

REPRESENTATIVE AREAS PROGRAM

TABLE 1 Current level of protection of NON-REEF bioregions within no-take areas

0% in no-take zones	< 1 to 5% in no-take zones	5 to 25% in no-take zones	> 25% in no-take zones
NB8 Capricorn Bunker Lagoon	NA3 High Nutrients Coastal Strip	NB1 Inshore Muddy Lagoon	NA1 Coastal Strip
NJ Princess Charlotte Bay Outer Shelf	NA4 Inshore Terrigenous Sands	NC Mid Shelf Inter Reef - Seagrass	ND Mid Shelf Inter Reef
NK Princess Charlotte Bay	NB3 Inner Shelf Seagrass	NF Halimeda Banks - some coral	NE Outer Shelf Lagoon
NN Capricorn Bunker Banks	NB5 Inner Mid Shelf Lagoon	NH Mid Shelf Sandy Inter Reef	X3 Outer Far Northern Inter Reef
NO Capricorn Trough	NB6 Inner Shelf Lagoon Continental Islands	NL1 Outer Shelf Algae and Seagrass	
NR Queensland Trough	NB7 Mid Shelf Lagoon	NL5 Swains Inter Reef	
NS Intermediate Broad Slope	NI Halimeda Banks - some coral	NP Eastern Plateau	
NTE Eastern Pelagic Platform	NL2 Outer Shelf Seagrass		
NTW Western Pelagic Platform	NL3 Outer Shelf Inter Reef - Central		
X1 Far Northern Offshelf	NL4 Outer Shelf Inter Reef - Southern		
X2 Offshelf Queensland Trough	NM Mid Shelf Seagrass		
X6 Central Offshelf	NQ Steep Slope		
X8 Southern Embayment	NU Terraces		
	X4 Capricorn Bunker Inter Reef		
	X5 Outer Central Inter Reef		
	X7 Central Inter Reef		
Total: 13	Total: 16	Total: 7	Total: 4



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TABLE 2 Current level of protection of REEF bioregions within no-take areas

0% in no-take zones	< 1 to 5% in no-take zones	5 to 25% in no-take zones	> 25% in no-take zones
RC1 Torres Strait Influenced Mid Shelf reefs	RCB2 Capricorn Bunker Mid Shelf Reefs	RA4 Strong Tidal Outer Shelf Reefs	RA1 Deltaic Reefs
	RE3 Coastal Central Reefs	RB1 Far Northern Outer Mid Shelf Reefs	RA2 Outer Barrier Reefs
	RE4 Coastal Southern Reefs	RCB1 Capricorn Bunker Outer Reefs	RA3 Outer Shelf Reefs
	RE5 High Tidal Fringing Reefs	RE1 Coastal Far Northern Reefs	RC2 Far Northern Protected Mid Shelf Reefs and Shoals
	RE7 Tidal Mud Flat Reefs	RE6 Incipient Reefs	RD Far Northern Open Lagoon Reefs
	RE8 Coastal Southern Fringing Reefs	RF1 Northern Open Lagoon Reefs	RE2 Coastal Northern Reefs
	RK Strong Tidal Inner Mid Shelf Reefs	RF2 Central Open Lagoon Reefs	RG1 Sheltered Mid Shelf Reefs
	RSW-O Swains Outer Reefs	RG2 Exposed Mid Shelf Reefs	RSW-M Swains Mid Reefs
		RHC High Continental Island Reefs	RSW-N Coral Sea Swains - Northern Reefs
		RHE Strong Tidal Mid Shelf Reefs (East)	
		RHL Hard Line Reefs	
		RHW Strong Tidal Mid Shelf Reefs (West)	
Total: 1	Total: 8	Total: 12	Total: 9



FOR MORE INFORMATION

If you have any queries in relation to the RAP, please direct them to The Representative Team at the address listed below. A detailed document on the RAP, which answers commonly asked questions, is also available from GBRMPA. All information, including the new RAP timelines, is also available on the GBRMPA website: www.gbrmpa.gov.au.
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The Great Barrier Reef Marine Park Authority REPRESENTATIVE AREAS PROGRAM



update 4 december 2001

WHAT'S BEEN HAPPENING

The official launch of the first formal Community Participation phase of the Representative Areas Program (RAP) has, unfortunately, been delayed.

As the RAP process effectively comprises a rezoning of the entire Marine Park, the RAP launch cannot occur until the new Zoning Plan for the Far Northern Section (FNS) comes into effect. This was not progressed due to conventions that apply after an election has been called.

The date for the new FNS Zoning Plan has yet to be determined by the new Federal Minister for the Environment & Heritage, The Hon. Dr. David Kemp MP. However, once the launch date is announced, the formal Community Participation phase for RAP will be publicised widely through the media, the Web and via existing networks of user groups, stakeholders and other interested parties.

During this formal consultation phase, written submissions about the rezoning of the Marine Park, and RAP in particular,

will be sought from the broader community, together with users and stakeholder groups.

Anyone who has been involved in informal consultation with Authority staff over the last 18 months about RAP is welcome to make an additional formal submission. The information you have provided, however, is already being considered as part of the planning process.

