Ecologically Sustainable Fishing in the Great Barrier Reef Marine Park

Position Paper

Australian Government
Great Barrier Reef Marine Park Authority

The Great Barrier Reef Marine Park Authority (GBRMPA) recognises that fishing on the Great Barrier Reef is an important pastime and a source of income for both Queensland coastal communities and the Queensland seafood industry. Viable commercial and charter fishing industries depend on a healthy ecosystem just as Queenslanders rely on a healthy reef ecosystem for recreation and as a source of local seafood. Traditional Owners too are keen to ensure this culturally important resource remains healthy.

The GBRMPA works collaboratively with others including Fisheries Queensland, the Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC), and commercial and recreational fishers to continuously improve fishing gear and methods.

While fisheries management continues to improve, a small number of risks remain which are being progressively addressed.

A multiple use Marine Park

The Great Barrier Reef Marine Park (the Marine Park) was established to provide for the long-term protection of the environmental, biodiversity and heritage values of the Great Barrier Reef while allowing for ecologically sustainable use of the Region. The Marine Park is a multiple-use Park and activities such as tourism, defence training, fishing, recreation, shipping, aquaculture, research and Traditional Use are all socially, culturally and economically important uses of the Great Barrier Reef.

Management of the Marine Park provides for these important activities to continue but does impose limits where necessary to protect the Great Barrier Reef's plants, animals and habitats with an aim to maximise the resilience of the Great Barrier Reef against threats such as climate change.

Ecologically sustainable fishing

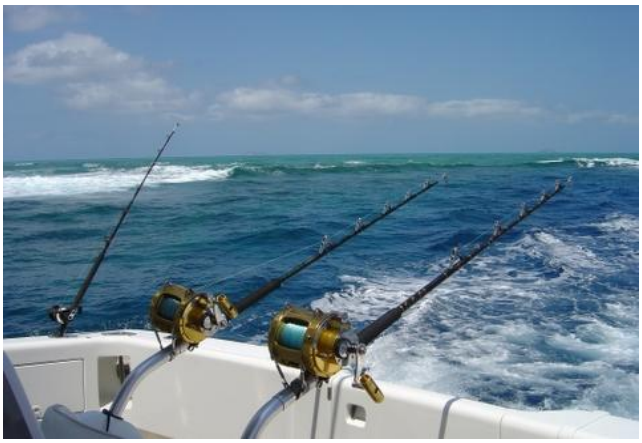
Fishing in the Great Barrier Reef is managed with the aim of being ecologically sustainable.

Considerable improvements have been made in recent years across a range of fisheries in the Great Barrier Reef to improve their ecological performance.

The 2004 rezoning of both the Great Barrier Reef Marine Park (the Marine Park) and the Great Barrier Reef Coast Marine Park, coupled with measures in place such as Dugong Protection Special Management Areas and changes to fisheries legislation, have collectively provided increased protection for a range of fish species taken by commercial and recreational fishers, and improved protection for species of conservation concern such as dugong and turtles.

Fishing on the Great Barrier Reef forms the basis of a commercial fishing industry; provides recreational and tourism opportunities and generates regional social and economic value. Commercial fishing contributed $139 million to the Australian economy in 2006/07 and recreational use (including recreational fishing) contributed $153 million.

Product taken from the Great Barrier Reef is an important component of the Queensland seafood industry, with about 95 per cent of Queensland's reef line fishery, 60 per cent of the trawl fishery, 40 per cent of the net fishery and 40 per cent of recreational fishing taking place in the Great Barrier Reef Marine Park.



Management of fisheries in the Great Barrier Reef

Fisheries in Queensland, including those that occur in the Marine Park, are directly managed by Fisheries Queensland.

Fishing activities are also required to comply with Marine Park zoning and other Marine Park Regulations.

All export fisheries operating in the Marine Park are assessed under the *Environment Protection and Biodiversity Conservation Act 1999* against the Australian Government's Guidelines for the Ecologically Sustainable Management of Fisheries.

