

Improving Federal Fisheries Management

A National Report

A Synthesis of Views Presented during Roundtable Meetings
Conducted in the Eight Fishery Management Council Regions

The H. John Heinz III Center
for Science, Economics and the Environment

August 2000

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Founded in 1995 to carry on the work of Senator John Heinz, The H. John Heinz III Center for Science, Economics and the Environment is a nonpartisan, nonprofit institution dedicated to improving the scientific and economic foundation for environmental policy through multisectoral collaboration. Focusing on issues that are likely to confront policymakers within two to five years, the Center fosters collaboration among industry, environmental organizations, academia, and government in each of its program areas and projects. It uses the best scientific and economic analyses to develop viable options for solving problems, and its findings and recommendations are widely disseminated to public and private sector decision makers, the scientific community, and the public.

Funding for This Project

The Heinz Center gratefully acknowledges the National Oceanic and Atmospheric Administration, the Andrew W. Mellon Foundation, and the Surdna Foundation, Inc., for their support of this project.

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Acknowledgments

This report is the product of information contributed by more than 100 participants in the regional fishery management council system. Heinz Center staff Mary Hope Katsouros, Robert Friedman, and Glenn Boledovich provided guidance and insight to the development of the report.

Four senior advisors provided The Heinz Center's Managing U.S. Marine Fisheries program with policy guidance, advice, and the benefit of their expertise: Dr. Andrew Rosenberg, Douglas Hopkins, Esq., Captain Barry Fisher, and Professor Michael Orbach.

We thank each of these individuals for their contributions. We share with them a dedication to finding a better future for the management of U.S. marine fisheries.

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INTRODUCTION

Background

Conservation and management of U.S. fishery resources is conducted under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). Enacted in 1977, this law has been amended by nearly every subsequent Congress and is scheduled to be reauthorized again this year. The ensuing debates will be enhanced by understanding the context and current status of U.S. fisheries management, as well as the progress fishery managers have made and the remaining challenges they face in implementing substantial provisions added to the MSFCMA through the Sustainable Fisheries Act of 1996.

The Heinz Center's Managing U.S. Marine Fisheries Program

In 1998, The Heinz Center initiated a two-year program to examine ways to increase the effectiveness of U.S. fisheries management. A primary goal of the program is to identify present concerns and possible courses of action for key decisionmakers, especially as Congress considers changes to the MSFCMA.

The first phase of the program reviewed the background and context of federal fisheries management in the United States. Based on an extensive literature review and detailed interviews with a wide variety of participants in the fisheries management system, it identified important events and decisions that have shaped fisheries management, structural issues that underlie fisheries management failures, and fundamental policy choices for the future. The findings are discussed in the book *Fishing Grounds: Defining a New Era for American Fisheries Management*, which is available through Island Press.

The second phase of the program identified regional challenges in implementing and meeting mandates added to the MSFCMA through the Sustainable Fisheries Act of 1996 and how fisheries management can be made more effective under the MSFCMA. The findings are synthesized and summarized in this report.

How We Collected the Information in This Report

The Heinz Center hosted eight roundtables in the federal fishery management council regions between July and October 1999. The purpose of the roundtables was to identify problems the councils have encountered in implementing the new MSFCMA provisions and to solicit input on how fisheries management can be made more effective in the regions. The original intent was to focus on improvements to the system that could be made through reauthorization. Participants also offered many ideas about administrative actions that the National Marine Fisheries Service (NMFS) and the regional fishery management councils could take to make the system work better.

The roundtables were limited to a small number of participants to keep the discussion focused and productive. We asked regional council directors and leadership of the Marine Fish Conservation Network to help us identify industry members, environmentalists, fishery managers and scientists who were knowledgeable participants in the fisheries management system at the regional level. Participants were familiar with the full range of issues facing their region, but, in some cases, practical limitations did not allow for representation from every fishery, gear type or other specific interest group.

The booklet *Reauthorizing the Magnuson-Stevens Fishery Conservation and Management Act: A Handbook and Discussion Guide for Regional Fishery Management Councils*, produced during the first phase of The Heinz Center's Managing U.S. Marine Fisheries program, provided background for the regional roundtable discussions.

Each roundtable lasted two days and was guided by a similar agenda. The first day was devoted to discussing the implementation of four mandates added to the MSFCMA in 1996, including: (1) end overfishing and rebuild overfished stocks; (2) minimize bycatch; (3) identify and protect essential fish habitat; and (4) minimize adverse economic impacts to fishing communities. The second day's discussions were focused on identifying how the fisheries management system can be improved. They too were divided into four segments, including (1) background conditions; (2) decisionmaking; (3) management implementation and administration; and (4) "new" management tools, such as individual fishing quotas and marine protected areas.

We hired professional reporting services to record and transcribe each roundtable discussion. We then produced summary minutes from each transcript, which participants reviewed for accuracy. We incorporated these materials into a report for each region, which summarizes the discussions and outlines the participants' recommendations.

Throughout the roundtable discussions the participants identified many specific actions that they believe will improve the federal fisheries management system. The Heinz Center's goal for the regional reports was to capture as much information as possible about the problems and potential solutions identified by the knowledgeable and diverse participants at each roundtable. We did not attempt to forge consensus among the group, nor did we attempt to fully evaluate or prioritize the participants' recommendations or resolve potential conflicts among them. We did, however, note areas of strong agreement or dissent. Although participants did not necessarily characterize proposed actions as most appropriate for Congress, NMFS, or the councils, we did so in the final reports in the interest of making the information more useful. Reports for each of the eight regional roundtables are available at The Heinz Center's Web site.

Content of This Report

This report was prepared by Susan Hanna and Heather Blough. It is a summary and synthesis of the majority views of participants in the regional roundtables. It begins with a description of 10 primary challenges to effective fisheries management and concludes with recommendations to Congress, NMFS, and the councils on steps that should be taken to remedy each problem area. Problems and

recommendations were selected for inclusion in the report based on both the frequency with which they were identified and their apparent support by the majority of all roundtable participants. No further ranking or analysis was attempted.

As a synthesis and summary document, an effort was made to be concise. Readers interested in more detail are encouraged to go to The Heinz Center's Web site at www.heinzctr.org to view detailed reports for each region and other documents produced under The Center's fisheries program.

