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Can Anglers Manage Themselves?

New Ideas for Recreational Fisheries Management

Robert J. Johnston and Jon G. Sutinen

Bobbi Walker's property is surrounded by towering hickory trees on the coast of Orange Beach, Alabama. This modest plot of land contains both her home and the small office from which she and her family operate a charter fishing business. Much of her business relies on red snapper—a popular fish with both recreational anglers and commercial vessels. Although she is dismayed to see the sprawl of new condominium developments surrounding her property, she has no plans to leave. As long as there are fish and anglers who wish to catch those fish, Walker plans to keep operating in the Gulf of Mexico. When she talks about her plans, she speaks as an angler, a business owner, and as a member of the Gulf of Mexico Fishery Management Council.

Like many in the Gulf region, Walker is concerned with the red snapper fishery. She believes that most recreational anglers comply with guidelines regulating red snapper fishing, but that they are concerned with many aspects of management. It is quickly apparent that anglers in the red snapper fishery are concerned with a wide range of issues, including the quantity and size of fish allowed for commercial take, uneven data regarding recreational harvests, a perceived inability of existing size and bag limits to curtail mortality, and a seasonal closure subject to considerable disagreement.

At first glance Gulf of Mexico red snapper, mid-Atlantic red drum, mid-Atlantic summer flounder, and New England striped bass seem to have little in common. However, these fisheries all share a similar challenge—competition between commercial and recreational fishers. Many fisheries in the U.S. support significant commercial and recreational activity. However, recent expansion of combined recreational and commercial fishing effort has placed fish stocks under substantial pressure in several important fisheries. Fish populations are squeezed between their popularity in fish markets and their status as a favorite among recreational anglers. For example, between 1990 and 2000, commercial harvests of red snapper nearly doubled, while recreational harvests more than tripled. State and federal regulators have responded by tightening regulations on both commercial and recreational fishers. On the recreational side, this has often meant shortening open seasons, reducing bag limits, and increasing minimum sizes. However, pressure on these popular species continues to increase.

Many of these fisheries also share a second feature: an increasing dissatisfaction among recreational anglers with one-size-fits-all management measures. Saltwater recreational fishing restrictions are often applied over large geographic scales. Regulations are criticized for failing to address important differences among regions or types of fishing. In addition, anglers often feel that their input has little influence on management.

For example, since 2000 the Gulf of Mexico Fisheries Management Council (GMFMC) has set the open season for the recreational red snapper fishery at 194 days, running from April 21 to October 31. While this season may be fine for some year-round residents, it effectively closes the fishery to "snowbirds," or part-time residents who arrive in Gulf

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of Mexico communities during the popular winter and spring break fishing seasons. Even during the busy summer season, half of the recreational red snapper harvest is thrown overboard to comply with bag and size limits. While these released fish do not count against the "official" recreational quota, the stress of capture leaves many dead or subject to easy predation by sharks or dolphins. Indeed, some anglers describe current bag and size limits as akin to a "feeding program for dolphins," with little impact on snapper mortality. Such management shortcomings have led to frustration among many red snapper anglers and charter operators.

Is there a better way to manage popular recreational fisheries? Recent experience in commercial fisheries has shown that *rights-based management approaches* (individual fishing quotas, or IFQs, are among the best known) are able to promote sustainable management of fisheries and generate increased wealth for fishery participants. Commercial experience has also suggested the benefits of fishery *co-management*—or sharing management authority with those fishery participants who are subject to regulations. Co-management can in many cases increase voluntary compliance with fishery regulations, decrease enforcement costs, and increase stakeholders' satisfaction with management. A combination of these two concepts—rights-based co-management—may offer a solution to challenges in recreational fishery management.

Recent collaborative work among the University of Connecticut, the University of Rhode Island, and the nonprofit group Environmental Defense has suggested a novel alternative for improving recreational fisheries management. This alternative would incorporate rights-based management concepts, and would place more management authority in the hands of recreational anglers—allowing anglers the authority to devise management measures most appropriate for their local regions and the species they target.