Even though the first formal launch has yet to occur, considerable liaison about RAP has happened to date and continues to occur. In the 12 months since 1 July 2000, over 140 meetings have occurred with over 1500 stakeholders including Sunfish, QSIA (Queensland Seafood Industry Association), ANSA (Australian National Sports -fishing Association), conservation groups, Landcare, LMACs (Local Marine Advisory Committees), Reef Advisory Committees, the Great Barrier Reef Consultative Committee and the Queensland Government.

WE CAN'T TAKE BIODIVERSITY FOR GRANTED

Often when people think of biodiversity, they focus on the visible or better-known species like whales, dugong or coral, or popular fish species like those targeted by recreational fishers.

Biodiversity is much more than that, encompassing all plants and animals, the places they live and the ecological processes that keeps them alive.

All the consumptive and productive industries (like commercial fishing, recreational fishing and tourism) rely on these ecological functions and processes for their

continuing existence. This reliance also occurs in ways, which are not so obvious (eg. the provision of nurseries for most fish species, in particular in mangroves, seagrasses and coral reefs).

Other important ecosystem functions include the recycling of organic wastes, which occur naturally in marine systems, but all these processes and functions can only occur if the entire ecosystem is healthy. In the marine environment, everything is connected by the water itself, which means all plants and animals and the ecological processes play a role in this complex 'web of life'.

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PROTECTING BIODIVERSITY

WE CAN'T TAKE BIODIVERSITY FOR GRANTED

continued . . .

Scientific evidence from around the world has shown the best way to maintain biodiversity is to allow species to evolve and function undisturbed by extractive activities (Jackson *et al* 2001). However, coral reefs world-wide are starting to show some worrying trends suggesting that, on a global scale, coral reefs are in trouble. 10% of reefs in the world are estimated as severely damaged or destroyed, with a further 58% potentially threatened (Bryant *et al*, 1998).

Reefs from some of our nearest neighbours, Indonesia and the Philippines, are already 60%-70% degraded, with only 5% still in excellent condition (Wolanski, 2001). There are numerous issues facing management of reefs in these countries but many relate to the intensity and extent of fishing pressures.

While the Great Barrier Reef is mainly in good condition, global experience clearly shows that we need to get ahead of problems rather than wait until there is a major decline.

The 1998 State of the Great Barrier Reef World Heritage Area Report said, "*Many of the reported attributes of the (Great Barrier Reef World Heritage) Area are not exhibiting indications of any major decline which is clearly attributable to human activity. However, lack of any evidence of a problem does not necessarily*

mean that everything is fine. Ongoing monitoring and careful management of potential impacts will be required in order to ensure the continuing health of the World Heritage Area."

The Representative Areas Program aims to protect the range of biodiversity by protecting representative examples of all the different habitats and ecological communities that occur in the Great Barrier Reef Marine Park. This will be done by a new network of 'no-take' areas or Green Zones.

Fishing and collecting will be prohibited in these Green Zones but there will be medium and long-term benefits for fishers in areas that remain open because of the 'spill-over' of both larval and adult fish from the Green Zones.

Ensuring a positive and sustainable future for all interested parties, including commercial and recreational users of the Marine Park, is fundamental to the objectives of the Representative Areas Program.

Jackson *et al*, Historical Overfishing and the Recent Collapse of Coastal Ecosystems *Science* Jul 27 2001: 629- 637.

Bryant *et al*, Reefs at Risk: A map-based indicator of threats to the world's coral reefs, *Joint publication of WRI, ICLARM, WCMC & UNEP, 1998*

Wolanski E. Oceanographic processes of coral reefs, CRC Press, 2001.

TWO EXAMPLES

OF HOW PEOPLE'S NEEDS AND ISSUES ARE BEING ADDRESSED IN RAP

The Representative Areas Program (RAP) is using the results of two recent CRC Reef social research programs to help minimise any negative impacts that a new network of protected areas might have on existing users. These programs include examples of the type of social data the RAP is using to understand people's needs and issues in the planning process.

In the first of these programs, the CRC Reef conducted a series of telephone surveys of residents of Queensland coastal communities and southern capitals (Brisbane, Sydney, Canberra and Melbourne). This survey is the fourth in a series of community attitude surveys that the CRC Reef has undertaken since 1997.

In March 2001, a total of 1183 people were interviewed, with 48% of the people coming from Queensland coastal communities adjacent to the GBRMP. The other 52% were from southern capital cities.

Participants were told that "Biodiversity refers to the range and variety of plants, animals and environments and the connections between them. One of the ways to protect this variety or diversity of reef life is to increase the amount of the GBR that is included in highly protected areas."

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"People can visit these areas but they can't take things from them. This means that improvement in the protection of the biodiversity may mean restrictions on some human uses of the GBR, especially fishing."

Given this information, 81% of GBR coastal residents supported an increase in the amount of no-take zones in the Great Barrier Reef Marine Park. Many agreed we should try to avoid restrictions to human uses (27%), which is what the Representative Areas Program will aim to do. Most, however, considered increasing the amount of no-take areas worthwhile even if it means restricting human use (53%).