THE PROBLEMS

The Heinz Center convened a series of roundtable meetings in each of the eight federal fishery management regions to identify problems with the federal fisheries management system and to solicit recommendations for change. Participants were selected from industry, environmental organizations, academia, and government agencies. While the problems discussed below were not prioritized or ranked by the participants, they arose at all or most of the roundtables and represent the concerns of the majority of attendees. They can be grouped into 10 categories:

1. Deficiencies in the Collection, Analysis, and Use of Scientific, Social, and Economic Information
2. Insufficient Funds to Meet Management Requirements
3. Too Much Fishing Effort
4. Short-Sighted Scope and Vision
5. Lack of Innovation and Experimentation
6. Decisionmaking Processes
7. Administrative Delays and Red Tape
8. Competing Management Goals
9. Inadequate Enforcement
10. Failure to Learn from the Past

This part of the report briefly summarizes each problem area. The second part presents the recommendations proposed and supported by a majority of the regional roundtable participants as possible solutions to these problems and challenges.

1. Deficiencies in the Collection, Analysis, and Use of Scientific, Social and Economic Information

The MSFCMA requires that fisheries management decisions be based on the best scientific information available. Participants agreed that the social and economic science needed to meet legislative mandates and to adequately identify and assess the critical tradeoffs inherent in fishery conservation and allocation decisions is severely deficient. In addition, the biological and ecological science required to develop adequate stock assessment information and meet legislative mandates is far from adequate. Participants also saw room for improvement in the use of existing scientific information, noting that the councils vary significantly in their use of scientific and statistical committees and in the weight they give to the recommendations provided by these committees.

2. Insufficient Funds to Meet Management Requirements

Participants believe that many scientific and other deficiencies within the fishery management system result from a severely inadequate funding base. They pointed out that NMFS and the councils do not

have the resources needed to meet legislative mandates. This frustrates attempts to fulfill management responsibilities, overburdens staff, and often leads to staff “burn-out.” In addition, attempts to fulfill requirements based on insufficient information are increasingly met with lawsuits, which stresses relations among and between NMFS, the councils, and constituents and further reduces the resources available to meet legislative mandates.

3. Too Much Fishing Effort

Virtually all participants agreed that most U.S. fisheries are overcapitalized. They noted that overcapacity reduces fishery profits, pressures fishery managers to increase total allowable catch quotas, and provides fishermen with little incentive to conserve fishery resources. And although managers have made much progress limiting access to commercial fisheries, restricting access to recreational fisheries remains a highly charged issue. Congress has prohibited the development of individual fishing quota programs, which many participants believe have great potential as capacity-reduction tools.

4. Short-Sighted Scope and Vision

The fishery management system is perceived by participants as suffering from short-sightedness and lack of focus. They believe that no one appears to be considering how fisheries management goals and objectives fit into the “big picture,” in terms of the overall management of coastal zone and fishery resources at the federal, state, and local levels. Decisions at the federal level seem to be increasingly centralized and litigation-oriented, and those at the regional level take place without the context of long-term goals and objectives.

5. Lack of Innovation and Experimentation

Participants commented that limited fiscal and personnel resources and the tendency of fishery managers to jump from one crisis to the next inhibit innovative thinking and experimentation within the fishery management system. They raised, but did not necessarily answer, these types of questions: Are there tools that have not yet been tried that may be able to address existing problems? Are there ecosystem-based approaches that would be more effective in managing multispecies fisheries? If capacity reduction is the goal, what tools can help to achieve this most equitably? If the science is inadequate, are alternative, less information-intensive management mechanisms available? How can incentives be used to gain acceptance and reduce noncompliance? How can industry strengths be put to best use?

6. Decisionmaking Processes

Participants believe that the credibility of the decisionmaking processes established by the MSFCMA and used by NMFS and the councils are suffering. They reported that new council members are having trouble understanding all facets of the decisions required of them, as well as their role in the overall fishery management process. They also indicated that fishery managers often lack the personal and

communication skills required of them as managers, resulting in poor relations with industry members and difficulty exercising the leadership and oversight roles they are provided under the MSFCMA. Participants pointed out that congressional interference also reduces regional and administrative leadership and oversight capabilities. This occurs when constituents make “end runs” around the process by taking their specific concerns directly to Congress. In addition, the public interest is believed to be under-represented in the process, and poor public education about fisheries and fishery management processes and outcomes often results in misperceptions.

7. Administrative Delays and Red Tape

Participants identified delays in implementation of fishery management plans and amendments as one of the biggest problems in the system at present. Often, by the time fishery rules and regulations are implemented, their usefulness has been greatly diminished because subsequent changes in the fishery have already triggered discussions of new management measures.

8. Competing Management Goals

Making fishery management decisions to meet the requirements of the MSFCMA often requires making tradeoffs among diverse biological, economic, and social goals. Participants believe the goals presented under the MSFCMA’s National Standards and other provisions often compete and conflict with each other. This, along with confusion related to how these multiple goals should be prioritized, leads to extensive debates over the Act’s intent that are exacerbated by ambiguous language, resulting in confusion, delay, and even litigation.

9. Inadequate Enforcement

Fisheries management cannot be successful if adopted rules and regulations are not enforced. Participants expressed concern about the inadequacy of current fishery enforcement budgets, which limit both the number of enforcement officers in each region and the use of innovative new tools, such as electronic vessel monitoring systems. They also noted that inconsistent rules and regulations between interstate and federal-state waters allow violators to use one system to evade the other. In addition, participants observed that lenient penalties result in the attitude that fines are simply “the cost of doing business.”

10. Failure to Learn from the Past

Failure to routinely monitor and evaluate the success or unintended consequences of management measures was identified by participants as a serious deficiency in the fisheries management system. The lack of monitoring and evaluation of present and past management practices prevents fishery managers from learning from mistakes and building on successes.

RECOMMENDATIONS AND KEY ISSUES FOR CONGRESS

The following recommendations and key issues were identified by participants in regional roundtable discussions and appeared to be supported by the majority. Although participants did not necessarily characterize proposed actions as most appropriate for Congress, NMFS, or the councils, we have done so here in the interest of making the information more useful. Also, in some cases there was clear agreement on a key issue, but no commensurate agreement on specific recommendations to address or resolve the issue. Such issues are identified as a “KEY ISSUE” and are listed last in the recommended actions that address each of the 10 problem areas.

