



Oceans Action Bulletin

An Update from the Marine Division of the Department of the Environment and Heritage February 2006

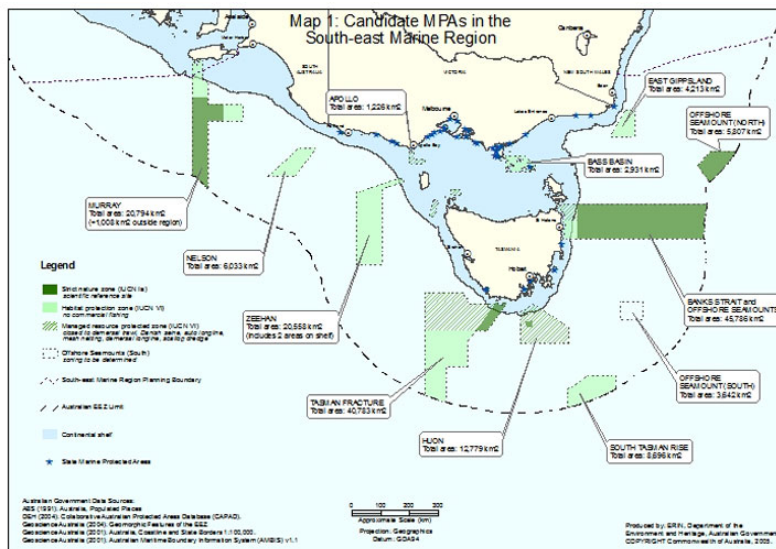
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This Bulletin updates you on Australian Government activities in the marine environment. Please forward to any interested parties. For further information or to unsubscribe from this Bulletin, please email samantha.meyer@oceans.gov.au

Public Submissions on South-East Marine Protected Areas Available Online

Formal submissions on development of a network of marine protected areas in the South-east are now available on the website of the Department of the Environment and Heritage.

The Australian Government has been working with key stakeholder groups for the past three years to develop the South-east MPA network using agreed criteria and the best available scientific information.



Meetings have been held with stakeholder groups and state fisheries and MPA managers during January and February to consult on MPA boundaries, zoning and management issues and displaced fishing effort. The public comment period closed at the end of February.

The network of candidate MPAs

During the public consultation process, stakeholders and the general public have been asked to contribute submissions, including proposals for alternative boundaries or zoning. The Minister has advised that he will give full consideration to any alternative proposals.

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After Ministerial consideration during March, the statutory process for declaration of a Commonwealth reserve under section 351 of the *Environment Protection and Biodiversity Conservation Act 1999* will begin with a notice inviting comment on a declaration proposal, allowing a minimum period of 60 days for comments.

Following the declaration, the Director of National Parks will begin the management planning process. There are many opportunities for stakeholders to be involved in the management planning process including the opportunity to comment in detail on a draft management plan, which will be made publicly available.

Submissions can be viewed at
www.deh.gov.au/coasts/mpa/southeast/publications/se-mpa-submissions.html

Submissions available for review include those from the Australian Marine Sciences Association, the Fisheries Research and Development Corporation/Tasmanian Aquaculture and Fisheries Institute, Karen Edyvane, South Australian Fishing Industry Council and the Wilderness Society (Tasmania).

Great Barrier Reef Study finds New Species

After more than 300 days at sea, scientists have begun compiling a rich picture of seabed life across the length and breadth of Australia's Great Barrier Reef Marine Park.

While some parts of the Great Barrier Reef Marine Park, such as coral reefs, are relatively well understood, less is known about the number and type of organisms that live in deeper parts of the area.

Principal investigator Dr Roland Pitcher of CSIRO says it's expected that analysis of samples collected will confirm new species.

"We have already seen nearly 6 000 types of organisms including new records for Australia and some new species that may be unique to the Great Barrier Reef."

Scientists are now processing 15 000 plant and animal samples, 2 000 sediment samples, 2 200 hours of video footage and 140 gigabytes of echo-sounder data from almost 1 400 sites on the continental shelf.



Seapens on soft sediment offshore from Port Clinton, with a tiger prawn

This vast, underwater snapshot will form the basis of maps, databases and management tools to help marine resource managers conserve important habitats and biodiversity and ensure that fisheries are ecologically sustainable.

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“This has been the most intensive scientific exploration of the lesser known, deeper seabed of the world’s largest marine protected area,” Dr Pitcher said.

“With the fieldwork completed, we’re now identifying the diverse animal and plant samples and processing video footage and acoustic data”.

The Great Barrier Reef Seabed Biodiversity Project is funded by CRC Reef, the Fisheries Research and Development Corporation and the Department of Environment and Heritage, through the National Oceans Office. The project is co-funded by AIMS, CSIRO, QDPI&F and the Queensland Museum, and is affiliated with the global Census of Marine Life.

