

# The Great Barrier Reef Marine Park Authority

## REPRESENTATIVE AREAS PROGRAM

Update September 2000

### WHAT'S IN THIS UPDATE?

#### **Explaining the classification phase**

In the course of public presentations on the Representative Areas Program (RAP), questions have been asked about details of the classification phase – What is a bioregion? How were the bioregions mapped? What data were used? This Update answers some of the questions and invites comment on the bioregion map.

#### **Collecting information on use of the Great Barrier Reef World Heritage Area (GBRWHA)**

We currently have some information on use of the GBRWHA to help us select areas for high levels of protection while minimising restrictions on existing users. This Update explains how the information will be used and how community groups can help us build on this information.

#### **AIM OF THE REPRESENTATIVE AREAS PROGRAM**

To protect the biodiversity of the Great Barrier Reef World Heritage Area through a network of highly protected areas.

#### **PHASES OF THE RAP**

1. Classification of the biodiversity
2. Review of the existing zoning
3. Identification of potential areas for protection
4. Selection of areas to be incorporated into the network of highly protected areas
5. Development of a draft zoning plan for public review

#### **WHY YOU NEED TO GET INVOLVED**

- The RAP is a review of existing zoning and will result in additional green zones ('no take' areas) in the Marine Park, in bioregions that are currently unprotected.
- The timelines have been extended to allow more opportunity for public participation – refer to our website for the new timelines.

### MORE THAN JUST CORAL REEFS

The Great Barrier Reef is well known worldwide for its 2900 coral reefs and its huge variety of wildlife – but there's more to it than just coral reefs. The GBRWHA includes many different community types, groups of animals and plants, which live together in habitats such as sponge or soft coral gardens, mangroves, seagrass beds, sandbanks, mudflats, estuaries and reef drop-offs. This is the 'biodiversity' of the Great Barrier Reef World Heritage Area, which has evolved over millions of years. It is an important part of Australia's natural heritage, and is recognised as a World Heritage Area for its

outstanding universal values. In many ways we depend on this biodiversity for our enjoyment, livelihood, food, medicine and inspiration.

## **UNDERSTANDING THE BIODIVERSITY OF THE GBRWHA**

The first phase of the RAP, the classification phase, has improved our understanding of the GBRWHA, resulting in new maps which show the diversity of the whole area.

### **How was the biodiversity classified?**

In the past 30 years, our knowledge of the Great Barrier Reef Region has increased considerably. As a first step to the RAP classification, more than 40 layers of biological and physical data for the GBRWHA were mapped using a Geographic Information System (GIS). This included information on fish, hard and soft corals, seaweeds, seagrass, sediments and depth. This is the best available information we have at present.

Two groups of scientific experts analysed all this information and used their combined experience to classify the whole of the GBRWHA as 72 different broad scale 'bioregions' (generally at the scale of hundreds of kilometres). Thirty different bioregions were described for the reef areas and 34 for the non-reef areas. A further eight areas, mostly in the deep water offshore, were classified but not described due to insufficient information.

### **What is a bioregion?**

A bioregion is an area where the groups of plants and animals, and the physical features (e.g. depth, sediment type) are sufficiently distinct from the surroundings and the rest of the GBRWHA, at a chosen scale. What makes one bioregion different from another is the combination and structure of animals and plants, and the physical features which make up that region. Reef bioregions are easier to distinguish than non-reef as they generally represent just reef habitat. By comparison, a non-reef bioregion may comprise a number of smaller scale habitats, such as patches of seagrass within a broader area of mudflats. The types of seagrass and mud-living animals found in a northern bioregion are different from those in a southern coastal bioregion. The resulting map of bioregions is complex, but it is clear that there is distinct variation from north to south, from inshore to offshore, and between reef and non-reef areas.

The different bioregions are shown on the map by different colours (note that the colours on the bioregion map do not represent Marine Park zoning). A brief description of each bioregion is given in the table on the back of the colour map. The map and table can be found on the GBRMPA website.

### **What is a 'fuzzy boundary'?**

The bioregion map shows the boundaries between the different colours as sharp lines. In reality the boundaries between most bioregions are rarely that sharp. Except for some clearly defined edges of reefs, in most cases the boundaries are more gradual or 'fuzzy'. This may be due to a gradual change in nature (e.g. as the water gets deeper the sediments and animals will change gradually until there is a different community from that closer inshore). Or it may be due to less detailed information about the animal and plant life in some areas.