1. Strengthen the Scientific Basis of Fishery Management

- **Fund biological, ecological, social and economic data collection and analysis.**

Specific participant recommendations that shared strong support include:

- funding routine collection of social science information in all regions and the addition of social science personnel to NMFS and the regional councils;
- funding electronic logbook programs to provide real-time information on catch and fishing operations;
- funding cooperative research programs that increase the involvement of industry in data collection and research;
- funding the expansion of the Marine Recreational Fisheries Statistics Survey to all council regions and broadening the scope of the survey to provide more useful information on recreational fisheries; and
- funding the Atlantic Coastal Cooperative Statistics Program (ACCSP) to improve and integrate data on Atlantic fisheries. The ACCSP affects fisheries on the Atlantic coast and was strongly supported by participants in both the Mid-Atlantic and South Atlantic roundtables.

- **Develop a national policy on observer programs.**

Most participants recognized the usefulness of observer programs in the collection of biological data, but many have questions related to:

- who should fund these programs;
- appropriate coverage levels;
- how observers should and can be used in small boat fisheries; and
- the roles and responsibilities of observers as data collectors versus informants.

Participants believe that national guidelines should address these issues, but that the councils should be provided the flexibility to develop programs appropriate to regional contexts. The greatest disagreement concerned funding. Providing federal support for observer programs in some regions while industry pays the cost of observers in others was perceived as unfair.

- **Relax restrictions on the collection of social and economic information.**
There is widespread frustration with survey restrictions under the Paperwork Reduction Act and proprietary protections under the MSFCMA that prevent the collection of socioeconomic information needed to meet legislative mandates. Participants believe that these laws should be amended to relax restrictions on the collection of social and economic information.

2. Improve the Fishery Management Funding Base

- **Fully fund legislative mandates.**
Participants expressed frustration with the inadequacy of current funds to meet management requirements. They believe funding levels should be increased so that fishery managers can meet the MSFCMA's mandates.
- **Authorize the councils and NMFS to accept funds from other sources.**
Participants voiced strong support for diversifying the funding base of NMFS and the councils by allowing them to accept funds from alternate sources, such as industry and nongovernmental organizations, and removing legislative restrictions on the collection of administrative fees.
- **Re-examine funding priorities.**
Participants frequently commented that hot political issues, such as salmon and marine mammals, are diverting much-needed resources away from fishery management requirements under the MSFCMA. They emphasized the need to re-examine current funding priorities at the national level.

3. Reduce Fishing Capacity

- **Fund capacity reduction programs.**
Participants in each region supported vessel buyback or other programs to assist with capacity reduction. Most also supported the application of some government funds to these activities, but there was no agreement on whether these should be completely funded by government or funded jointly by government and industry.
- **Fund transition assistance programs.**
All participants agreed that transition assistance in the form of job training, counseling, and other services will be needed to ease the burden of capacity reduction on the fishing industry. But they disagreed as to whether such programs should be funded solely by the government or jointly by the government and industry.
- **Eliminate the moratorium on individual fishing quota programs.**
The majority of participants supported providing the regional councils with the option to design and implement individual fishing quota programs at their discretion. But those opposed expressed strong views stemming from concerns about consolidation of the industry and their doubts about the conservation benefits of these tools.

- **KEY ISSUE: Commercial/recreational allocations.**

Most participants believe that capacity-reduction programs must include the recreational sector to be fair and effective. Otherwise, they noted, any stock recovery or improvement gained by reducing the fishing capacity of the commercial sector is likely to be offset by unregulated increases in recreational fishing effort. Reducing fishing capacity fairly and effectively over the long term will necessitate resolving allocations between the commercial and recreational sectors. The recreational sector, in general, remains adamantly opposed to any restrictions on capacity and access.

4. Broaden Management Scope and Vision

- **Provide a mechanism to reconcile state and federal goals, standards, and requirements for coastal zone and marine resource management.**

A strong majority of participants agreed that conflicting state and federal goals represent one of the most significant impediments to achieving sustainable management of fishery resources. In particular, they pointed out that state and local support for coastal development and their tendency to promote recreational fisheries and coastal tourism often conflict with or impede achievement of federal efforts to protect habitat and reduce fishing effort. There appeared to be universal support among participants for improving state and federal coordination, and most supported providing NMFS and the councils with greater authority over nonfishing impacts on essential fish habitat.

- **Provide national policy as general guidance, but allow regional flexibility in meeting established goals.**

Participants expressed overwhelming support for increasing regional flexibility in meeting fishery management requirements within a well-defined overall framework. Three areas where greater flexibility was most frequently requested include the definitions of (1) overfishing; (2) commercial, recreational, and subsistence fisheries; and (3) fishing communities.

- **Distinguish between the condition of depletion and the act of overfishing.**

There was widespread support for identifying a term other than “overfished” to describe the condition of depleted stocks. Such a term should recognize the roles of nonfishing-related anthropogenic influences and natural variability on the health and status of fish stocks.

5. Consider New Tools

- **Provide the regional councils the flexibility to experiment with new tools.**

Participants repeatedly noted the need to develop and adopt incentive-based and ecosystem-based tools that can help the regional councils to more effectively meet established fishery management goals and objectives. They urged Congress to promote and fund the development of such tools through the MSFCMA.

- **KEY ISSUE: Precautionary approach.**

Participants expressed many and diverse opinions related to:

- the meaning of the precautionary approach;
- if, or how, it should be applied in fisheries management; and
- the appropriateness of NMFS's application of this approach, particularly in its Essential Fish Habitat Guidelines.

There was disagreement over whether the precautionary approach should be widely applied in fisheries management. Proponents suggested that the scientific uncertainty inherent in fishery management decisions makes such an approach necessary. Some opponents believe that the precautionary approach unfairly forces the fishing industry to prove, at great expense, that their actions are not harmful. Others fear that, if adopted, such an approach will provide fishery managers with a disincentive to improve and expand scientific research.

