

Planning and Management of the Great Barrier Reef Marine Park

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The Great Barrier Reef is the largest system of coral reefs and associated life-forms anywhere in the world. The Great Barrier Reef Region extends from just north of Bundaberg to the tip of Cape York and covers some 350,000 square kilometres. It contains 2900 reefs ranging in size from less than one hectare to greater than 100 square kilometres. The Reef Region contains 300 coral cays and about 600 continental islands.

In terms of fauna, the Great Barrier Reef is particularly rich and diverse. It contains an estimated 1500 species of fishes, some 350 species of hard coral and numbers of endangered species such as dugong and 6 species of turtle. An estimated 242 species of seabirds and 4000 species of molluscs are also found in the Great Barrier Reef Region.

Many people use the Great Barrier Reef for many things. The only activities which are prohibited are commercial mining and oil drilling. The major activities occurring in the Great Barrier Reef Region are tourism and fishing. In its early years reef tourism grew forty-fold between 1940 and 1980. Tourism is now the fastest growing activity in the Great Barrier Reef Region, growing at an estimated rate of 10% per year, and in some areas, for example, Cairns, growing at an estimated rate of 30% per annum until recently. Tourism, as well as undergoing a rapid increase in growth in the last five years or so, has also undergone a dramatic change in style. It has changed from unsophisticated, relatively inexpensive, generally slow, family styles of tourism to high technology, high speed, corporately financed and in many cases, up-market, tourism.

In terms of visitors, an estimated 5,000 visitors to the Great Barrier Reef Region generate an estimated 2.5 million visitor nights per annum in the Great Barrier Reef Region and these visitors produce an output estimated at \$400 million per year including the adjacent mainland. The major activities undertaken by tourists in the Great Barrier Reef include diving, snorkelling, reefwalking and coral viewing.

The other major activity in the Great Barrier Reef Region, fishing, consists of both commercial and recreational fishing. Together they are estimated to generate \$400 million of output per year. The main commercial fishery is trawl fishing for prawns and scallops. The other major fishery is the reef fishery for reef fish, usually coral trout, red emperor etc. It is estimated that some 70% of the reef fish catch is taken by recreational fishermen. It is also estimated that 30-40% of that catch is taken by about 10% of people recreationally fishing. In addition there are minor fisheries for aquarium fish, coral, beche-de-mer, trochus and there is of course a traditional fishery adjacent to Aboriginal deed of grant in trust lands.

The Great Barrier Reef began to figure in the national conscience in the 1960s when concern about limestone mining and oil drilling on the Great Barrier Reef generated two Royal Commissions and in 1975 the passage through Federal Parliament of the Great Barrier Reef Marine Park Act, supported by all political parties. The Act has a number of elements which are closely related to the success of the organisation. These important elements are:

- that the Authority consists of three members, two of whom are federally appointed (one a public servant and one independent) and a member of the Authority is a Queensland Government nominee.
- The Act also provides for the establishment of a Great Barrier Reef Consultative Committee, an advisory committee composed of Queensland and Federal nominees representing major user interest groups.
- The Act also provides for the Marine Park Authority to perform its functions in association with Queensland.
- The Act prohibits mining and oil drilling in the Great Barrier Reef Region.
- The Great Barrier Reef Marine Park Act prevails over conflicting legislation with the exception of the navigation acts.

The Great Barrier Reef Marine Park Authority has from its Act derived a goal and series of aims. The goal of the Great Barrier Reef Marine Park Authority is to provide for the wise use, protection and understanding of the Great Barrier Reef in perpetuity through the care and development of the Great Barrier Reef Marine Park. A number of subordinate aims have also been derived. These are:

- To protect the natural qualities of the Reef, whilst providing for reasonable use of the Reef's resources;

- To involve the community meaningfully in the care and development of the Marine Park;
- To achieve competence and fairness in the care and development of the Marine Park through the conduct of research, and the deliberate acquisition, use and dissemination of relevant information from research and other sources;
- To minimise regulation of, and interference in, human activities, consistent with meeting the goal and other aims of the Authority;
- To minimise costs of caring for and developing the Marine Park consistent with meeting the goal and other aims of the Authority;
- To achieve management of the Marine Park primarily through the community's understanding and acceptance of the provisions of zoning, regulations and management practices;
- To provide for economic development consistent with meeting the goal and other aims of the Authority;
- To adapt the Marine Park and the operations of the Authority to changing circumstances.