Table: Summary of classification phase

<p><b>Process:</b></p> <ul style="list-style-type: none"> <li>▪ Over 40 data sets (physical and biological) compiled and mapped.</li> <li>▪ Classification by reef and non-reef experts using data and analyses.</li> <li>▪ Descriptions of bioregions and degree of ‘fuzziness’ of boundaries.</li> </ul>	
<p><b>Outputs:</b></p> <p><b>Reef bioregions</b></p> <ul style="list-style-type: none"> <li>▪ 30 bioregions identified</li> <li>▪ Key data sets used: <ul style="list-style-type: none"> <li><i>Physical:</i> reef structure, depth, tidal range, broad scale currents.</li> <li><i>Biological:</i> reef fish, soft corals, hard corals, reef plants and animals, seaweeds.</li> </ul> </li> <li>▪ 83% of boundaries clearly defined, 13% unclear (fuzzy).</li> </ul>	<p><b>Non-reef bioregions</b></p> <ul style="list-style-type: none"> <li>▪ 34 bioregions identified</li> <li>▪ 8 additional deep water, offshore areas not yet classified due to insufficient information</li> <li>▪ Key data sets used: <ul style="list-style-type: none"> <li><i>Physical:</i> sediments, distance from shore, latitude, depth, broad scale currents.</li> <li><i>Biological:</i> shallow and deepwater seagrass data, seafloor animals, sponges.</li> </ul> </li> <li>▪ Most boundaries were classified as fuzzy.</li> </ul>

## WHERE TO NEXT IN THE REPRESENTATIVE AREAS PROGRAM?

Having defined the different bioregions, the next stage of the RAP involves identification of options (‘candidate areas’) within each bioregion which may be zoned ‘highly protected’. The Great Barrier Reef Marine Park is zoned for different uses, with some areas being highly protected. These are shown on the zoning maps as small patches of pink ‘no go’ zones, and larger areas of green ‘no take’ zones. Only 4.5% of the total Marine Park is currently highly protected, in terms of extractive activities. A review of the existing zoning shows that some bioregions have no highly protected areas at all, whilst others have only small areas of high protection, particularly in the non-reef areas. As this is likely to mean some future changes in zoning in the Marine Park it is important that you have input.

Whilst the main aim of the RAP is to protect the biodiversity of the GBRWHA, it is hoped to achieve this whilst minimising the impacts on existing users. This will be done by considering available information on how people use and value the GBRWHA, including information from Indigenous groups, fishers, tourist operators, conservationists and ‘locals’.

### How do we know which areas are important to you?

We already have some information – you may have contributed to this – but we need more. We have access to the following mapped data, which has been compiled by social scientists and managers:

- aggregate data on commercial fishing locations (including trawling, line fishing, netting, crabbing, harvest fishing)

- aggregate data on charter boat fishing
- recreational fishing locations
- areas of, and publicly available information on, Native Title claims
- tourism locations and activities
- recreational collecting sites
- shipping channels
- shipwrecks
- defence activities
- research activities
- locally collected data on use (Whitsundays, Cooktown)
- Aboriginal and Torres Strait Islander Heritage database
- Historic Heritage database.

In addition to this information we are also gathering information from local people and other experts to ensure that our data is as comprehensive as possible.

## HOW YOU CAN HAVE YOUR SAY

**We would like your comments on the bioregion map, and information on the way you use the GBRWHA:**

### **1. Comments on the bioregion map**

The draft reef and non-reef bioregions have been defined based on the best available scientific data and expertise and at a broad mapping scale. There will be cases where people with local information have knowledge at the appropriate scale, which can improve the identification and boundaries of bioregions, particularly in the coastal areas.

### **2. Information about use**

The GBRWHA means different things to different people. We would like to add to our existing information on how people use different parts of the GBRWHA. If you would like to tell us about places you like to visit, or value for whatever reason (e.g. diving, fishing, birdwatching, painting) we will add this information to our existing data.

### **3. Information about special areas**

People with local knowledge may also have information about areas that are special or unique due to the animal/plant life or physical features, which they think should be protected. For example, areas may be important for breeding, spawning, migration or feeding of a particular animal or plant, or the only place where an animal or plant is known to live, or it may be a site with special coral, sand or rock formations. Wherever possible, and appropriate, such special areas will be incorporated into highly protected zones.

If you would like to provide comments, please use the questionnaire provided and mail it to the Representative Areas Program at the Great Barrier Reef Marine Park Authority (pre-paid). The questionnaire will be used as a basis for regional workshops where community information will be compiled. Information on workshop dates and venues will be available on the website or through the RAP contact numbers.

**How will we use your input?**

Your information on the bioregions will be collated with that gathered from all other sources and used to fine-tune the bioregion map. Proposed changes will be delivered to the reef and non-reef experts for their comment before adoption.

The use/special area information you provide will be put into our Geographic Information System and make up additional layers of information to consider when we are assessing the possible effects of protecting different candidate areas. This will help to fill gaps in our existing information.

**Is this the only opportunity for me to have input to the Representative Areas Program?**

No – this is part of a comprehensive project with several phases, which will interest a lot of users and people who care about the Great Barrier Reef World Heritage Area. You will have future opportunities to hear about and comment on the next phases of the Program – the identification phase and the rezoning phases.

The Great Barrier Reef Marine Park Authority is keen to ensure that everyone who wants to have input has opportunity to do so. Please ensure that you have completed the contact information if you want to continue to be informed and involved.

**WANT MORE INFORMATION?**

If you have any queries about this Update or would like to be involved in a regional workshop, contact a member of the Representative Areas Program on the number below.

A detailed overview 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.

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