

Filleting Nemo

For many indigenous communities, national and marine parks can be significant threats to their hunting and fishing rights

With the rapid loss of wild landscapes in the 19th century, Western nations created 'national parks' to preserve 'wild' landscapes and, in the 20th century, to protect examples of habitat and the species they contain—before they were lost entirely. Early marine parks were established for much the same reason.

In Africa, Asia and central America, national parks were later designed to attract Western tourism revenue and aid. In some instances, they displaced local communities and traditional owners became 'poachers'. For many indigenous communities, national parks and, indeed, marine parks can be significant threats to their hunting and fishing rights.

In Australia, threats by the Queensland State Government to drill for oil on the Great Barrier Reef in the 1980s saw the federal government, in response to a public outcry, establish one of the world's largest marine parks jointly managed with the State government.

Marine reserves were established in Victoria around the same time, though a lack of initial consultation with local communities led to considerable opposition. However, they were eventually established and included most recreational and commercial fisheries. These first marine reserves also protected public (crown) land well above the high-tide mark.

The Great Barrier Reef marine park originally included a series of very small no-take zones for scientific purposes but otherwise accommodated and protected a large commercial and recreational fishery. Though designed to protect the marine environment, the park housed within, and adjacent to it, a number of tourist

development projects that destroyed mangroves and small sections of reef—despite some major conservation campaigns.

Other marine parks based on the 'fisheries inclusive' model were established, like the Solitary Islands marine park on the north coast of New South Wales (NSW) by NSW Fisheries.

Here a co-operative approach with all stakeholders in deciding no-take zones worked well, with additional protection of estuaries some distance inland, while allowing for fishing near small coastal towns.

No-take zones were established through agreement with specific objectives such as the protection of shoreline corals and grey nurse shark. The fishing industry and community guarded 'their' marine park, and local businesses sponsored the management, providing a management vehicle.

Sadly, this marine reserve too was later compromised, with the National Parks Department taking management from the Fisheries Department and adopting a less co-operative and more aggressive approach to management. A large sewerage ocean outfall was also established within the boundaries of the reserve.

Principal threat

By the late 1990s, many marine scientists and various government bodies in many countries had established in the public's mind fishing as a principal threat to fisheries and the marine environment. As fishing rights were privatized and commodified under individual tradeable/transferable quotas (ITQs) and 'days at sea' catch management regimes,

fish species in each country were presented by scientists as threatened by commercial fishing.

This increasing emphasis on 'overfishing' shifted the marine conservation debate away from the protection of the marine environment against pollution and the impact of mining and logging.

In early 2000, the Victorian State government proposed a series of marine parks to 'protect' five per cent of the State's coasts. The proposal was met with Statewide protests. The government negotiated the location of no-take zones under the threat of a potential massive electoral backlash from the unlikely coalition of recreational and commercial fishing communities. They had worked 'outside' the initially soft State bodies and then 'dragged' them along.

The original marine reserves were re-legislated. The new marine parks now allow exploration by seismic testing and drilling, while removing protection for mangroves and salt-marsh on adjacent public land in the original reserves.

These Victorian marine parks did not come about as a result of community campaigns but were imposed. Their value for 'restocking fisheries' became part of the 'spin' used to campaign for them *by government*. Their boundaries,

especially of no-take zones, were chosen by selecting places with the highest recorded catches and assuming a link with biodiversity. These criteria initially saw the targeting of the limited 'lee shores', amplifying the social and economic impact of the no-take zones—and the opposition to them.

Through the late 1990s, representative bodies legislated for both commercial and recreational fishing industries had been replaced by government-appointed bodies. These now included competing interests, with representation from processors, importers and other sectors squeezing out the voices of commercial fishfolk. Even the 'women in industry' body included women from the world of science, wives of managers and so on—hardly fishfolk—thus effectively muffling the voices of women from the traditional owner-operator fleets.

Oil exploration

The Commonwealth established in the late 1990s the National Oceans Office, which established marine parks that allowed oil/gas exploration while banning fishing in distant-water Antarctic territories, targeting the control of international Patagonian toothfish fisheries. In early 2000, it proposed a series of large marine parks approved by State and federal 'appointed industry bodies' for southeastern Australia. These marine parks allow oil and gas

exploration, including seismic testing, with the inclusion of select commercial fisheries, limited by method and not scale—again creating de facto fisheries management decisions.

The management of the Great Barrier Reef marine park too has changed. Select marine scientists seemed to lead the campaign in 2003, with government blessing, to establish no-take zones covering nearly a third of the Great Barrier Reef. The tourism industry, especially the dive industry, was identified as the principle beneficiary. For tour boat and marina operators, implementation of legislation to regulate the containment and discharge of sewerage from boats and ports was further delayed—a far more critical problem than the heavily regulated commercial fisheries.