6. Improve Decisionmaking

- **Fund training and orientation programs.**

The majority of participants believe that NMFS should develop mandatory, more extensive orientation programs for council members and provide more management training for fishery personnel.

- **Improve public participation in the process.**

Most participants believe that the fishery management process is not effectively representing the public. Solutions frequently recommended to improve public participation included increasing education and outreach by both NMFS and the regional councils and requiring the councils to establish strict ground rules that will both discourage undesirable behavior and encourage public participation in council meetings and hearings.

- **Eliminate congressional interference in the fishery management process.**

Participants expressed a great deal of frustration with the response of Congress to constituent pressure that leads it to override the established fishery management process and trump council and NMFS decisions. They noted that such actions reduce the effectiveness of NMFS oversight and leadership and often result in national policies that are not appropriate or applicable to all council regions.

- **KEY ISSUE: The role of science in decisionmaking.**

There is widespread recognition that the use of science to inform fishery management decisions varies greatly among council regions. Participants in many regions suggested that science is not being used effectively. Many supported giving science more weight in the process, by requiring that final decisions regarding total allowable catch be made by Scientific and Statistical Committees. But many others strongly opposed such an option, noting that the scientific information that informs decisions is too inadequate to stand alone.

- **KEY ISSUE: Council composition.**

Participants were divided over the question of council composition. Some expressed a need to diversify and/or change the current composition, while others believe that the councils, as currently composed, are capable of representing the diverse array of interests in fishery management. The most frequent recommendations included increasing environmental representation, adding a seat for consumer groups, and relegating state representatives to nonvoting status. Some participants staunchly opposed any change in state representation.

7. Streamline the Administrative Process

- **Require NMFS to meet established deadlines and provide more timely feedback and guidance on fishery management plans and amendments.**

NMFS's failure to provide the councils with adequate feedback and guidance in the fishery management plan development process, and its delays in implementing plans and amendments, were repeatedly identified by participants as serious problems in the fishery management system.

- **Amend the MSFCMA to allow concurrent approval actions for plan amendments and implementing regulations.**

The 1996 MSFCMA amendments separated the review periods for plan amendments and implementing regulations. Participants strongly supported re-combining these actions to increase the efficiency of the administrative process.

- **Coordinate and integrate socioeconomic requirements under the MSFCMA, Small Business Act, National Environmental Policy Act, Regulatory Flexibility Act, and Executive Order 12866: Regulatory Planning and Review.**

Participants identified the large number and redundancy of socioeconomic requirements under various laws as a major obstacle to timely review and implementation of fishery management plans and amendments by NMFS. They suggested that steps be taken to streamline and better harmonize such statutory requirements.

8. Clarify Management Goals

- **Provide guidance on how to reconcile competing goals.**

Participants repeatedly noted the need to directly identify and address the conflicts and tradeoffs presented by current, competing fishery management goals and objectives. The two most often mentioned were resolving conflicts between requirements (1) to "minimize bycatch" and "minimize costs," and (2) to "minimize adverse economic impacts" on fishing communities and rebuild overfished fisheries within a 10-year time frame (except in cases where the biology of the stock, other environmental conditions, or international agreements dictate otherwise).

9. Strengthen Enforcement

- **Incorporate enforcement funding into the MSFCMA and promote federal/state cooperative enforcement agreements.**

There was widespread frustration in the regions related to inadequate funding for fishery enforcement. Most supported the development and implementation of cooperative state/federal enforcement programs—perhaps modeled after the NMFS/South Carolina cooperative agreement—to stretch limited funds.

- **Eliminate the clause limiting fines to an individual’s ability to pay.**

There appeared to be universal support among participants for increasing the severity of penalties for fishery violators. Doing so would require eliminating statutory language limiting fines based on the ability of an offender to pay.

10. Monitor and Evaluate the Effects of Management Measures

- **Build funding for monitoring and evaluation into the MSFCMA and require that the effects of fishery management measures be routinely evaluated.**

Participants expressed frustration that fishery regulations continue to accumulate despite a poor understanding of their individual or cumulative effects. There was widespread recognition of the need to better understand whether fishery management actions are achieving their intended objectives.

RECOMMENDATIONS AND KEY ISSUES FOR THE NATIONAL MARINE FISHERIES SERVICE¹

The following recommendations and key issues were identified by participants in regional roundtable discussions and appeared to be supported by the majority. Although participants did not necessarily characterize proposed actions as most appropriate for NMFS, the councils, or Congress, we have done so here in the interest of making the information more useful. Also, in some cases there was clear agreement on a key issue, but no commensurate agreement on specific recommendations to address or resolve the issue. Such issues are identified as a “KEY ISSUE” and are listed last in the recommended actions that address each of the 10 problem areas.

1. Strengthen the Scientific Basis of Fishery Management

- **Enhance social science research.**

The inadequacy of current social science information was widely recognized among participants as a serious impediment to sound decisionmaking. They recommended that NMFS:

- develop systematic, long-term social science data collection programs;
- develop comprehensive social science research programs; and
- increase social science staff at headquarters, science centers, and regional offices.

- **Improve stock assessments.**

Most participants expressed frustration at the large number of fish stocks that have not been assessed and the inadequacy of existing stock assessment information. The most frequent suggestions for NMFS related to improving stock assessments included:

- increase the frequency of at-sea surveys;
- promote training in stock assessment and increase stock assessment staff in the regions;
- require more at-sea experience of stock assessment scientists; and
- better incorporate oceanographic information, natural variability, and industry-dependent data into stock assessments.

Participants noted that certifying fishermen as sea samplers and/or developing structured, scientifically sound at-sea surveys in which they can participate could alleviate concerns about the reliability of industry-dependent data.

- **Improve and expand data collection programs.**

Specific recommendations strongly supported by participants include:

- design and implement electronic logbook programs to provide real-time information on catch and fishing operations;

¹ While most recommendations pertain specifically to NMFS, in some cases they include the entire, complex administrative decision-making process involving NMFS; NOAA; the Department of Commerce; and the Office of Management and Budget.