For more information, visit the project website

<http://www.reef.crc.org.au/resprogram/programC/seabed/index.htm>

Call for Global Coral Network

Researchers at the new ARC Centre of Excellence for Coral Reef Studies (CoECRS) have called for the worldwide networking of tropical marine parks and protected areas to limit the risk of large-scale extinctions under global change, in the light of new scientific findings.

Their research, published in the international science journal *Nature*, finds evidence from sites across the Pacific Ocean to refute the "neutral theory of biodiversity", which had been proposed as a framework for conservation.



Scientist surveying coral reef

Photo courtesy Ailsa Kerswell, JCU and ARC Centre of Excellence PhD student

Neutral theory argues that coral species colonise reefs in a random way, much like a lottery. However the team's studies of living reefs revealed that location and environmental change play a critical role in determining what sorts of corals settle and flourish - and which ones fail to establish.

This has major implications for the long-term survival of corals – and for how marine conservation areas are managed.

The study’s lead author, Ms Maria Dornelas, and Centre researcher Dr Sean Connolly, both of James Cook University, tested the theory's predictions by teaming up with Centre Director Professor Terry Hughes, who had recently completed a huge survey of coral diversity at 180 sites spread over 10 000 km from Sulawesi to French Polynesia.

"Not only did we find that the theory didn't work," says Dr Connolly, "it failed in a completely unexpected way, totally different from what critics of the neutral theory

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had been expecting. By looking closely at how and why the theory failed, we gained some new insights into how coral reefs sustain so many species."

"Just because a particular location's environment suits some corals' specific strengths now, doesn't mean that it will always be so. Corals need to disperse their offspring widely, so that when conditions change, some of their offspring are in places where the environment has become more suitable for them."

"Most marine protected areas around the world are too small and too isolated to preserve the links between populations on different reefs. This increases the risk that a rare group of animals could go extinct unless they can colonise a more favourable reef," said Professor Hughes.

Protected areas need to be close enough for marine life, including coral spawn, to flow freely between them, to give the corals the best chance of preserving their unique biodiversity as the environment changes.

"The recent re-zoning of the Great Barrier Reef is a step in the right direction, but we need to see MPAs networked worldwide across national borders to help reefs cope with the large-scale environmental changes expected with global warming."

The researchers' paper "Coral reef diversity refutes the neutral theory of biodiversity" appears in the current issue of *Nature* (March 2, 2006)

The ARC Centre of Excellence for Coral Reef Studies is funded by the Australian Research Council, and includes James Cook University, the University of Queensland, the Australian National University, the Australian Institute of Marine Science and the Great Barrier Reef Marine Park Authority.

More information is available at <http://www.coralcoe.org.au/news.html>

2006 - Year of the Sea Turtle

The Australian Minister for the Environment and Heritage, Senator Ian Campbell, has called on people from across the South-East Asian region to support an international campaign to conserve sea turtles.



Green Turtle © Arthur Mostead

Launched by the United Nations Environment Programme (UNEP) last week, the *Year of the Turtle – 2006* focuses on the Indian Ocean/South-East Asia region, which contains six of the world's seven species of marine turtles.

"Australia is home to these six species of sea turtles and supports some of the world's most important remaining populations," Senator Campbell said.

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“Many of the world’s populations of marine turtles have declined, some to the point of extinction, as a result of incidental deaths in fishing gear, damage to turtle nesting beaches, and unsustainable harvests.

From Australia and Thailand to Oman and South Africa, this campaign pulls 25 countries together under the banner ‘Cooperating to Conserve Marine Turtles: Our Ocean’s Ambassadors’. It is being coordinated by the Secretariat of the Indian Ocean – South-East Asia (IOSEA) Marine Turtle Memorandum of Understanding (MOU).

“Australia is a signatory to this Memorandum of Understanding and has been one of its most active supporters,” Senator Campbell said.

“As well as contributing almost \$250 000 from the Natural Heritage Trust to the implementation of the MOU over its first three years, Australia has championed greater participation by countries that share turtle migrations.

“Turtles are unique ambassadors of our oceans, linking countries and communities globally.

“They are of cultural, spiritual, traditional and economic importance to Indigenous Australians, are great tourist attractions, and play a significant role in the health of our marine environment. I am pleased to see that Australian primary school children are participating in the year by developing a new turtle education guide.”

Other related projects in Australia funded by the Natural Heritage Trust include satellite tagging to increase our understanding of turtles migratory patterns, and the development of protocols for assisting stranded turtles.

Overseas, activities for the Year include beach and reef clean-ups in Thailand, research in Iran to track turtle movements and underwater film festivals in the Seychelles.

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