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# Sportfishing, MPAs, and the Debate Over Management

Discussions of fishing and MPAs often center on fishing for food, whether conducted for commercial or subsistence reasons. But recreation is an increasingly common purpose of fishing activity, particularly in developed nations. Researchers have estimated that hundreds of millions of individuals worldwide fish for enjoyment and sport — sometimes keeping their catches, sometimes releasing them to perhaps be caught again another day.

Like any activity conducted on such a large scale, recreational fishing has effects on the environment. The nature of these effects is poorly understood, however, and the debate over them holds implications for management of sportfishing in MPAs. Many sportfishermen, or anglers, believe they should be allowed to fish where they want, particularly in cases where caught fish are released back to the water. Some scientists and managers believe that even these catch-and-release methods have negative impacts on fish stocks and ecosystems and should be managed as such, including being prohibited from no-take marine reserves. This month, *MPA News* examines the arguments surrounding sportfisheries and how managers are addressing them.

## Freedom to fish

Participation rates in sportfishing vary extensively among countries. (Note: the terms "recreational fishing" and "sportfishing" are used interchangeably in this article.) Published estimates of national participation rates in Europe, for example, range from less than 1% of the population of Cyprus to 42% of Finland. While the concept of fishing for fun, not food, remains a relatively alien concept in many parts of the world, it is spreading via the increased tourism of anglers, who are seeking new sportfish and fishing grounds to target (see box, *Sportfishing in the Galápagos Marine Reserve*, p.3).

In several developed countries where recreational fishing is already popular, anglers and the industries that support them — namely gear and boat manufacturers — have organized to form national associations, which lobby government in support of the activity. While some of these organizations, like the European Anglers Alliance (http://www.eaa-europe.org) with a reported five million members, have not yet declared their stance on the subject of no-take marine reserves, others have been active in working to influence national policies on MPAs and the planning of individual reserves. Processes to designate no-take areas in the Florida Keys and Channel Islands in the US (*MPA News* 1:1 and 4:6, respectively) and the Great Barrier Reef in Australia (5:10) each involved extensive consultation with recreational fishing groups, as well as opposition and threats of litigation from anglers who disagreed with the final results.

Some of the largest and most active saltwater sportfishing groups are in the US, including the American Sportfishing Association (http://www.asafishing.org) and the Recreational Fishing Alliance (http://www.joinrfa.org). These groups estimate that marine recreational fishing contributes more than US$30 billion to the US economy each year, while supporting nearly 300,000 jobs in the manufacturing, retail, and service sectors. The 2002 designation of no-take areas in the Channel Islands National Marine Sanctuary — carried out over the objection of sportfishing representatives on an official planning committee — became a rallying cry for some US angler organizations. These groups said resource managers and environmentalists were trying to take away sportfishers' favorite fishing areas. They advocated that sportfishers fight back.

This helped fuel support for legislative bills intended to pre-empt the closure of popular fishing areas. Collectively referred to as the "Freedom to Fish Act" and introduced to the US Congress and 12 state legislatures in recent years, the bills have sought to disallow closure of areas to recreational fishing (and, in some cases, commercial fishing) unless such fishing is proven to have contributed to a particular conservation problem, like low fish populations. In the event that a closed area is absolutely necessary to correct the problem: (a) the closure will be made as small as possible; (b) science-based benchmarks will be established to measure progress toward conservation; and (c) the closure will be reopened once the benchmarks are reached. The Freedom to Fish Act in various forms became law in the state of Rhode Island in 2003 and Maryland 2004, and — although not yet passed elsewhere — has been regularly reintroduced to other state legislatures and the US Congress.

Observers of the Freedom to Fish Act argue it sets too high a standard for designation of no-take marine reserves, namely by requiring that sportfishing be

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proven as the cause of a specific conservation problem. Bob Warner, biologist at the University of California at Santa Barbara (US), says science has a hard time proving anything conclusively, particularly in the dynamic realm of oceans (a challenge, incidentally, that also emerges in the study of reserve effects on adjacent fisheries [*MPA News* 6:9]). "For 'proof' of an effect, the closest we can get are controlled experiments," says Warner. For proper controls, the experiment would require data gathered before and after a full closure, a process that could require years of study to account for natural fluctuations in local conditions and species of interest. There would also need to be rigorous data on recreational catches — difficult to gather due to the relatively decentralized nature of the activity. With proof of causation so hard to show, says Warner, the Freedom to Fish Act would make it nearly impossible to establish marine reserves. Several US-based environmental NGOs have teamed up to contest the Freedom to Fish legislation, forming an umbrella organization — the Coastal Ocean Coalition — to lobby against it (http://www.coastaloceancoalition.org).