- develop and implement cooperative research programs that increase the involvement of industry in data collection and research;
 - expand the Marine Recreational Fisheries Statistics Survey to all council regions and broaden the scope of the survey to provide more useful information on recreational fisheries;
 - develop and implement observer programs; and
 - implement the Atlantic Coastal Cooperative Statistics Program to improve and integrate data on Atlantic fisheries. The ACCSP affects fisheries on the Atlantic coast and was strongly supported by participants in both the Mid-Atlantic and the South Atlantic roundtables.
- **Improve communication of scientific information.**
Participants frequently emphasized the importance of clear and concise presentations by biologists and social scientists. They also urged scientists to clearly communicate the degree of uncertainty when presenting scientific information to the councils.
 - **Re-examine research priorities.**
Participants frequently mentioned the need to focus fishery research priorities on documenting bycatch and discard mortality, examining the impacts of fishing gear on habitat, documenting existing commercial and recreational capacity levels, determining sustainable capacity levels, and examining fish population dynamics, including habitat/productivity links.

2. Reduce Fishing Capacity

- **Design and implement capacity-reduction programs.**
Participants recognized a need for vessel buyback or other programs to assist with capacity reduction. Many noted the need to develop national guidelines for buyback programs to ensure that they are both fair and effective.
- **Design and implement transition assistance programs.**
All participants noted the need to ease the burden of capacity reduction on the fishing industry. Specific services frequently mentioned as useful include counseling and job training.
- **KEY ISSUE: Commercial/recreational allocations.**
Most participants recognized the need for comprehensive capacity reduction and limited entry programs that apply to both the commercial and recreational sectors. But they perceive a real problem at both the regional and federal levels in determining whether restrictions should be placed on recreational access. There was broad recognition that establishing general commercial/recreational allocation guidelines would help relieve pressure on the councils related to these decisions, but there was disagreement as to whether this should be done by NMFS or the councils.

3. Broaden Management Scope and Vision

- **Allow region-specific definitions of fishery management terms.**
While recognizing the need for national goals, participants repeatedly noted the need for more regional flexibility in achieving those goals within an overall framework. Most frequently identified areas where more flexibility was desired included definitions of overfishing; commercial, recreational, and subsistence fisheries; and fishing communities.
- **Improve coordination with coastal zone managers.**
There appeared to be universal agreement among participants regarding the need to strengthen the participation of NMFS in coastal zone management decisions that influence the condition of fishery resources. They also urged the agency to consider the cumulative impacts of coastal development and other land-use practices in consultations required by the MSFCMA and other laws.
- **Better understand and manage the recreational sector.**
The inadequacy of data and information on recreational fisheries and the failure to integrate commercial and recreational goals were widely recognized as serious obstacles to effective fisheries management, particularly with respect to establishing and meeting capacity-reduction goals. A federal saltwater recreational permit system was frequently suggested as a mechanism for obtaining more information, but it was not clear whether the majority of participants support such a program.

4. Consider New Tools

- **Focus research on developing innovative approaches to management.**
Participants repeatedly emphasized the need to develop alternative ways and means to manage changing fisheries. Suggestions most frequently mentioned that shared the most support include:
 - ecosystem-based alternatives to maximum sustainable yield;
 - less information-intensive approaches to management; and
 - incentive-based approaches that promote stewardship and sustainability.

Many recommended that NMFS encourage the development of, and experimentation with, these tools in the regions.

- **KEY ISSUE: Precautionary approach.**
There was both strong support for and opposition against NMFS's adoption of the precautionary approach as reflected in Essential Fish Habitat Guidelines. Those who supported the action view it as a much-needed and long-awaited change, but those opposed argued that it is unfounded and contrary to congressional intent.

5. Improve Decisionmaking

- **Better train and educate council members and fishery managers.**
The majority of participants recognized a need for improved training and education at the regional and federal levels. They suggested that NMFS develop and require formal, more comprehensive training and orientation courses for new council members, improve the management skills of fishery managers, and train staff in effective communication techniques for general audiences.
- **Improve public outreach and education.**
Participants recommended that NMFS improve education and outreach on fisheries issues to strengthen working relationships between fishery managers and industry members and to increase public participation in the fishery management process.
- **Improve feedback and guidance in fishery management plan development.**
Participants frequently identified as a serious problem the agency's failure to provide the councils with adequate feedback and guidance during the process of developing fishery management plans. They recommended the agency be more proactive and engaged during the planning process.

6. Streamline the Administrative Process

- **Simplify the administrative process and reduce delays.**
Administrative delays were a primary concern of participants and are perceived to result from unnecessary layers of review and an over-reliance on the opinion of NOAA's General Counsel. They suggested that the agency eliminate unnecessary layers of review and evaluate plans primarily based on their ability to meet criteria established in the MSFCMA. They also noted the need to keep the councils and industry more up to date on the status of plans and amendments in the review process.

7. Clarify Management Goals

- **Clarify and communicate fishery management goals, standards, and requirements.**
Participants noted a troubling disconnect between NMFS headquarters and the regional offices in their perceptions of fishery management goals, standards, and requirements. They recommended that NMFS clarify, prioritize, and clearly communicate fishery management goals, standards, and requirements so that regional staff can be more effective advisors in the plan development process. This would also strengthen the ability of the industry and other stakeholders to plan for the long term.

8. Strengthen Enforcement

- **Prosecute fishery violators to the full extent and penalize fishery violations more severely.**
Frustration among participants with the current status of fishery enforcement was widespread. They urged NOAA's General Counsel to prosecute all violators that are turned over to headquarters and to increase the severity of penalties.
- **Develop cooperative state/federal enforcement programs.**
Participants frequently mentioned the usefulness of cooperative state/federal enforcement programs in helping to stretch limited enforcement budgets. The current NMFS/South Atlantic Fishery Management Council agreement was repeatedly identified as a good model.
- **Clarify who should fund electronic vessel monitoring systems.**
The potential of electronic vessel monitoring systems to assist with fishery enforcement was uniformly recognized, but there appeared to be disagreement over whether use of this tool should be funded by government or industry.

9. Monitor and Evaluate the Effects of Management Measures

- **Establish routine evaluations of the effects of management actions.**
The majority of participants supported developing a protocol requiring routine monitoring and evaluation of the effects of fishery management measures.

