Fisheries Issues for the Ocean Policy Commission Hearings

American Fisheries Society(AFS)
November 14, 2001
Address to the Ocean Policy Commission
by
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*Introduction

The American Fisheries Society (AFS) is an international, professional, and scientific non-profit organization of more than 9,000 fisheries scientists and managers. The mission of the AFS is to improve conservation and sustainability of fishery resources and aquatic ecosystems by advancing fisheries and aquatic science and promoting the development of fisheries professionals. Throughout its 131-year history, AFS has advocated science-based policy, as its leaders and members worked to bring important resource issues to the attention of government and the public (see attached sampling of AFS position statements related to the marine environment.) Well before any major environmental government regulations were established in North America, AFS developed the North American Fish Policy that became a guide for state, provincial, and federal fishery programs.

Today, AFS is the world's largest organization dedicated to strengthening the fisheries profession, advancing fisheries science, and providing timely information and continuing education to its members and others who share its mission. Chapters of AFS are established throughout North America, and the Society's members reside in 71 countries. The American Fisheries Society views the work of the Commission on Ocean Policy as vital to the interests of our members and to the conservation of the country's living marine resources. We welcome the opportunity to provide input to the Commission's work and intend to participate fully in its deliberations through the regional hearing process as well.

* Improve Fishery management

More marine fish stocks are fully utilized or over utilized today than prior to the implementation of the Magnuson-Stevens Fishery Conservation and Management Act. During various re-authorizations of the Act, solutions and suggestions to prevent additional overfishing were incorporated, yet many key fisheries remain over utilized and in decline. It is becoming clearer that fishery management must focus at a level other than the single-species level, which tacitly assumes that the harvest of a particular species has no impact on its predators, its prey, or other components of the ecosystem. In addition, bycatch of non-target species and habitat damage from bottom gear continue to thwart management efforts.

It seems unlikely that there will ever be sufficient resources to fully assess the condition of all marine species affected by fishing and eliminate all uncertainty in stock assessments. Thus, we believe that ensuring the long-term sustainability of fisheries and maintenance of ecosystem function will require new approaches. One currently available alternative is to establish a system of marine reserves (or marine protected areas). Marine reserves should not be considered a substitute for traditional fisheries management measures currently used in fisheries, but rather as a complement that will provide protection from the unknown consequences of fishing for some portion of the ecosystem. Further research on the long-term effects of marine reserves is necessary, as is research on alternative methods to reduce over utilization of stocks, degradation of habitats, losses of nontargeted species, and the effects of climate change. Other approaches should continue to be explored such as multispecies and ecosystem management, even though these are complex,

difficult to define, and do not provide specific management guidance at this time. Until such time as other options are developed and we have a better understanding of the impacts of fishing on marine communities and ecosystems, we believe that large, interconnected systems of marine reserves may provide a good alternative to protect against permanent, irreversible damage to our marine ecosystems.

*** Develop a national level, coordinated research program for living marine resources**

At the same time that innovative approaches are sought for improving fisheries management, we urge national level efforts to enhance basic scientific understanding of how marine ecosystems function and how fishing activities interact with these ecosystems. Lack of such knowledge prevents us from anticipating changes in fisheries caused by either natural factors, anthropogenic factors, or both. Currently, the fisheries management process concentrates on only the most economically valuable fisheries while other fisheries may be simply ignored. However, we point out that economic value is not necessarily equivalent to ecological value. There is a real need for a national level, coordinated research program for living marine resources to begin addressing fundamental scientific questions. This research program should include a competitive granting process. A possible model to consider is that used by the National Science Foundation program on Long-Term Ecological Research (LTER) or the Land-Margin Ecosystem Research (LMER) program. These flagship programs consist of long-term, spatially focused, and process-oriented research investigations that have contributed immensely to our understanding of ecosystem function. A variety of terrestrial and limited coastal ecosystems have been studied, but far less effort has been devoted to studying marine ecosystems. Indeed, what is known about the dynamics of marine species is generally based on information gathered after a species is in peril or a decline in abundance is noted. The value of studying populations when their abundance is high – before they begin to decline or show signs of trouble – cannot be overstated. Basic studies conducted over long time periods contribute to our ability to ask the right questions and provide a baseline against which we can understand future fluctuations in marine fish and invertebrate populations. In addition, basic studies on marine ecosystems could provide a context for understanding and addressing emerging problems (e.g., *Pfiesteria piscicida* or other harmful algal blooms) as well as persistent threats (e.g., global climate change).

A national coordinated research program for living marine resources must integrate biological studies with studies that seek to understand the physical environment in which organisms live. We must adapt technological tools for remote sensing of the ocean environment, including habitat mapping of shallow water areas (using e.g., LIDAR), and to improve stock assessments for marine mammals and fish. Such technologies may include miniaturization of electronic tags that can upload information to satellites and that can be placed in organisms smaller than currently possible. Other technological advances could be focused on improving sampling of all trophic levels (plankton in particular). Advanced sensing capabilities will provide an understanding of factors important to feeding, growth, migration, reproduction, and survival of living marine resources. In addition, such data could contribute to our understanding of habitat use and how habitats change over time.

*** Develop a vision and common objectives for fisheries, and a plan for managing living marine resources to achieve those objectives**

Every citizen has a stake in the oceans and our living marine resources, and we must engage the public in forthright discussions of what we want our fisheries and marine ecosystems to look like in the future. A number of legislative acts were passed to protect and conserve marine resources (e.g., Magnuson-Stevens Fishery Conservation and Management Act, Marine Mammal Protection Act, Endangered Species Act), but the goals of these acts are sometimes conflicting or contradictory.

For example, marine mammals (including the great whales) compete directly with humans for fish resources. Should there be limits placed on the size of marine mammal populations or should they be allowed to grow at the expense of fish for human consumption? Aquaculture has the potential to significantly increase marine fish and invertebrate production, but such enterprises may alter coastal wetlands, displace traditional fishing communities, contribute to organic enrichment in near shore and estuarine systems, introduce diseases to natural populations, etc. Are such unintentional effects acceptable? The harvesting of fish may affect other components of marine ecosystems, such as bottom habitat and the distribution and abundance of submerged vegetation. Do we want to protect habitat and incidental species even if it means greatly reducing fishery yields? These are not scientific questions but the scientific community should contribute information to enable society to reach an informed decision on these and other fishery issues. We therefore recommend that the Commission on Ocean Policy seek specific input on questions like these during the public hearing process. Recommendations dealing with fisheries issues that arise from the several hearings conducted by the Commission around the country should then be consolidated and incorporated into the final report in such a way to assure these issues are addressed nationally.