In states where the legislation has been passed, lobbying efforts to oppose it have managed to dilute some of its requirements. In the state of Rhode Island, for example, where the legislation has been in place for nearly two years, the law allows the state director of marine fisheries to designate no-take reserves via emergency rule in cases where he or she "deems it necessary", without having to demonstrate proof that sportfishing caused a particular problem.

Mark Gibson, deputy chief of marine fisheries for the Rhode Island Division of Fish and Wildlife, says this special allowance will enable managers to designate reserves. "I doubt that the Rhode Island legislation will have much impact on fishery management," he says. At the same time, he adds, he does not see reserves as being a frequently used tool for Rhode Island. "No-take reserves might be useful in the event that sensitive, essential fish habitat needs to be placed off-limits. Other than that, though, we already have tools to control fishing mortality. So I want to keep the option of reserves open, but don't see it being used often."

Gibson agrees with Warner: proving that sportfishing (as opposed to commercial fishing or pollution or climate change) has caused a particular conservation problem is difficult. He says that, in the end, it is the cumulative total of dead fish that matters. "When mortality needs to be reduced, all sectors need to contribute to conservation in proportion to their catch allocations," he says. "If a closure is the necessary course of action, it needs to apply to all fishery sectors. We may be able to improve on this in the future if we can develop real-time monitoring capability for the recreational sector. With pre-assigned quota shares, it might be possible, for example, to close a commercial fishery in a certain area but let the recreational fishermen continue if their quota is available."

### Sportfishing views on marine reserves

In researching this article, *MPA News* spoke with officials from several recreational fishing organizations worldwide. Their views regarding no-take marine reserves varied. Below are comments from two, in their own words:

**Frank Prokop, President, Recfishwest, Western Australia (http://www.recfishwest.org.au)**

"In Australia, recreational fishers support [multi-use] marine parks. We also support no-take zones: there are some justifications for their creation and there will be situations in which these justifications outweigh the loss of amenity to recreational fishers. However, this does not automatically translate into acceptance of prescriptive protection of 30-50% as no-take. [...] There has been a tendency among managers to put no-take zones in the highest-use areas, which is 'in your face' management. Also, the provision in Western Australia of commercial fishing compensation provisions, combined with the political leverage of the minerals exploration industry, has meant that the majority of no-take areas have [impacted most heavily upon] recreational fishing."

**Ryck Lydecker, Asst. Vice President of Governmental Affairs, Boat Owners Association of the US (BoatU.S.), US (http://www.boatus.com)**

"Roughly 60-65% of our members are self-identified as anglers, of 590,000 members in total. In the US, I guess that would make us the biggest dog in the fight on reserves — if we chose to fight, that is. Every time that I write in our magazine on the subject of marine reserves, I receive letters from BoatU.S. members on both sides of the issue. I would say a majority of them do not favor reserves, but some do. Partly as a result of this, we have not taken an official position on the topic. However, what does concern us about reserves — or MPAs or whatever you want to call them — is whether they will create a slippery slope toward no-access zones, where not even boating is allowed. That is when we'll step into the fray."

### Effects and effort of sportfishing

What impacts does recreational fishing have on the marine environment? The question is central to management of the activity. In cases where fish are commonly retained by anglers, some impacts can be similar to those of commercial fishing; namely, local reductions in those fish populations may occur if catches are significant enough. In cases where catch-and-release methods are used, various studies over the past decade have documented the potential for mortality or increased vulnerability to predation experienced by fish following their capture, unhooking, and release. Post-release mortality rates can be affected by such factors as hook location in the fish, handling time, angler experience, and species of fish, among others. Fishing line and hooks can also snag on habitats or be discarded, creating hazards for wildlife and ecosystems. (These effects are referenced in: Schroeder, D.M., and Love, M.S. 2002. Recreational Fishing and Marine Fish Populations in California. *California Cooperative Oceanic Fisheries Investigations Reports*, 43:182-190. The paper is available online at http://www.id.ucsb.edu/lovelab/Schroeder_Love2002.pdf.)