RECOMMENDATIONS AND KEY ISSUES FOR THE REGIONAL FISHERY MANAGEMENT COUNCILS

The following recommendations and key issues were identified by participants in regional roundtable discussions and appeared to be supported by the majority. Although participants did not necessarily characterize proposed actions as most appropriate for the councils, Congress, or NMFS, we have done so here in the interest of making the information more useful. Also, in some cases there was clear agreement on a key issue, but no commensurate agreement on specific recommendations to address or resolve the issue. Such issues are identified as a “KEY ISSUE” and are listed last in recommended actions that address each of the 10 problem areas.

1. Strengthen the Scientific Basis of Fishery Management

- **Improve the use of social science.**
Participants recommended that the regional councils involve social scientists earlier in the development of fishery management plans and amendments and rely on statistically sound social science research, rather than anecdotal information, to support management decisions.
- **Develop and support observer programs.**
There was broad recognition that observer programs will be needed to collect much of the data and information required by current mandates.
- **KEY ISSUE: Use of scientific advisory committees.**
Use of scientific advisory committees varies greatly among council regions. Participants in several regions believe that the recommendations of these committees are too seldom adopted. They fear that the councils risk losing the participation of expert scientific advisors and suggested that the councils work to improve relations among scientists, industry members, and the councils. Others disagreed that there is a problem with how scientific advisory committees are used.

2. Improve the Fishery Management Funding Base

- **Consider alternative, nontraditional funding sources.**
To supplement congressional funding, participants recommended that the councils consider innovative funding sources. They suggested, for example, that conservation organizations be targeted for funds needed to design and implement marine protected areas because such areas are likely to help preserve their interest in fisheries.

3. Reduce Fishing Capacity

- **Design and support capacity-reduction programs.**
All participants noted the need to design and implement programs, such as vessel buybacks, to reduce fishing capacity.
- **Design and implement transition assistance programs.**
All participants noted the need to ease the burden of capacity reduction on the fishing industry. Specific services and programs frequently mentioned as useful included counseling and job training.
- **KEY ISSUE: Reducing capacity fairly and effectively.**
There was broad recognition among participants of the need to reduce capacity in the fisheries and to implement comprehensive limited-entry programs to maintain fishing capacity at sustainable levels. But there was much disagreement related to how fishing capacity can be reduced fairly and effectively. Key concerns and conflicts exist regarding controls on recreational participation and state fisheries. Many suggested that general guidelines would help to relieve pressure on the councils related to long-term commercial/recreational allocations, but there was disagreement as to whether such guidelines should be developed at the federal or regional level.

4. Broaden Management Scope and Vision

- **Better understand and manage the recreational sector.**
The majority of participants recognized a need to gather more information on the recreational sector to improve understanding of the cumulative impacts of these fisheries and to develop equitable and effective capacity-reduction programs.
- **Improve communication and coordination among regional councils.**
Many participants noted the importance of improving cross-council communication to better coordinate management of transboundary stocks between council regions and to allow councils to learn from each other's successes and mistakes.
- **Conduct strategic planning involving all interested parties.**
The majority of participants recognized a need to develop a long-term vision for fisheries and fishery management, noting that it will be easier for councils to justify the need for tough decisions if they work toward achieving a well-understood and supported goal.
- **Consider the full effects of regulations.**
Participants continually mentioned the need to consider fishery regulations within the broadest possible context to avoid unintended consequences. They urged managers to consider, in particular, the potential effects of regulations on bycatch, enforcement, diversification, displacement, and the ability of the fishing industry to compete in domestic and international markets.

5. Consider New Tools

- **Consider nontraditional tools.**

The majority of participants urged the councils not to shy away from new, alternative fishery management tools, such as individual fishing quota programs and cooperatives, that can help them to reduce capacity in the fisheries. They also suggested a need to examine ecosystem-based tools, such as fishery ecosystem plans and marine protected areas, and to develop new approaches to management that give the industry an incentive to fish cleanly and sustain fishery resources.

6. Improve Decisionmaking

- **Increase training and orientation.**

In addition to mandatory participation in NMFS orientation programs, participants frequently mentioned the need to train and orient new council members at the council level to make them more effective participants in the process.

- **Improve meeting processes.**

Participants recognized that meeting processes vary greatly among council regions. They recommended that all councils:

- hold meetings in locations that are accessible to the public;
- structure their meetings in an organized fashion;
- stick to the agenda;
- require roll call votes on every action;
- establish clear ground rules for participation; and
- penalize participants who break the rules.

Lack of accountability for public testimony was frequently noted as a problem for council members who sometimes have trouble distinguishing between truthful and untruthful statements. But participants are divided on the question of whether to impose requirements on witnesses, such as taking an oath. Those opposed fear that such restrictions would restrict public participation in the process.

- **KEY ISSUE: Council composition.**

Participants were divided over the question of council composition. Some expressed a need to diversify and/or change current composition, while others argued that the councils, as composed, are capable of representing the diverse array of interests in fishery management. Most frequent recommendations included increasing environmental representation, adding a seat for consumer groups, and relegating state representatives to nonvoting status. Some fiercely opposed any change in state representation.

7. Clarify Management Goals

- **Identify and communicate clear goals and objectives consistent with federal guidelines on which to base management decisions.**

Participants appeared to universally support the need to identify and establish clear long-term goals and objectives for each fishery.

- **Send clear signals to communities about long-term management directions.**

Participants frequently mentioned the importance of clearly communicating management expectations and future options for fisheries so that industry can plan for the future.

8. Strengthen Enforcement

- **Better consider enforcement needs in fishery management plan development.**

There appeared to be universal agreement among participants that fishery enforcement would be greatly improved if the councils better considered enforcement needs in the development of fishery management plans.

- **Simplify fishery rules and regulations.**

There was widespread frustration among participants about the complexity of fishery regulations that have accumulated over the years. They recommended that the councils examine existing regulations and simplify and integrate them to the extent possible to make them easier to comply with and enforce.

9. Monitor and Evaluate the Effects of Management Measures

- **Monitor and evaluate progress in meeting fishery management goals.**

Participants repeatedly identified as a critical missing link in fisheries management the failure to monitor and evaluate the impacts of management measures and their progress in meeting intended objectives. They recommended that the councils:

- include measurable goals and objectives in each fishery management plan;
- incorporate monitoring and evaluation criteria into each fishery management plan;
- routinely evaluate progress in meeting those goals and objectives; and
- adapt management as necessary.

