



## Great Barrier Reef Research News - Special Edition

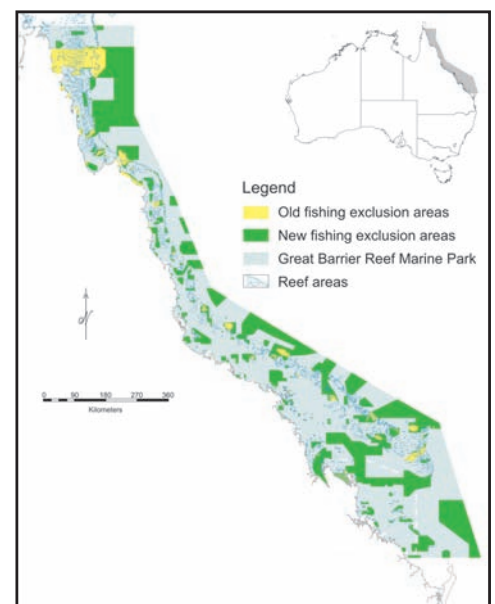
Research Outcomes from the Australian Government's Marine and Tropical Sciences Research Facility

### Attitudes of Recreational Fishers to the Rezoning of the Great Barrier Marine Park Dr Stephen Sutton and Owen Li, James Cook University

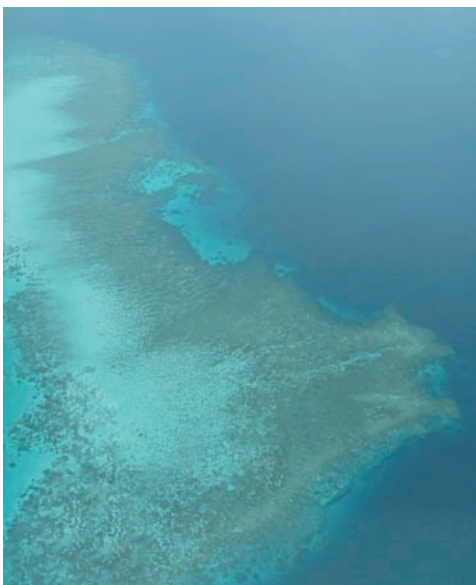
#### Background

The Great Barrier Reef Marine Park (GBRMP) is one of the largest in the world, covering an area of roughly 345 000 km<sup>2</sup>, and extending approximately 2300 km along the north-east coast of Queensland. The Great Barrier Reef Marine Park Authority (GBRMPA) manages the Park with the primary goal of preserving and protecting the ecosystem while allowing for various activities in the area.

In July 2004, GBRMPA implemented a new Zoning Plan for the GBRMP, increasing no-take areas from 5 per cent to 33 per cent of the total Park area. The rezoning was aimed at increasing the level of protection afforded to marine life in the Park. Prior to implementation, a consultation process allowed the public to have input into the size and location of new zones and comment on draft zoning plans. Under the public consultation program, approximately 360 public meetings were held and over 31 000 written submissions were received by GBRMPA.



The new Zoning Plan increased no-take areas from 5 per cent to 30 per cent



Recreational fishing is a popular activity in the GBRMP. With over 180 000 active recreational fishers within easy access of the Park, it could be said that the recreational fishing community was the largest group likely to suffer any negative impacts arising from the increase in no-take areas. However, should the new no-take areas lead to healthier fish stocks, recreational fishers are also the group most likely to benefit.

Unfortunately, the 2004 Great Barrier Reef Marine Park Zoning Plan was controversial among recreational fishers, in part because there was little objective information to confirm or deny the perception that there was a high level of opposition among recreational fishers towards the proposed Plan. Comments by recreational fishers in the media since the rezoning suggest that many are unhappy with the outcomes thus far.

This study, headed by Dr. Stephen Sutton from the Fishing and Fisheries Research Centre at James Cook University, was the first aimed at objectively quantifying the attitudes and perceptions of recreational fishers regarding the 2004 Zoning Plan, the rezoning process, and the costs and benefits of the plan to the recreational angling community. This information will allow for a more accurate assessment of the costs and benefits of the

2004 Zoning Plan, and will help facilitate better engagement of the recreational fishing community in future marine park development and management, both in the GBR and elsewhere in Australia.