The Queensland government had run an effective campaign targeting recreational fishing too, educating recreational fishermen to ‘blame themselves’ for catching too many fish in the past, and building on the recent introduction of strict bag limits for select recreational species. The recreational fishing lobby was given some recreational fishing-only areas and were effectively silenced.

The creation of recreational fishing zones had also been effectively used by the NSW government to greatly reduce commercial fishing in estuaries and estuarine lakes in the south. This again re-established the notion that it is fishing alone that principally determines the abundance of fish. The economic justification was simplistic. Fish landed by recreational fishfolk were seen as more valuable to the economy than the same fish caught by commercial fishing—though, in this case, the highest value commercial fishery, sea mullet, is not fished recreationally.

This approach was, in turn, followed by ongoing restrictions of the recreational catch, with limits or bans on the landing of an increasing variety of fish species. Each Australian State is moving towards fully regulating recreational fishing and using it as its principal source of finance for fisheries management. In NSW, recreational licence fees were used for the commercial industry buyout, as they were

in Victoria. Victoria also implemented additional recreational fishing areas, closing a series of coastal lakes suddenly and passing retrospective legislation to stop a single fisherman challenging this decision in court.

The marine park around Ashmore Reef off northwestern Australia was proclaimed without any research or consultation. It was simply assumed that if Indonesian fishermen were allowed to continue to fish there, they would ‘threaten’ turtles and dugong, and so a marine park no-take zone was necessary. Poorly marked, it is a ‘trap’ for Indonesian fishermen. They are prohibited from using navigational aids or motors by the Australian Fisheries Management Authority’s literal interpretation of the ‘traditional fishing rights’ to be maintained as the territory got transferred from Indonesian control. Many fishermen are in Australian jails—around 200 Indonesian fishermen at any one time.

To be sure, marine parks can be useful tools for the management of ecotourism and the marine environment. But, to be effective, they *must* always be created with local community support. The co-operation of the adjacent local communities is essential to their management and small-boat commercial fisheries play a key role in enforcement and *cost-effective* environmental monitoring.

Marine parks without community support or small-boat commercial fisheries are extremely expensive to ‘enforce’. It is very important that the aim of any proposed marine park is widely discussed and clearly presented, and that local communities are genuinely engaged. Marine parks are ‘forever’, so plenty of time must be taken to establish them. People play an essential role in these parks and the ‘hard-hearted puritan’ approach of the urban West—total protection for all species and the exclusion of humans—is impractical, unachievable, and economically, ecologically and socially unsustainable.

Wide variety

If habitat protection is to be used for fisheries management, then it must reflect the actual needs of a wide variety of

marine species. This will likely lead to management of widely dispersed shared habitats like coral reefs, mangroves, salt-marsh and coastal wetlands and the stream and river systems that feed them.

Some of these areas will have to be cleared and drained in the future for agriculture, industry, coastal development and water diversion associated with population growth. These types of habitat and the quality and strength of stream flow must be recognized as important to fish production. Stream flow could also be re-established in areas where fish production is required.


Commercial fisheries, small or large, are an industry and, as such, their management needs an economic, rather than a conservation, framework. The fish production and tourism of a given marine environment generate significant income. This income gives an economic value to all the various components of that marine environment—from the mangroves to corals and the quality and quantity of fresh water flowing to the coast. Inclusive marine parks can provide both a focus for management and a 'boundary' to calculate the economic/financial value of a wide variety of habitat types.

Those who catch fish species that rely directly on these coastal habitats and indirectly (like tuna that feed on the bait fish they produce) benefit most from investing in the management, maintenance and restoration of essential habitats. Such investment in management of coastal habitat feeding into coastal marine environments, funded in part by those who fish in them (or eat the fish) and utilize them for tourism, will enhance their value to all.

Many nations will find themselves at management crossroads in the near future as the demand for, and value of, fish from their waters, and their value as exports, increase. They will have to choose between adapting essentially traditional and regionally evolved fisheries, and catch management regimes with the internationalization of fishing rights. The latter will likely see the gradual loss of fishing rights from

territorial waters under expensive catch management regimes. Local employment may well be limited to deckhands for foreign-owned corporate fleets.

Similarly, poorly planned marine parks may damage the local traditional economy by depriving people of existing rights to harvest the marine environment. Governments interested in export income from foreign tourists who come to watch fish, not eat them, may favour and 'overprotect' marine ecosystems that can easily sustain coastal fisheries and vibrant ecotourism.

Rather than just "finding Nemo" (the title of a Disney animated film that subtly 'humanizes' fish), fisheries and marine park managements must always be clear of the need to also "fillet Nemo" to maintain good health, economic independence and the marine environment. 

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