ROUNDTABLE PARTICIPANTS

1. New England Regional Roundtable, Boston, Massachusetts 27-28 July 1999

Discussants

Jennifer Atkinson, Conservation Law
Foundation

Sonja Fordham, Center for Marine
Conservation

Thomas Hill, member, New England
Fishery Management Council; recreational
fishing expert

Doug Hopkins, Environmental Defense;
member, New England Fishery
Management Council

Paul Howard, Executive Director, New
England Fishery Management Council

Ilene M. Kaplan, Union College and
Woods Hole Oceanographic Institution

Patricia A. Kurkul, Regional Administrator,
Northeast Region, National Marine
Fisheries Service

George LaPointe, Maine Department of
Marine Resources; member, New England
Fishery Management Council

Russell A. Sherman, Gulf of Maine
Fishermen's Alliance

Mark Simonitsch, North Atlantic Marine
Alliance

Michael Sissenwine, Director, Northeast
Fisheries Science Center, National Marine
Fisheries Service

Willis M. Spear, Jr., small boat fisherman,
Maine

Jon G. Sutinen, University of Rhode Island

Richard Taylor, member, Advisory Panel,
New England Fishery Management
Council; scallops, aquaculture, habitat

Facilitator: Susan Hanna

Assistant: Heather Blough

Recorder: Paul Wallace

2. Pacific Regional Roundtable, Portland, Oregon 3-4 August 1999

Discussants

Ralph Brown, Fishermen's Marketing Association

Mark Cedergreen, Executive Director, Westport Charterboat Association; Chairman, Salmon Advisory Panel, Pacific Fishery Management Council

Bob Eaton, Executive Director, Pacific Marine Conservation Council

Paul Engelmeyer, Northwest policy analyst, Living Oceans Program, National Audubon Society

R. Barry Fisher, President, Midwater Trawlers Cooperative

Rod Fujita, marine ecologist, Environmental Defense

Jim Hastie, National Marine Fisheries Service

Rod Moore, Executive Director, West Coast Seafood Processors Association

David B. Sampson, Associate Professor of Fisheries, Oregon State University

Larry Six, Executive Director, Pacific Fishery Management Council

Gil Sylvia, marine resource economist, Coastal Oregon Marine Experiment Station, Oregon State University

Invited, unable to attend

Phil Anderson, Washington Department of Fish and Wildlife

Jim Harp, Quinault Indian Nation; member, Pacific Fishery Management

James Potts, California fixed gear

Bill Robinson, National Marine Fisheries Service, Northwest Region

Facilitator: Susan Hanna

Assistant: Heather Blough

Recorder: Craig Martin Hess, Martin Enterprises

3. Gulf of Mexico Regional Roundtable, New Orleans, Louisiana 10-11 August 1999

Discussants

Pamela Baker, fisheries biologist,
Environmental Defense

Felicia C. Coleman, Department of
Biological Science, Florida State University

Kimberly Davis, Center for Marine
Conservation, St. Petersburg, Florida

Chris Dorsett, program director for
Fisheries, Gulf Restoration Network (Day
1)

Bob Jones, Executive Director,
Southeastern Fisheries Association

Andrew J. Kemmerer, National Marine
Fisheries Service

William S. "Corky" Perret, Mississippi
Department of Marine Resources

Kenneth J. Roberts, Louisiana Cooperative
Extension Service, Louisiana Sea Grant
College Program

Cynthia Sarthou, Executive Director, Gulf
Restoration Network (Day 2)

Gerald P. Scott, National Marine Fisheries
Service, Southeast Fisheries Science
Center

Wayne Swingle, Executive Director, Gulf of
Mexico Fishery Management Council

Roy O. Williams, Florida Fish and Wildlife
Conservation Commission

Bob Zales II, Bob Zales Charters

Invited, unable to attend

Robert Shipp, Executive Director, Alabama
Chapter, Coastal Conservation
Association; Department of Marine
Sciences, University of South Alabama

Stephen Thomas, University of South
Alabama

Kay Williams, Save America's Seafood
Industry, Inc.

Facilitator: Susan Hanna

Assistant: Heather Blough

Recorder: Elizabeth Carney, Snelling Personnel Services

4. North Pacific Regional Roundtable, Anchorage, Alaska 19-20 August 1999

Discussants

Lee Alverson, Chairman of the Board,
Natural Resources Consultants

Chris Blackburn, Director, Alaska
Groundfish Data Bank

Steve Ganey, Alaska Marine Conservation
Council

Jay J.C. Ginter, Chief of Operations
Branch, Sustainable Fisheries Division,
National Marine Fisheries Service, Alaska
Region

Joe Kyle, member, North Pacific Fishery
Management Council

Rick Lauber, Chairman, North Pacific
Fishery Management Council

Doug Ogden, recreational angler; member,
Advisory Panel, North Pacific Fishery
Management Council

Clarence Pautzke, Executive Director,
North Pacific Fishery Management Council
Wally Pereyra, Chairman, Arctic Storm,
Inc.

Joe Plesha, General Counsel, Trident
Seafoods Corporation

Alan Springer, University of Alaska
Fairbanks

Beth Stewart, Director, Natural Resources
Department, Aleutian East Borough

Grant Thompson, Alaska Fisheries Science
Center, National Marine Fisheries Service

Invited, unable to attend

Linda Behnken, Alaska Longline
Fishermen's Association; member, North
Pacific Fishery Management Council

Dave Benton, Alaska Department of Fish
and Game

Mark Lundsten, Queen Anne Fisheries,
F/V *Masonic* (submitted written comments)