Recognising the need for information about social impacts of rezoning the GBR, the Australian Government's Marine and Tropical Sciences Research Facility provides funding for the study (formerly funded by the CRC Reef Research Centre). GBRMPA and the recreational angling community (through Sunfish Qld and CapReef) also lent support and fishing advice.



## Methods Used

The data we needed were collected using both telephone and mail surveys. To get a good sample, 13 435 households within 50 km of the Great Barrier Reef Marine Park were randomly called in February, 2007. Only people who were aged over 15 and had fished in the Great Barrier Reef Marine Park in the previous 12 months were interviewed. Fishers were questioned about how often they fished yearly, the number of years of experience they had, how familiar they were with the 2004 Zoning Plan, and their opinions about the effects of the Zoning Plan on their fishing activity and the sustainability of the Great Barrier Reef. The fishers were also asked their opinions about how effective the consultation program was at considering the concerns of recreational fishers. Eight hundred completed mail surveys were returned.

## Profiling Recreational Fishers

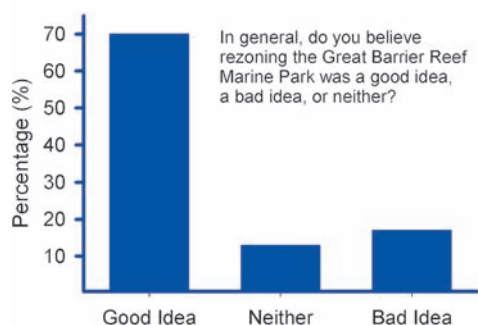
Most of the recreational fishers interviewed were male, between the ages of 31 and 60, with an average age of 43 years. The most common annual household income category was between \$30 000 and \$59 000.

Total fishing experience covered a broad range, from one to 74 years with GBR fishing experience ranging from one to 69 years. On average, recreational fishers had approximately 29 years of fishing experience in total and 23 years fishing experience in the GBRMP itself.

Recreational fishers along the Great Barrier Reef are certainly enthusiastic, with a majority reporting that fishing is their first or second most important outdoor activity and 67 per cent saying that fishing is their most important activity in the Great Barrier Reef Marine Park. Most fishers surveyed averaged 20 days of fishing in total and 14 days in the GBRMP over the previous year. Nevertheless, 73 per cent of fishers reported being either moderately or very satisfied with fishing in the Great Barrier Reef Marine Park.



## What Fishers Thought About the 2004 Zoning Plan



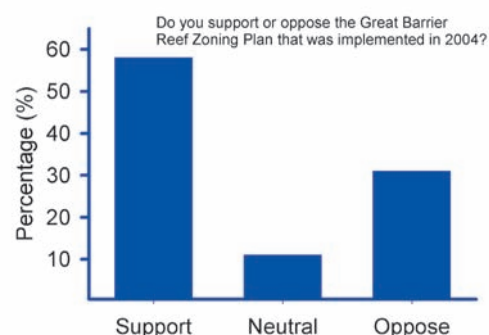
When asked "In general, do you think the rezoning of the GBRMP was a good idea, a bad idea or neither?" most recreational fishers said they thought that the rezoning was a good idea. Only 17 per cent believed that it was a bad idea. When asked about their level of support for the actual Zoning Plan that was implemented in 2004, almost 60 per cent of fishers said they supported it whereas just of 30 per cent were opposed to it.

Fishers were also asked to rate their opinions about the size of each of the GBRMP zoning types in the areas where they fish. Many (47 per cent) believed that there was too much green (no take) zone, 43 per cent believed that there was just enough yellow zone (limited fishing – one hook and line only), 42 per cent believed there was just enough olive zone (buffer zones, limited fishing – trolling only), and 40 per cent believed that there was just enough pink zone (preservation zones – no entry). Just a little under half of those fishers surveyed also believed that there was not enough dark blue (habitat protection – no trawling).

The amount of area covered by yellow zones was increased within the GBRMP as part of the 2004 Zoning Plan. The nature of yellow zones severely limits commercial fishing (i.e. no netting or trawling, limited crabbing, only one line and one hook, and only one dory permitted) while still allowing recreational fishers to fish so long as no more than one line and one hook is used per fisher.