The assessments against the Guidelines have brought about important improvements in fisheries management. The assessments are designed around the principles of adaptive management. The conditions and recommendations are developed in close cooperation with the fishery managers to drive continuous improvement and ensure that fisheries continue to be managed in an ecologically sustainable way.

Pressures affecting fishing in the Marine Park

The *Great Barrier Reef Outlook Report 2009* is a summary of the past and present condition of the environmental, economic and social values of the Great Barrier Reef and presents its possible future The first Outlook Report highlighted that the Great Barrier Reef is one of the most diverse and remarkable ecosystems in the world and remains one of the most healthy coral reef ecosystems.

Climate change, continued declining water quality from catchment runoff, loss of coastal habitats from coastal development and a small number of impacts from fishing were identified as the priority issues reducing the resilience of the Great Barrier Reef.

It is clear that there are likely to be flow-on effects from these issues to the communities and industries that depend on the Great Barrier Reef.

The remaining risks associated with fishing in the Marine Park

An independent assessment of the effectiveness of current management arrangements for the Great Barrier Reef was undertaken as part of the Outlook Report. That assessment identified that there have been significant improvements made in reducing the impacts of fishing in the Great Barrier Reef, such as by-catch reduction devices, effort controls, and the introduction of total allowable catches, revised possession and size limits, and increasingly the adoption of tag and release fishing.

The Outlook Report, however, also identifies that although progress is being made towards best practice fisheries management, some risks remain. The key risks identified that are related to fishing are:

- Extraction of top order predators (e.g. sharks) – most predator populations are relatively healthy, but a few species are under serious pressure, with potential flow-on impacts on habitats and other species in the food web
- Incidental catch during fishing of protected species and other species of conservation concern
- Death of non-targeted or discarded (by-catch) species
- Ecosystem level impacts of fishing – each major ecological group plays a role in the complex food web of the GBR ecosystem. Targeting a specific level in the food web, or a specific size class, can have unintended ecological consequences
- Fishing unprotected spawning aggregations
- Maintaining the role of herbivorous fish which are a critical aspect for the health of coral reefs. Without herbivores, macroalgae (or seaweed) can overgrow corals resulting in coral mortality and reduced settlement and growth of new corals.

- Climate change impacts on fishing
- Illegal fishing or collecting (by both domestic and foreign fishing vessels)
- Global changes such as declines in global fisheries production and increasing population growth, and the consequences for Australian fisheries
- Limited information for effective management.

A number of these key risks are of high priority and are currently being addressed by fisheries managers, industry and the GBRMPA. These include:

- Understanding the role of top order predators
- Reducing the incidental catch of protected species and other species of conservation concern
- Minimizing the death of non-targeted or discarded (by-catch) species
- Targeting illegal fishing
- Improving access to management information.

What is GBRMPA's role in management of fishing activities?

The GBRMPA has a responsibility to ensure that all activities in the Marine Park and World Heritage Area are ecologically sustainable. In relation to fishing activities, this includes:

- Maintaining a comprehensive system of highly protected (no-take) areas that are representative of the complex range of ecological communities found in the Marine Park. This is achieved through the Marine Park zoning.
- Working with Fisheries Queensland, research institutions and the fishing community to address any damaging ecological impacts of various fishing activities throughout the Marine Park.
- Working to improve understanding of, and compliance with the management regimes in the Marine Park. This is achieved through public information and education programs, effective surveillance and enforcement programs and the adoption of satellite monitoring and communications technology.
- Commissioning appropriate research, monitoring and assessment to understand any impacts of fishing activities and the status of harvested stocks, non-target species and the ecosystems on which they depend.
- Maintaining and improving communications and collaborative management arrangements with stakeholders including commercial, charter, recreational and Traditional fishers, conservation groups, other community groups and government agencies.
- Working with the industry and the fishing community more broadly, fisheries managers and research institutions to:
    - address the remaining key risks and move towards best practice fisheries management; and
    - identify adaptation measures that will help to future-proof their activities against the impacts of a changing climate.

Related websites

DEEDI - Queensland's commercial fisheries
DSEWPaC Fisheries assessments
Outlook Online

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