Facilitator: Susan Hanna

Assistant: Heather Blough

Recorder: Helen Allen

5. Western Pacific Regional Roundtable, Honolulu, Hawaii 24-25 August 1999

Discussants

Paul K. Bartram, Akala Products
James D. Cook, Chair, Western Pacific Fishery Management Council; Vice President, Pacific Ocean Producers
Paul Dalzell, staff, Western Pacific Fishery Management Council
Manuel P. Duenas II, Guam Fishermen's Cooperative Association
Eric Gilman, Pacific representative, Living Oceans Program, National Audubon Society
Alvin Z. Katekaru, National Marine Fisheries Service, Pacific Islands Area Office
Pierre Kleiber, National Marine Fisheries Service, Southwest Fisheries Center, Honolulu Lab
Craig D. MacDonald, Ocean Resource Development Manager, State of Hawaii Department of Business, Economic Development and Tourism; member, Scientific and Statistical Committee, Western Pacific Fishery Management Council

Henry Sesepasara, Executive Director, Developmental Disability Council, Pago Pago, American Samoa

Craig J. Severance, cultural anthropologist, University of Hawaii, Hilo; member, Scientific and Statistical Committee, Western Pacific Fishery Management Council; part-time commercial/recreational troller

John Sibert, Program Manager, Pelagic Fisheries Research Program, University of Hawaii, member, Scientific and Statistical Committee, Western Pacific Fishery Management Council

Kitty M. Simonds, Executive Director, Western Pacific Fishery Management Council

Pete A. Tenorio, small commercial/recreational fisherman, Saipan, M.P.

Invited, unable to attend

Paul Callaghan, Department of Finance and Economics, University of Guam
John Hampton, South Pacific Commission
Sam Pooley, National Marine Fisheries Service, Southwest Fisheries Center, Honolulu Lab; member, Scientific and

Statistical Committee, Western Pacific Fishery Management Council (submitted written comments)

Patricia Tummons, Environment Hawai'i (submitted written comments)

Facilitator: Susan Hanna

Assistant: Heather Blough

Recorder: Doy Farwell

6. Mid-Atlantic Regional Roundtable, Washington, District of Columbia 31 August - 1 September 1999

Discussants

Lee G. Anderson, University of Delaware
Raymond D. Bogan, Legal Counsel, United
Boatmen of New Jersey and New York

Eric B. Burnley, Sr., *The Fisherman*
Magazine; EBB Tide Guide Service;
freelance outdoor writer

John H. Dunnigan, Executive Director,
Atlantic States Marine Fisheries
Commission

Sonja Fordham, Center for Marine
Conservation

Daniel T. Furlong, Executive Director,
Mid-Atlantic Fishery Management Council

James H. Gilford, Chair, Mid-Atlantic
Fishery Management Council

Dave Krusa, captain, F/V *Restless*,
Montauk, New York

C. Wayne Lee, recreational fisherman,
North Carolina

Jim Lovgren, Fisherman's Dock
Cooperative, Pt. Pleasant, New Jersey

Bonnie J. McCay, Professor of
Anthropology and Ecology, Rutgers
University, New Jersey

Andrew A. Rosenberg, Deputy Director,
National Marine Fisheries Service

James Ruhle, owner/captain, F/V *Darana*
R, Wanchese, North Carolina

Bradford H. Sewell, Natural Resources
Defense Council

Daniel Whittle, Environmental Defense

Invited, unable to attend

John Hoenig, Virginia Institute of Marine
Science

Facilitator: Susan Hanna

Assistant: Heather Blough

Recorder: Paul Wallace

7. Caribbean Regional Roundtable, San Juan, Puerto Rico 29-30 September 1999

Discussants

Richard Appeldoorn, Department of Marine Sciences, University of Puerto Rico

David J. Berry, M/V *Lady Lee*; commercial fisherman

Graciela García-Moliner, Caribbean Fishery Management Council

Joseph J. Kimmel, National Marine Fisheries Service, Southeast Regional Office

Monica M. Lester, Office Manager, Tropical Trappin'

Craig Lilyestrom, Marine Resources Division, Puerto Rico Department of Natural and Environmental Resources

Ken Lindeman, Coastal Research and Education; University of Miami

Lucia Roberts, Director, Department of Planning and Natural Resources, Division of Environmental Enforcement, U.S. Virgin Islands

Miguel A. Rolón, Caribbean Fishery Management Council

Miguel Sanabria, Chair, Caribbean Fishery Management Council

Patricia Skov, Vice Chair, Caribbean Fishery Management Council

Manuel Valdés-Pizzini, University of Puerto Rico, Sea Grant College Program

Hector M. Vega, member, Advisory Panel, Caribbean Fishery Management Council

Invited, unable to attend

Laverne Ragster, Vice President, Research and Public Service, University of the Virgin Islands

Alex Stone, ReefKeeper International

Facilitator: Susan Hanna

Assistant: Heather Blough

Recorder: Diana Martino

Mussin Suárez, commercial and recreational fisheries

William James Tobias, U.S.V.I. Fish and Wildlife

8. South Atlantic Regional Roundtable, Charleston, South Carolina 5-6 October 1999

Discussants

Carol S. Ballew, National Marine Fisheries Service, Southeast Region

Don DeMaria, commercial fisherman; research assistant

Christopher C. Koenig, research biologist, Institute for Fishery Resource Ecology, National Marine Fisheries Service/Florida State University Cooperative

Robert K. Mahood, Executive Director, South Atlantic Fishery Management Council

John V. Merriner, National Marine Fisheries Service, Southeast Fishery Science Center, Beaufort Laboratory

Michael K. Orbach, Professor of Marine Affairs and Policy Director, Duke Marine Laboratory

Robert R. Pelosi, Florida fisheries advocate

Doug Rader, Environmental Defense

Susan Shipman, Georgia Department of Natural Resources, Coastal Resources Division; Council Member, South Atlantic Fishery Management Council

Jack Sobel, Director, Ecosystem Protection, Center for Marine

Conservation; Chair, Marine Reserve Advisory Panel, South Atlantic Fishery Management Council

Bill Wickers, C/V *Linda D.*; Key West Charter Boat Association

Invited, unable to attend

Ken Hinman, President, National Coalition for Marine Conservation

Miles Philip Mackaness, commercial fisheries

Pete Moffitt, Chair, South Atlantic Fishery Management Council

Robert Muller, Florida Department of Environmental Protection

Gene Proulx, National Marine Fisheries Service, Southeast Regional Office, Law Enforcement

Facilitator: Susan Hanna

Assistant: Heather Blough

Recorder: Barbara F. Curry