Even more of our southern compatriots (89%) supported an increase in the amount of no-take zones in the Marine Park to protect biodiversity!

These results strongly suggest there is broad community support for the introduction of management arrangements that will increase the level of protection for biodiversity in the Great Barrier Reef Marine Park.

The other CRC Reef project, done with the support of the Queensland Seafood Industry Association (QSIA), provides information on the social and financial profiles of 2,000 commercial fishers in Queensland. The results of the study allow these profiles to be linked to areas people fish in the GBRMP using a Geographical Information System (GIS).

The data generated from this project will assist the RAP team to minimise any negative social and financial impacts upon commercial fishers that might occur as a result of the RAP.

SOME OF YOUR QUESTIONS

- What activities will be allowed in the Green Zones?

Non-extractive activities will be permitted such as boating, diving, snorkelling, non-extractive research and tourism. All forms of fishing and collecting will be prohibited in the new Green Zones (as is currently the case).

Some activities obviously have far greater impact upon biodiversity than others, in particular activities that kill or remove plants and animals. Research from Australia and overseas suggests that removing extractive activities allows plants and animals to exist and evolve in a relatively undisturbed state.

RAP's March Update gave evidence from the GBRMP showing that no-take areas do work. A recent study in NSW showed that Bouddi National Park had 63% greater species richness overall and 70% greater numbers of fish. Some of the new species that turned up in the no-take area were not even targeted species! (Gladstone 2001).

Conversely, when fishing was reintroduced to previously closed reefs, the impacts on fish stocks were significant and immediate. Coral trout densities on Bramble Reef were reduced by 60% just eight weeks after it was opened to fishing; after 12 months it was reduced by 80%. When Boulton Reef, in the Capricorn/Bunkers was opened to fishing after a three and half year closure in 1986, fish stocks were reduced by 25% in 14 days; there was a 75% reduction in fish stocks after 18 months (Russell 1997).

The Authority recognises that even non-extractive activities have impacts on the environment and is also addressing them to ensure sustainability. For example, new regulations applying to discharge of sewage from vessels with a survey capacity of more than six passengers will be coming into

effect in the near future. Tourism activities will continue to be assessed and be subject to permit requirements. Training programs for the tourism industry have been introduced to promote best environmental practices. Mooring plans have been introduced in the most heavily used anchorages and anchor damage has been dramatically reduced in the Cairns and Whitsundays areas. [References available upon request]

- How will the displacement of fishing effort be addressed?

RAP will target low-use and no-use areas of the Marine Park for the location of the new Green Zones. Fishing effort is not distributed evenly throughout the Marine Park and much of it is concentrated in particular areas. Feedback from the public will help the Authority locate where these least-used areas are.

The Authority also has access to a wide variety of information about existing use of the Marine Park and which areas are most important to commercial and recreational fishers.

Together, all of this information will be used to help decide which areas will be included in the Green Zones. The protection of an increased proportion of the Marine Park in the new Green Zones does not mean displacement of the same proportion of fishing effort. In this way impact on, and displacement of existing use, will be minimised as far as possible.

- Why not address other critical issues first?

The Great Barrier Reef Marine Park is under pressure from a range of human activities, including unsustainable fishing practices, declining water quality from land-based agricultural and pastoral activities and increasing coastal development, tourism and recreational activities. All of these issues are actively being addressed by GBRMPA. Refer to the GBRMPA website for more details (www.gbrmpa.gov.au).

The best way to maintain biodiversity, which in turn will enable continuation of commercially viable and ecologically sustainable industries, is to allow ecosystems to evolve and function effectively.

The establishment of a new network of no-take zones under RAP will not alone, save the Great Barrier Reef World Heritage Area - but it is a fundamental component for conserving habitats and ecosystem processes and ensuring the Great Barrier Reef system remains GREAT for the future.

BIOREGION BOUNDARIES FINALISED

Bioregions provide an indication of the biodiversity within the Great Barrier Reef Marine Park, and provide the basis for the Representative Areas Program. In the March Update newsletter we reported that various stakeholders had provided feedback on some changes needed for the bioregion boundaries. Based on this information the Authority has now finalised the boundary descriptions for all bioregions.

The latest maps of the bioregions are available on the RAP page of the GBRMPA website (www.gbrmpa.gov.au). A total of 70 bioregions (30 reef bioregions, 40 non-reef bioregions) have been identified and an analysis of how much of each bioregion is currently in highly protected areas (Green Zones, Pink Zones and Orange Zones) is given in Table 1 and 2.

The current level of protective 'no-take' zoning in the Marine Park is:

- 21% of area of coral reefs (coral reefs cover only 6% of the Marine Park)
- 3% of non-reef area (most of the Marine Park (94%) is NOT coral reef)
- 4.6% of the entire Great Barrier Reef Marine Park

Look at the tables on pages 5 and 6, and a bioregion map to see how much protection in no-take zones is currently given to bioregions near where you live!!! Bioregion maps are available on the web or by contacting us at the addresses given on page 6.