In a paper published in the 24 September 2004 issue of *Science*, a research team studied data on commercial and recreational landings from the past two decades in the US, and concluded that sportfishing was responsible for the majority of landings of some high-value, overfished species (*e.g.*, red drum, bluefish, red snapper). Led by Felicia Coleman of Florida State University, the researchers calculated that sportfishing had accounted for roughly 22% of total landings of overfished stocks in

US waters over that time period. These figures did not include estimates of mortality related to catch-and-release. (Michael Nussman, president of the American Sportfishing Association, responded to the study in a letter to *Science*, published 11 March 2005. He said that although sportfishing does account for a significant share of the catch of some overfished stocks, these stocks "arrived at their current condition through years of commercial overfishing" — not recreational fishing — and that the greatest obstacle to recovery of at least one of the species was bycatch of juveniles by commercial shrimp trawlers.)

A study in the journal *BioScience*, published September 2004, went a step beyond the Coleman group's research by examining the global impact of recreational fishing. Steven Cooke of the University of British Columbia (Canada) and Ian Cowx of the Hull International Fisheries Institute at the University of Hull (UK) estimated that roughly 11.5% of all humankind fishes recreationally, harvesting 11 million metric tons of fish each year. (These figures reflect both inland and marine sportfishing.) Cooke and Cowx acknowledge, however, that their estimates are fraught with assumptions, and hope that the uncertainty and limitations associated with them will encourage global recording of recreational fishing statistics. Few countries require recreational fishing licenses and even fewer collect regular data on capture, harvest, and release.

Cooke says he would also like to see more research on the compatibility of recreational fishing with MPAs. "Unfortunately, there are few fisheries where sufficient data exist to ensure that recreational fishing activity is indeed compatible with the goals of most protected areas," he says. "I see a need for research on two fronts if we are to consider the possibility of enabling recreational anglers to fish within protected areas: (1) species- and region-specific assessments of the full impact of angling activities, including direct effects on fish and effects on associated habitats and ecosystems, and (2) greater understanding of the human dimensions of protected areas, being that what we are really talking about are socioeconomic issues — that is, what will displaced fishers do if provided with no fishing opportunities?"

Cooke is now conducting research in the Bahamas to examine whether lodges and guide services could serve as a source of alternative employment for local commercial fishermen displaced by no-take areas. In other words, if sportfishing is found to be compatible with the biological goals of these closures, then perhaps it could be allowed inside them, thus providing locals with employment that is environmentally sustainable. "One of the big questions for this study is what criteria should be used in determining whether recreational fishing is a compatible activity within protected areas," he says.

Across the world on Rottnest Island in Western Australia — a popular recreational fishing location — the topics of sportfishing effort and MPA compatibility have both been examined. Resource managers for Rottnest Island Reserve (a multi-use protected area with roughly 38 km$^2$ of marine area) are working with stakeholders to plan new management zones, including no-take areas for recreational fishing and other zones to address user conflicts. In an ongoing process, managers and stakeholders have been working to site the no-take areas where they will cause minimal impact to recreational fishing while also encompassing representative areas for biodiversity conservation.

To help determine how many Rottnest Island anglers are active in the shore-based fishery and where they go fishing, Lynnath Beckley of Murdoch University (Australia) used surveys to document their spatial and temporal distribution. She and post-graduate student Claire Smallwood also collected data on target species, catch composition, and angler demographics, among other criteria. They found that more than 70% of shore-based anglers were fishing in the populated eastern part of the island. Thus, biodiversity conservation measures along the remainder of the coastline would affect a relatively small proportion of the shore-based anglers. "In Thomson Bay near the settlement, it would be inappropriate to create a sanctuary zone as most of the fishing effort is in this region," says Beckley. "Out at the western end of the island where relatively few people fish, it would not affect too many people." Managers are using her data in their planning.

## Sportfishing in the Galápagos Marine Reserve

For four days in February 2005, an international billfishing tournament was held in the 140,000-km$^2$ Galápagos Marine Reserve. Initiated by an elected official in the archipelago and sanctioned by the International Game Fishing Association, the catch-and-release tournament attracted 15 boats from Galápagos and elsewhere, and recorded nearly 1600 "strikes" on marlin in four days. By all accounts, it was an impressive event. The only problem was, the sportfishing industry — involving the exchange of money for rental of boats, guides, etc. — is not allowed in the Galápagos Marine Reserve.

