

Developing Australia's national system of marine reserves

A statement of concern about the proposal for Australia's South West Marine Region

Coordinator: Professor Hugh Possingham, The University of Queensland 8 August 2011

On 5th May 2011 the Australian Government released a draft proposal for a network of marine reserves in the Commonwealth waters of the South West bioregional marine planning region. Australia's South West is of global significance for marine life because it is a temperate region with an exceptionally high proportion of endemic species – species found nowhere else in the world.

Important industries, such as tourism and fisheries, depend on healthy marine ecosystems and the services they provide. Networks of protected areas, with large fully protected core zones, are essential to maintain healthy ecosystems over the long-term – complemented by responsible fisheries management¹.

The selection and establishment of marine reserves should rest on a strong scientific foundation. We are greatly concerned that what is currently proposed in the Draft South West Plan is not based on the three core science principles of reserve network design: comprehensiveness, adequacy and representation. These principles have been adopted by Australia for establishing our National Reserve System and are recognized internationally.²

Specifically, the draft plan fails on the most basic test of protecting a representative selection of habitats within the bioregions of the south-west. There are no highly protected areas proposed at all in three of the seven marine bioregions lying on the continental shelf.³ Overall less than 3.5% of the shelf, where resource use and biodiversity values are most intense, is highly protected. Further, six of the seven highly protected areas that are proposed on the shelf are small (< 20km in width)⁴ and all are separated by large distances (> 200km).⁵ The ability of such small isolated areas to maintain connectivity and fulfill the goal of protecting Australia's marine biodiversity is limited.

The gaps are further exemplified by the very patchy protection of identified unique features. We are concerned that 160 of the 165 areas identified as biologically important and thirteen of the sixteen key ecological features mapped during the planning process have either low levels of protection proposed (< 15% in highly protected areas) or very limited protection proposed (0% in highly protected areas). It is well recognized that where the habitat of a threatened species is spatially restricted full protection may be required.⁶

We have grave concerns about the lack of protection caused by these gaps in the proposed system of marine reserves. To protect marine biodiversity all habitat types should be represented to an adequate level within highly protected areas.⁵ If implemented as proposed, the marine reserves would cover less than half of the mapped habitat types within the South-west planning region within highly protected areas. This would be a major failure for the whole marine planning process and send a poor signal internationally.

We urge the Australian Government to amend the proposed network of marine reserves to address these concerns, by significantly increasing the level of protection to adequately cover all the continental shelf bioregions, and providing a high level of protection for key features such as the Abrolhos region, the Rottnest Shelf, the Perth Canyon, Geographe Bay and the Capes, the Albany Canyons, the Recherche region, the Great Australian Bight, Kangaroo Islands Canyons, and the Kangaroo Island upwelling system—one of Australia's most productive ocean areas.

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Endnotes:

¹ Effective biodiversity conservation involves high levels of protection within reserve networks, complemented by general strategies across the entire seascape – as set out in the UN FAO *Code of Conduct for Responsible Fisheries 1995*. Although all Australian Governments endorse this approach, in some cases implementation of these general strategies needs considerable improvement : Nevill, J, 2009 *Overfishing, uncertainty and ocean governance*. PhD Thesis, University of Tasmania.

² ANZECC TFMPA (Australian and New Zealand Environment and Conservation Council Task Force on Marine Protected Areas).1998. *Guidelines for Establishing the National Representative System of Marine Protected Areas*. Australian and New Zealand Environment and Conservation Council, Task Force on Marine Protected Areas. Environment Australia, Canberra.

³ IMCRA. 2006. *A Guide to the Integrated Marine and Coastal Regionalisation of Australia Version 4.0*. Department of the Environment and Heritage, Commonwealth of Australia, Canberra, Australia.

⁴ GBRMPA. 2001. *Biophysical operating principles as recommended by the scientific steering committee*, Great Barrier Reef Marine Park Authority, Townsville, Australia.

⁵ Halpern, B S, Regan, H M, Possingham, H P and M A McCarthy. 2006. Accounting for uncertainty in marine reserve design. *Ecology Letters* 9: 2-11.

⁶ The Ecology Centre, University of Queensland. 2009. *Scientific Principles for Design of Marine Protected Areas in Australia: A Guidance Statement*, University of Queensland, Brisbane, Australia.