Can recreational fishermen manage their own fisheries, in cooperation with government authorities? What would happen if we allowed recreational anglers the ability to organize into self-managing cooperatives? The possibility raises several more questions:

Can Recreational Anglers Really Manage Themselves?

Management authorities have already developed group and community-based management alternatives in US commercial fisheries. For example, The Pollock Conservation Cooperative (PCC) is made up of several companies eligible under the American Fisheries Act to harvest and process pollock in Alaska. Experience has shown these cooperatives to be effective at sustaining fishery resources and increasing returns to fishery participants. Although there are important differences between recreational and commercial fisheries, there is no reason to expect that similar principles would not apply to recreational fisheries. With this in mind, the collaborative work group devised the idea of the Angling Management Organization, or AMO.

An AMO, simply put, would be a large, organized group of recreational anglers who would jointly manage a specific recreational fishery, in a specific area. It would give recreational anglers the ability to cooperatively manage their own fisheries, within limits set by fishery management authorities. For example, for Gulf of Mexico red snapper, one might establish two AMOs—one for the eastern Gulf and one for the western Gulf—allowing management to better fit the needs of anglers in the two distinct regions.

How Would an AMO Work?

AMOs would function much like a commercial fishing cooperative, with recreational anglers acting as shareholders. These shareholders would elect a managing board, which would make decisions for the AMO. AMOs would be established in coordination with the appropriate Fishery Management Council, such that each AMO would have the exclusive right to manage recreational angling for a particular species, in a particular area. Government authorities would determine the annual harvest quota, or right, that would be granted to each AMO. In addition, most management authority currently in the hands of government regulators would be provisionally granted to recreational anglers themselves, as represented by AMOs. This is the key feature of AMOs—recreational anglers would be given the ability and responsibility to address their own management challenges.

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photo: Environmental Defense

Red snapper is a popular catch for commercial and recreational fishermen alike. Management shortcomings have led to frustrations among many red snapper fishers.

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Members of the AMO would have a renewable right to manage their quota. However, one would not have to be a member of an AMO in order to participate in the fishery. That is, ownership of an AMO share would offer the right to influence management of the fishery, not the right to harvest the quota itself. Indeed, AMOs would be required to offer equal fishing access to any interested angler.

The quota provided to an AMO would be renewable each year as long as the AMO did not violate its allowable harvest. Each AMO would have the exclusive right to determine how its quota would be used and managed. An AMO might sell licenses or fish tags, hold tournaments, set open and closed seasons, or choose any other of a range of available management measures to ensure that anglers did not exceed the allowable quota. Almost any management method would be allowed, as long as it provided equal access to the fishery to all interested participants. If fishery stocks became more healthy, federal regulators could reward the AMO by increasing the allowable harvest right. However, if an AMO were unable to successfully manage harvest or otherwise abused its management authority, management authority would be revoked.

photo: Environmental Defense

Captain Russell Underwood discusses the red snapper fishery with Environmental Defense biologist Pamela Baker.

Initially, shares in AMOs would be distributed through an equitable process to current recreational anglers. Once an AMO was established, any person could become a shareholder simply by purchasing shares from existing shareholders, much like one would purchase stock in a private company. Hence, membership in any AMO would be open to any interested party. Rules would be established to limit share ownership by any one party—such that no single entity could "buy up" excessive control of an AMO.

Would Taxpayers Finance AMOs?

No. AMOs would be largely self-financing, such that the taxpayer cost of management would actually decline. How would this happen? AMOs would be free to raise funds from use of their harvest quota. For example, an AMO might sell individual fishing licenses or tags that would be required for every harvested fish, charge tournament entry fees, or collect revenues from charter operators in return for certain harvest rights. These monies would allow the AMO to operate—funding enforcement activity, data collection, scientific research, and fisheries enhancement projects—and could also be returned to AMO members as a profit or dividend. This profit motive could provide additional incentives for AMO members to sustain healthy fish stocks, such that greater future harvests might be obtained.

If AMOs Are Controlled by Anglers, Won't They Allow Too Much Fishing?