Specifically, the industry is not allowed until a regulatory protocol is established for it, a responsibility of the Galápagos National Park Service. And although sportfishing in Galápagos is described as a potentially permissible activity under the marine reserve's 1997 management plan, no regulations for it have yet been crafted. Thus, as reiterated in a declaration by the Ecuadorian environment minister in March, the sportfishing business remains off-limits. Fishing recreationally with no exchange of money is allowed, although it is of little use to businesspeople and is relatively uncommon.

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Charter boat operators, who want to develop the marlin-rich reserve as an international sportfishing destination, are frustrated it has taken so long for regulations to be created. Braden Escobar, president of charter operator Ecuagringo S.A., has been working for years to convince the park service to craft regulations. "The park service has pretended we don't exist," he says. "Meanwhile, artisanal Galápagos fishermen who could be working in sportfishing continue to practice shark finning and fishing for sea cucumbers."

Development of a local sportfishing sector as an alternative livelihood for local fishermen, thereby reducing stress on Galápagos marine resources, is indeed prescribed in the reserve management plan. ("Artisanal" commercial fishing by locals is allowed in the reserve. Its management has been a major source of contention for years, resulting in several sometimes-violent protests against the park service by fishermen [*MPA News* 5:8] and recent pressure on managers to allow long-lining.) Under the 1997 plan, the main reason for establishing a sportfishing industry in Galápagos would be to benefit the local community.

But the global sportfishing sector — a capital-intensive industry requiring special boats, high-tech gear, and international marketing — is not easily entered by those with little experience or contacts. Thus, if or when the industry is eventually allowed in the reserve, it will be "outsiders" (businesspeople from the mainland or elsewhere) who have the ability to operate sportfishing charters there, at least initially. Escobar says this should not be a concern. "No other tourist operation in all of Galápagos contributes as much money to the local economy with as small an operation as we do," he claims, adding that sportfishing — even when managed by outsiders — provides some jobs to local fishermen. Escobar acknowledges taking customers fishing in the reserve since 2001.

Tim Choate, president of US-based charter operator Artmarina, says building a locally based sportfishing sector in Galápagos will require outsiders' boats and knowledge. "Even if the park service regulates that all companies have to be owned by locals, everybody is aware that outsiders' boats will come in and be registered under names of people in the islands," says Choate. "The locals will have to learn not only how to fish for marlin but also how to handle customers. That includes learning some English and how to treat someone who is paying US$2000 a day to go fishing." He suggests it would make sense for outsiders to retain operational control of sportfishing enterprises until locals have enough capital to purchase their own boats and have established their knowledge base of the industry.

Graham Watkins is executive director of the Charles Darwin Foundation, which advises the park service on scientific and conservation matters. He emphasizes the importance of sportfishing being developed as a sustainable, low-impact, alternative source of employment for local fishermen. In other words, if sportfishing does not help to reduce the stress on marine resources related to artisanal fishing, it will not be worthwhile to the reserve. "This issue is the major concern with respect to introduction of sportfishing in Galápagos," says Watkins. "Mechanisms will be required to ensure effective, sustainable business development through partnerships between local fishermen and the private sector." He says a consultant has been working with local stakeholders to develop a proposal for regulating sportfishing. The proposal, says Watkins, will be discussed in the local participatory management forum later this year.

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## Letter to the Editor

**Dear *MPA News*:**

I was surprised by the Georges Bank scallop example cited by both Halpern and Agardy (*MPA News* 6:9) in their recent pieces on the fisheries benefits of marine reserves. At first I thought I had missed something, so I looked at the evidence Halpern cited (*MPA News* 2:3). The cited article specifically says the jury was (is?) still definitely out on whether the observed year/s of high recruitment in areas around the Georges Bank closures are really due to the closures or just happened to be good recruitment periods (for example due to climate, etc). That is consistent with what I also remember having heard from scientists who work on Georges Bank. Recruitment is notoriously variable, and the stock-recruitment relationship notoriously weak, so can we attribute scallop recruitment variability in this case to a single cause — even when there are good reasons to expect enhanced recruitment such as increased spawner biomass and Allee effects? I would like to hear from the experts on Georges Bank about what is really happening.

Halpern and Agardy are not the only ones citing this as an example, and I think it is important that we have an open discussion about how we deal with this type of phenomenon (I won't yet say evidence). The precautionary principle does not apply equally in the worlds of management and science. If the evidence is equivocal, as *MPA News* 2:3 states, what research can be done to provide a clear answer to this question?