To find out how recreational fishers felt about these zones in particular, a series of questions specifically about yellow zones were asked. Most fishers believed that, generally, yellow zones are a good idea, and also stated that less than 25 per cent of their GBRMP fishing activity over the previous year occurred in yellow zones.

A majority of fishers believe that yellow zones will result in better recreational fishing in the Great Barrier Reef Marine Park. They also believed that the benefits of restricted commercial fishing in yellow zones outweigh the costs to recreational fishers. Interestingly, 41 per cent of fishers believe that yellow zones have also reduced the impact of recreational fishing on the GBR. Very few fishers believe that yellow zones are too restrictive on recreational fishers or commercial fishers.



## Perceived Effects of the Zoning Plan

Fishers were asked a series of questions about what effects the 2004 Zoning Plan has had on their recreational fishing activities, and the quality of their fishing experiences.

When asked about the overall effects of the new Zoning Plan on their recreational fishing activity, 73 per cent of fishers said that the Zoning Plan had either no effect, or a positive effect on their recreational fishing activity.

When asked about specific effects of the Plan on their fishing activity, a majority (68 per cent) said that there was no effect on the number of times they went fishing, the amount of time they spent fishing (67 per cent), size of the fish caught (57 per cent) or the cost of going fishing (55 per cent). A large proportion (47 per cent) also believed that the Zoning Plan had no effect on the number of fish they now catch and were overall still happy about fishing.

Sixty six percent of the fishers surveyed also said that the new plan has indeed increased the protection of marine life in the park and for 52 per cent, their level of knowledge about the Marine Park also increased. However, they also believed that the new plan has increased the number of people fishing in the remaining open areas and that their access to the best fishing areas in the Park was limited.

## A Question of Management

Recreational fishers were asked how they felt about the 2004 Zoning Plan and the management of the GBRMP. Not surprisingly, results show that recreational fishers are generally very environmentally conscious. For example, 77 per cent of fishers agreed that protecting the diversity of marine life is the most important goal of managing the Great Barrier Reef. Fifty nine per cent also agreed that the 2004 Zoning Plan will help ensure the survival of the Great Barrier Reef and was necessary to maintain the Great Barrier Reef in a healthy condition. Additionally, almost two thirds of fishers also agreed that the 2004 Zoning Plan would ensure sustainable fisheries in the Great Barrier Reef. Fifty four percent of participants also did not believe that recreational fishers needed to be compensated for any lost areas.

Despite the general support for the Plan, and positive beliefs about its impacts on GBR sustainability, a substantial number (44 per cent) of recreational fishers disagreed that they were adequately consulted about the 2004 Zoning Plan, and do not trust the Great Barrier Reef Marine Park Authority to consider the concerns of recreational fishers when managing the Marine Park. Many recreational fishers (64 per cent) also felt that they did not receive fair treatment compared to other groups during the 2004 rezoning process.



## Public Consultation Programs

Research undertaken by the Fishing and Fisheries Research Centre in 2006, revealed that public consultation programs may not adequately represent the views of the recreational fisher population. So, to find out how fishers could be better engaged in the management process, they were asked about how they felt about public consultation and specific consultation techniques.

Almost all (97 per cent) of those fishers surveyed believed that government agencies should consult the public about fisheries and marine park decisions. When asked which aspects or outcomes of public consultation programs were most important to them, no less than three quarters of recreational fishers said that consultation programs should follow a process easily understood by everyone; result in the best outcome for the marine environment and should not allow one group too much influence in decision making, thus allowing everyone a genuine opportunity to influence decisions. Three quarters of fishers also believed that community members should be allowed to express their opinions to resource managers and that their local concerns should be incorporated into decisions.

As for techniques that fishers rated as being very useful during public consultation: A large majority believed that public information displays, educational brochures and pamphlets and engagement of recreational fishers in research were all very useful.



## Were Some Fishers More Affected by the Zoning Plan than Others?



To understand whether some fishers were more affected by the rezoning than others, we broke the fisher population down according to two variables. First, we examined whether the impacts experienced by fishers for whom fishing is a very important part of their lifestyle differed from the impacts experienced by 'average' GBR fishers. Second, we looked at whether fishers from different regions (i.e. Rockhampton, Mackay, Townsville and Cairns) experienced different impacts.