The Great Barrier Reef Marine Park is not a Marine Park in the sense of a terrestrial National Park. It is a multiple use protected area. The Great Barrier Reef has received considerable international recognition. It was listed in the World Heritage Register in 1981, it has recently been declared a "Particularly Sensitive Area" by the International Maritime Organisation and the various zones in zoning plans correspond to various categories in the IUCN system of protected areas. The Great Barrier Reef Marine Park also conforms with the requirements of the Biosphere Reserve concept although it has not been declared as such.

The Great Barrier Reef Marine Park is divided into four sections, each of which has a zoning or management plan which spatially regulates usage within the area.

The process involved in the development of the zoning plan is long (approximately two years) with a significant focus on public participation. The process involved includes:

- presenting the public with an outline of the area to be zoned along with information available to date on usage and resources and seeking comments on those aspects. Users are asked what uses are important to them and which areas are important to them and what they would like to see in the Marine Park plan;
- from this period of public participation, a detailed series of maps showing patterns of use and important resources is able to be put together;
- a draft zoning plan is then prepared using the guidelines presented in the Act and policies developed by the Authority.

The objectives to be borne in mind in establishing a zoning plan are set out in the Act. They are:

- “(a) the conservation of the Great Barrier Reef;
- (b) the regulation of the use of the Great Barrier Reef so as to protect the Great Barrier Reef while allowing the reasonable use of the Great Barrier Reef Region;
- (c) the regulation of activities that exploit the resources of the Great Barrier Reef Region so as to minimise the effect of those activities on the Great Barrier Reef;
- (d) the reservation of some areas of the Great Barrier Reef for its appreciation and enjoyment by the public; and
- (e) the preservation of some areas of the Great Barrier Reef in its natural state undisturbed by man except for the purposes of scientific research.”

Policy guidance developed by the Authority is also taken into account in drawing up a zoning plan; for example:

- the zoning plan should be as simple as practicable;
- the plan should minimise regulation of and interference in human activities, consistent with the goal of the Marine Park Authority;
- as far as practicable single zonings should surround areas with a desirable geographic description.

This draft zoning plan is put out for public comment for an extended period of at least three months. The Marine Park Authority makes particular effort to contact all user groups to obtain their input and comment on the plan because it strongly believes that user acceptance of the plan will result in behaviour which abides by the plan with the consequent reduction in the need for enforcement activity in the Marine Park.

The comments that the public provides on the draft zoning plan are taken into account in the production of the final zoning plan which is approved by the Great Barrier Reef Ministerial Council, the Federal Minister responsible for the Great Barrier Reef Marine Park and ultimately tabled before Federal Parliament for fifteen sitting days. If no motion disallowing the plan is passed within that period of time, the plan comes into effect at a subsequent date.

Important points to note in the production of zoning plans for the Great Barrier Reef Marine Park are that it is a complimentary process in both method and time with Queensland Marine Parks. As the Great Barrier Reef Marine Park extends in general into low water, areas between high and low water are zoned as far as possible in a complimentary fashion and according to the Queensland Marine Parks legislation. The development of zoning plans is undertaken simultaneously in an effort to reduce user confusion. Additionally the Great Barrier Reef Marine Park Authority works very closely with other Queensland and Federal Government Departments, for example fisheries departments, who have interests and responsibilities in the Great Barrier Reef Region.

Another important point is that while zoning plans provide broad-scale strategic guidance they are not proving to be adequate on a localised scale. As a result, with the Queensland National Parks and Wildlife Service, the Great Barrier Reef Marine Park Authority is beginning to prepare reef and island management plans which guide usage at individual reefs. A further important point is that initial preparation of zoning plans has largely focused on uses of the Marine Park in terms of extractive uses. The rapid growth in tourism which was not foreseen in the initial development of zoning plans is now being addressed through the introduction of a subzone in the Cairns Section in which no structures other than moorings, research, monitoring and navigation aids are permitted.