**Russ Babcock**

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# MPA Profile The Seaflower MPAs, Colombia: Cooperative, Consensus-Based Planning with Stakeholders

**Designated:** 2004

**Description:** These are three adjoining, multiple-use marine protected areas, totaling 65,000 km$^2$, in waters of Colombia's San Andrés Archipelago in the southwestern Caribbean. The archipelago as a whole is a UNESCO biosphere reserve (designated 2000), and comprises 300,000 km$^2$ of marine area.

**Legal status:** The three MPAs are the first official "Marine Protected Areas" under Colombian law. Other types of protected marine sites also exist in Colombian waters, although primarily as part of otherwise terrestrial national parks.

**Planning:** The four-year process of mapping and zoning the Seaflower MPAs has been cooperative, involving local stakeholder groups (fishers, dive tourism operators, and others) and CORALINA, a regional Colombian government agency with oversight of the natural resources and sustainable development of the San Andrés Archipelago. Decisions are based on consensus (see box).

**Management:** A co-management structure will be responsible for day-to-day decisions. In the process of being established, the structure will include CORALINA officials, community commissions, and scientific advisory committees. Regional management offices will be located on the inhabited island nearest each of the MPAs.

**Types of zones:**

- No-entry — use is restricted to research, monitoring.
- No-take — allowing a variety of non-extractive uses.
- Artisanal fishing — for use by traditional fishers only.
- Special use — for specific uses identified during MPA planning, particularly where there is high potential for conflicts, such as ports, marinas, or heavily used recreation areas.
- General use — where minimal restrictions apply to protect water quality and preserve MPA system integrity.

**Objectives of the MPAs:**

- Preservation, recovery, and long-term maintenance of species, biodiversity, ecosystems, and other natural values.
- Promotion of sound management practices to ensure long-term sustainable use of coastal and marine resources.
- Equitable distribution of economic and social benefits to enhance local development.
- Protection of rights pertaining to historical use.
- Education to promote a sense of stewardship and community involvement in management.

**Habitats:** Barrier and fringing reefs, patch reefs, atolls, seagrass beds, mangroves, deep water.

## Insights on the Seaflower MPA zoning process: Marion Howard

Marion Howard is former coordinator of the MPA project of CORALINA, the regional Colombian government agency that oversees natural resources and sustainable development of Colombia's San Andrés Archipelago. Now an MPA advisor to the agency, Howard describes the process of zoning the Seaflower MPAs, below:

"The community has had final decision-making authority on zoning. To allow for this, CORALINA designed a flexible process that was carried out for each of the three MPAs. First we met with user groups, which had already been involved in mapping the MPAs and had been identified through a stakeholder analysis. Each group produced zoning plans based on its knowledge and needs, and CORALINA entered these maps into a GIS, overlaid them, and produced alternatives. The agency's MPA project team evaluated and fine-tuned each alternative to ensure it was faithful to community planning and zoning criteria.

"CORALINA also gathered information on the value that each stakeholder group placed on the various kinds of zones, another factor in evaluating alternatives. This work, funded by the European Union, was done simultaneously for the Galápagos Marine Reserve by the Charles Darwin Research Station (CDRS). CDRS and CORALINA supported each other. (There was temporary zoning in place in the Galápagos, and CDRS was evaluating how effectively it served users' values and priorities.)

"Next, the alternatives were reviewed by CORALINA's MPA international advisory board, primarily for conservation effectiveness. This board consists of planners, managers, social and biological scientists, and legal and policy experts from around the world, volunteering their time to the project (*MPA News* 5:2). Members have an advisory role but are not involved in decision-making. CORALINA made adjustments and produced final alternatives consistent with the board's recommendations without compromising the objectives, criteria, or participatory process, and while implementing ongoing input from the community. Finally, CORALINA took the alternatives back to the user groups in plenary. Plenary meetings continued until an alternative for each MPA was chosen by consensus."

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**Editor's note**

Magnus Johnson is head of the Scarborough Centre for Coastal Studies, University of Hull (UK). For readers interested in the scientific literature he cites in this essay, a version containing literature citations is available online at *http://depts.washington.edu/mpanews/johnsonlitcite.htm*.