Nineteen percent of fishers surveyed rated fishing as a very or extremely important part of their lifestyle. These highly committed fishers are those who spend the most money on fishing tackle, spend the most time out fishing, and catch the most fish. Highly committed fishers were more likely than other fishers to say: a) the Zoning Plan has had an overall negative effect on their fishing activity (48 per cent of committed fishers vs. 27 per cent of 'average' fishers); b) the Zoning Plan has reduced the number of fish they catch (52 per cent committed; 37 per cent average); c) their satisfaction with fishing has decreased (55 per cent committed, 34 per cent average); and d) the Zoning Plan has reduced their ability to access quality fishing areas in the Park (66 per cent committed; 51 per cent average). Com-

mitted fishers were also more likely than average fishers to say that the cost of fishing and the number of people fishing in the remaining open areas on the GBRMP has increased since the 2004 Zoning Plan was implemented.

Consequently, committed fishers were more likely to believe that the Zoning Plan was unnecessary, and were less likely to believe that it would reduce the impact of fishing on the GBR. They were also more likely to believe GBRMPA wasn't doing a good job of managing the GBR and did not consider the concerns of recreational fishers, consult them adequately, or treat them fairly during decision making processes. A high proportion of fishers to whom fishing was very important also reported losing more locations on average than other fishers, and were more likely to compensate by fishing more frequently at their usual locations.

In general, support for the Zoning Plan was lowest among Cairns fishers (48 per cent) and highest among fishers in Rockhampton (66 per cent) and Mackay (60 per cent). Fishers in Cairns were also those most likely to say that the Zoning Plan had a negative effect on their fishing activity; most notably the numbers of fish caught, satisfaction gained from fishing and the amount of time spent fishing. Cairns fishers were also the ones most likely to have lost at least one regular fishing area to the 2004 Zoning Plan, with 65 per cent affirming this in their surveys.

## Conclusions

The survey showed that there is consensus among recreational fishers about the need to protect and conserve the GBR, and that many recreational fishers are strong supporters of Marine Park management. However, many fishers reported experiencing at least some negative effects as a result of the 2004 Zoning Plan; effects which must be considered when evaluating the overall costs and benefits of the 2004 Zoning Plan.

It is also clear that some groups of recreational fishers perceive the costs and benefits of the 2004 Zoning Plan in a different way than the majority. In particular fishers in Cairns and those who consider fishing an important part of their lifestyle, had the least positive attitudes towards the Plan and reported the greatest impacts on their fishing activity. These results are important because they demonstrate that some groups were affected more than others, and that these differences are less evident if we focus only on the impacts on the 'average' recreational fisher.

The survey also demonstrated that the rezoning process and the 2004 Zoning Plan have resulted in a reduced level of trust in GBRMPA amongst recreational fishers. It is likely that dissatisfaction towards the rezoning and consultation process is the reason why some fishers still publically express negative attitudes towards the Zoning Plan and GBRMPA. This reduced trust may be a problem for resource managers when attempting to build and maintain a productive relationship with the recreational fishing community.

Ultimately, the results of this survey underline the need to continue monitoring recreational fishers' attitudes and perceptions in order to fully understand their views on the Zoning Plan and GBR management over time. It is also obvious that maintaining a strong and productive relationship between resource managers and the recreational angling community is extremely important, as is ensuring that all recreational fishers are allowed to meaningfully participate and communicate during the management process.

For more information or to download the entire report please go to [http://www.rrrc.org.au/publications/recreational\\_fishers/](http://www.rrrc.org.au/publications/recreational_fishers/)



**Australian Government**

**Department of the Environment, Water, Heritage and the Arts**



Produced by the Fishing and Fisheries Research Centre for the Australian Government's Marine and Tropical Sciences Research Facility, delivered by the Reef and Rainforest Research Centre. Editor: Ann Penny, Liaison Officer, Fishing and Fisheries Research Centre, James Cook University. Contact: [ann.penny@jcu.edu.au](mailto:ann.penny@jcu.edu.au) Ph. 07 47816365. For more information go to [www.rrrc.org.au/mtsr](http://www.rrrc.org.au/mtsr)