The implementation of zoning plans is largely undertaken by Queensland agencies, particularly the Queensland National Parks and Wildlife Service with an enforcement role for the Queensland Boating and Fisheries Patrol. The national coastal surveillance organisation, Coastwatch, also undertakes a significant amount of surveillance over the Great Barrier Reef Marine Park, along with its other aerial surveillance duties. A series of agreements between the Commonwealth and Queensland following from the 1979 Emerald Agreement between the then Premier of Queensland, Sir Joh Bjelke-Peterson and the then Prime Minister of Australia, Mr Malcolm Fraser, prescribed the arrangements under which management occurs. The Queensland National Parks and Wildlife Service have the equivalent of 92 full-time staff involved in day-to-day management in the Great Barrier Reef Marine Park and provide a field presence in the Marine Park. Their role also includes managing Queensland Marine Parks and National Parks in a unique agreement with the Commonwealth in which the capital funding for the first three years or so is provided by the Commonwealth with all recurrent funding and capital funding after the first three years or so and shared on a fifty-fifty basis. The cost of managing the Great Barrier Reef Marine Park is relatively small. Considering the budget of the Great Barrier Reef Marine Park Authority and the Queensland contribution to day-to-day management, the cost per Australian citizen per day works out to be less than a third of a cent for managing the Great Barrier Reef Marine Park.

Day-to-day management of the Great Barrier Reef Marine Park includes a number of functions:

- education and interpretation
- surveillance
- monitoring
- administration

Education and interpretation programs are, the Authority believes, the means for assuring the long-term future and security of the Great Barrier Reef Marine Park. The Marine Park Authority and the Queensland National Parks and Wildlife Service therefore have extensive information and education programs. These programs involve meeting with user groups, publication of brochures, pamphlets, television ads, signage and school programs. A major plank in the Marine Park Authority's education program is the Great Barrier Reef Aquarium which is a naturally functioning coral reef in a tank designed to enable those who cannot, and even those who can get to the Great Barrier Reef, to appreciate the reef without going to sea. Interpretive programs also provide an opportunity for the public to be able to understand management goals and strategies of the Great Barrier Reef Marine Park Authority.

Research and monitoring is also a function of the Great Barrier Reef Marine Park Authority. Under the Great Barrier Reef Marine Park Act, the Marine Park Authority can commission or carry out research which is relevant to the Marine Park. The Marine Park Authority has interpreted this fairly narrowly, particularly as it has a fairly circumscribed research budget and as a result it insists on the commissioning of specific pieces of research to answer specific management questions. Examples of questions which are addressed through the research and monitoring program are:

- determining whether the Cape Tribulation to Bloomfield Road through rainforest had an effect on the adjacent fringing reef;
- determining the effects of fishing on reef fish;
- determining attitudes of users to Marine Park zoning;
- determining the "health" of the reef;
- determining the oceanography of the Great Barrier Reef Region;
- investigating the status of endangered species.

In terms of research, the Great Barrier Reef Marine Park Authority believes that there are three major challenges in the years ahead which it must address. These are crown-of-thorns starfish outbreaks, the effect of nutrients (nitrates and phosphates) on the Great Barrier Reef, and the effects of fishing (particularly line fishing and trawling) on the Great Barrier Reef ecosystem.

Other challenges in the years ahead are attempting, with day-to-day management agencies, to develop more sophisticated methods of management of the Great Barrier Reef Marine Park. It is most unlikely that budgets will increase substantially in the next few years and efforts must be made to continue to take advantage of new techniques and practices.

The other major challenge in the years ahead is to prevent a major oil spill in the Great Barrier Marine Park. The Marine Park Authority has been particularly active in pressing for compulsory pilotage in the Great Barrier Reef Region and was recently achieved and is likely to come into effect in mid-1991. The maintenance and installation of navigation aids, the regular testing of Reefplan, the Oil Spill Contingency Plan, and participation in exercises and coordinating arrangements in the event of a spill are critical.

Conclusion

From this brief view of planning and management of the Great Barrier Reef Marine Park, the important points to note are:

- we are fortunate in that the Great Barrier Reef is located off Australia where subsistence use and other pressures are nowhere near as great as they are in other countries;

- the legislative provisions in the Great Barrier Reef Marine Park Act assist in providing a significant basis for protection and implementation of management provisions;
- the Great Barrier Reef Marine Park Authority has focused very heavily on user involvement in the development and operation of the Great Barrier Reef Marine Park;
- the Great Barrier Reef Marine Park Authority has demonstrated its willingness and preparedness to compromise as long as the objects of the Marine Park Authority are themselves not compromised;
- the Marine Park Authority is very willing to work with other agencies and attempts to demonstrate that it does not wish to intrude in their areas of responsibility providing the conservation of the Great Barrier Reef is assured;
- the Marine Park Authority emphasises the importance of education and information in attempting to inform and persuade people that responsible behaviour in the Great Barrier Reef Region is the most efficient and effective method of operation;
- the Great Barrier Reef Marine Park Authority constantly reviews its procedures and processes, attempts to remove inefficiencies and to introduce new and better methods of operation.