# MPA Perspective Deep-Sea Vents Should Be World Heritage Sites

**By Magnus Johnson, University of Hull, UK**

I am not someone who would be termed an ardent supporter of MPAs. I worry that they are too easy a tool for administrators to apply to any resource or conservation problem. To a non-biologist (and even to some biologists), the attractions of the erroneous equilibrium paradigm are such that a superficial understanding of what an MPA can do may discourage any consideration of alternative and more appropriate — though perhaps more difficult to implement — methods of resource husbandry or conservation.

That said, in the case of hydrothermal vents I can see that there could be a need for exclusive protection. Hydrothermal vents are discrete and startlingly different deep-sea habitats. Rather than the high-diversity, low-biomass environment that makes up 99.9% of the deep-sea, hydrothermal vents are crammed full of life mostly comprising a few endemic specialists. Membrane structures and even DNA from some vent species have evolved to be thermostable at temperatures approaching 100°C (Van Dover, 2000). The particularly hostile conditions mean that hydrothermal vents naturally create their own exclusion zone.

Their spectacular visual nature, exciting ecology, and possibilities for novel biological products draw biologists to these vents. This has unfortunately resulted in unregulated scientific activity at some of the best-known vent sites. Ironically, the Worldwide Fund for Nature has highlighted scientists as the main culprits with regard to disturbance of these habitats. Herring *et al.* (1998) provided evidence that the bright lights of submersibles were likely to be blinding large numbers of the vent shrimp *Rimicaris exoculata* with unknown consequences.

Notably, Canada has granted official protection for its Endeavour Hydrothermal Vents site (*MPA News* 4:9). However, despite Canadian officials' acknowledgement that the principal human impact on this deep-sea ecosystem comes from extraction of scientific samples, research will still be encouraged at the site, though requiring formal permission.

I have raised these issues to the scientific community (Johnson 2001, 2005) and have suggested that the community get its house in order. In a published response to a recent article of mine in *Nature*, researchers (Tyler *et al.* 2005) suggested that the scientific community has nothing of which to be ashamed regarding vent research, and pointed out that there is a draft code of conduct under consideration by InterRidge, the organization that coordinates international studies on mid-ocean ridges (http://interridge.org). Considering that the first hydrothermal vent site was discovered in 1977 (Gage & Tyler, 1991), it seems unfortunate that after 28 years the scientific community — the main user of hydrothermal vents — has only reached the stage of discussing an unpublished draft code of conduct.

The logic of Garrett Hardin's "tragedy of the commons" applies as much to scientists working on hydrothermal vents as it does to coastal fishers or cows on a pasture. The scientific community is driven by the need to be productive in the short term — to secure funding and generate publications — rather than conservationist in the long term. It could be argued that since the scientific community is attempting to foist sustainable resource management and MPAs on the rest of the world, it has a moral obligation to set an exemplary standard.

There is a need for robust international legislation to rein in narrow and short-term scientific agendas. I suggest that hydrothermal vents should become World Heritage sites and that there should be strict limits on the number of times a few selected sites may be visited. Moreover, prior to any scientific activity, proposals should be reviewed by a broad-based international panel consisting of conservationists, politicians, and academics.

### For more information

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# Notes & News

## IMPAC1 update

The organizing committee for the First International Marine Protected Areas Congress (IMPAC1) is finalizing the draft congress program: 235 abstracts (out of the 630 initially submitted) were requested to prepare expanded versions. It is anticipated that approximately 170 of these will be invited to present papers in the final congress program, to be announced in late May. IMPAC1 will be held 23-28 October 2005 in Geelong, Australia. Early registration is open until 10 July. For more information, visit the IMPAC1 website at http://www.impacongress.org.

## Website: information on Great Barrier Reef re-zoning

The process of re-zoning the 344,000-km$^2$ Great Barrier Reef Marine Park required years of public consultation and planning by officials (*MPA News* 5:10), culminating in July 2004 when the new zoning plan took effect. Lessons from this planning effort may be adaptable to other MPA-planning processes worldwide. The Great Barrier Reef Marine Park Authority has launched a website with links to information on all features of the re-zoning process, including biophysical operating principles, socioeconomic evaluations, a financial assistance program for stakeholders affected by new closures, and more. The website, to be updated as additional information is prepared and further papers are written, is at http://www.gbrmpa.gov.au/corp_site/management/zoning/planners_info.html. Any comments or suggestions to improve the information may be e-mailed to Jon Day, GBRMPA director of conservation, at j.day@gbrmpa.gov.au.