

Systematic Conservation Planning: A Network of Marine Sanctuaries

Summary of This Research Project

The Ecology Centre of The University of Queensland has conducted an independent analysis of marine sanctuaries for the Commonwealth's South West Marine Region.

The Ecology Centre's blueprint, the result of more than two years of analysis and research, is the first of its kind to be developed to safeguard marine life and protect economic and social interests as well.

A consensus statement of 44 of Australia's most experienced scientists in the fields of marine science and social science is included in this research project, which represents peer-level guidance on the principles behind the selection, design and implementation of marine protected areas.

Background To This Research

In the early 1990s, the Australian Government identified the need for a National Representative System of Marine Protected Areas (NRSMPA) to ensure the long term protection of the country's marine ecosystems and biological diversity.

However, progress towards achieving this goal has been poor. Currently, just 9.5% of Australia's marine jurisdiction is included in marine protected areas, while in the South West less than 1% has the status of fully protected, ie. in marine sanctuaries.

Many of the decisions that have been made about marine protected areas in Australia have been ad hoc and have failed to include ocean areas where highly valued fish stocks and unique marine life are located.

This research project is the first detailed attempt at an integrated and scientifically based conservation assessment in any of Australia's marine regions following the rezoning of the Great Barrier Reef.

Findings of The Ecology Centre Research

1. Scientific Principles for Design of Marine Protected Areas in Australia.

The Ecology Centre, led by Professor Hugh Possingham, developed a set of principles for the selection, design and implementation of marine protected areas in Australia.

These principles were endorsed and developed with 44 of Australia's most experienced scientists involved in marine research and social science and represent peer-level guidance for marine protection in Australia.

2. A blueprint for marine sanctuaries in the South West was developed using unique software called Marxan to analyse more than 3300 sources of biological and socio-economic data evidence.

A benchmark for protection of marine life in a network of sanctuaries in the South West was found to cover 50% of the region. This level of protection afforded safeguards to:

- 57 species of fish and marine life listed under the Environment Protection and Biodiversity Conservation Act;
- 1465 species (mammals, fish, birds, invertebrates);
- 486 key underwater features supporting marine life, such as depth zones, seascape types, geomorphic structures, and fish assemblages.

3. A blueprint for protection of fish stocks and marine life in sanctuaries does not equate to a 50% loss to socio-economic activities.

The Ecology Centre analysed social, economic and conservation uses and priorities and was able to deliver a world class network of marine sanctuaries that minimises impacts to socio-economic sectors.

The implementation of this blueprint would make Australia the world leader in marine conservation and marine resource management—applying best scientific practice to achieve high quality, cost-effective marine sanctuaries and conservation outcomes in the face of vast uncertainties and ever-growing pressures for economic development.