An AMO's right to its harvest quota would only be renewed as long as it was successful at maintaining harvest within allowable limits. If an AMO were to repeatedly allow "too much" fishing, its management rights would be revoked, management authority would revert to the government, and all shares in the AMO would become worthless. This would provide a strong incentive for AMOs to provide effective management, and to maintain harvest within allowable limits.

Could AMOs Establish Fishing Rules that Would Limit Fishing to Exclusive Groups?

No. If an AMO did not allow equal fishing access to all groups, its quota would be revoked. While an AMO would be free to establish fees for various types of fishery access, it would not be permitted to establish fees that would eliminate fishing opportunities for less wealthy anglers, or anglers of particular socioeconomic groups.

Why bother? How would cooperative management such as AMOs really improve over current management?

If appropriately applied, AMOs could offer several important advantages. First, allowing AMOs strong and renewable rights to a harvest quota would encourage sus-

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tainable, efficient and financially sound use of fishery resources. Because AMOs would provide the ability for recreational anglers to manage their own fishery, they would provide strong incentives for superior and cost-effective management, greater levels of voluntary compliance, and the ability to tailor management mechanisms to the particular needs of recreational anglers.

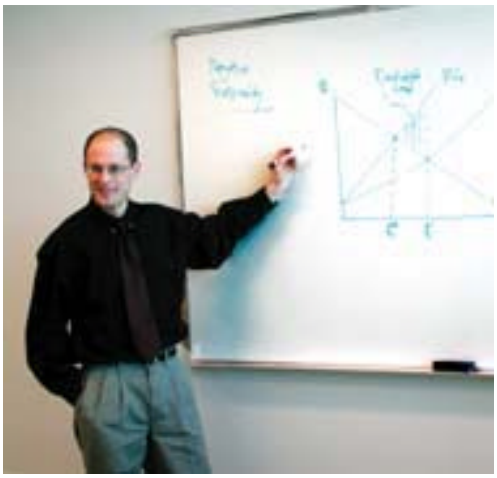
Second, members of AMOs would have a direct stake in the outcomes of their policies, because they would be "owners" of a community-based organization. As a fishery became more healthy and successful, fishing would become more valuable to anglers. AMO shares—reflecting the ability to manage this increasingly valued resource—would also become more highly valued. Hence, successful fishery management on the part of AMOs would have a direct benefit to shareholders—as they would own shares of increasing value. In other words, recreational fishery managers would face immediate consequences of their decisions. Successful management would result in greater gains for shareholders. Unsuccessful management would result in losses to shareholders, and (perhaps) a revocation of management rights.

In sum, this system would provide strong incentives for successful management—incentives that do not exist in current management arrangements.

It's a Big Change…

In early January, 2004, the AMO concept was presented to anglers, regulators, and other stakeholders in the Gulf of Mexico red snapper fishery. There were many questions. Would AMOs really work? Would AMOs simply represent another layer of bureaucracy? How would the boundaries between waters governed by different AMOs be enforced? Who would conduct the data collection and scientific research necessary for management? Clearly, application of a concept such as AMOs would be complex, and would require fishery participants and regulators to address many details and hard questions. Initial set-up costs and effort could be quite high. However, the ultimate costs of retaining current management methods might also be high. If not managed effectively, popular fish such as Gulf of Mexico red snapper will likely become increasingly rare. Even in places where they may be caught, increasingly stringent fishing regulations may entirely prevent certain groups from fishing entirely. Already, many seasonal anglers have no opportunity to harvest red snapper. However, there are other options. New ideas in cooperative, rights-based management offer a potential solution to many of the challenges facing our popular recreational fisheries.

When the red snapper season re-opens in April, anglers will again crowd Bobbi Walker's boats, seeking to catch this prized fish. Today, she has many questions and concerns about AMOs—she is not yet convinced that AMOs are a perfect solution. However, she believes that management of the red snapper fishery can be improved, and is willing to consider alternatives. The willingness of regulators and anglers to consider such alternatives may have critical impacts on the future sustainability of our popular fisheries.



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For fun facts about fish, see the NOAA Northeast Fisheries Science Center website, <http://www.nefsc.noaa.gov>.