Courts, Congress, and Constituencies:

Managing Fisheries by Default

July 2002

National Academy of Public Administration

A Report by a Panel of the

NATIONAL ACADEMY OF PUBLIC ADMINISTRATION

for the Congress and the U.S. Department of Commerce
National Marine Fisheries Service

July 2002

COURTS, CONGRESS, AND CONSTITUENCIES:

MANAGING FISHERIES BY DEFAULT

Panel
Mary A. Gade
Terry D. Garcia*
Jonathan B. Howes
Theodore M. Schad
Susan Shipman*

* *Not an Academy Fellow*

Officers of the Academy

Mortimer L. Downey, III, *Chair of the Board*
Carl W. Stenberg, III, *Vice Chair*
Robert J. O'Neill, Jr., *President*
Cora Prifold Beebe, *Secretary*
Sylvester Murray, *Treasurer*

Project Staff

J. William Gadsby, *Director, Management Studies Program*
Ray Kammer, *Senior Panel and Staff Advisor*
Arnold E. Donahue, *Project Manager*
Ruth Ann Heck, *Senior Consultant*
W. Peter Jensen *Senior Consultant*
Joseph P. Mitchell III, *Research Associate*
Braddock J. Spear, *Research Assistant*
Martha S. Ditmeyer, *Project Associate*
William P. Shields, *Editor*

The views expressed in this document are those of the Panel alone. They do not necessarily reflect the views of the Academy as an institution.

FOREWORD

Managing marine fisheries and other marine resources is one of the most challenging areas of natural resource management. It involves thousands of species with dynamic populations operating in an environment that it is difficult, often impossible, to observe. Further, these fisheries provide the livelihood for a storied, even legendary, cadre of fishers, families, and communities. Marine resources also are the subject of numerous statutory and policy prescriptions that often are difficult to reconcile and involve competing values and conflicting interests.

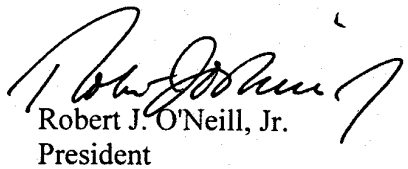
Federal marine fisheries management, however, has fairly recent origins, largely coincident with the establishment of the 200-mile exclusive economic zone in the 1970s. This management system entails a unique and innovative form of participatory management involving the states, fishers, and the federal government through eight regional councils. They operate in cooperation with the National Marine Fisheries Service (NMFS), which participates in their analyses and decisions, reviews their proposed management actions on behalf of the Secretary of Commerce, and issues and enforces regulations to implement proposed actions. NMFS itself also has recent origins; it was established in 1970 with National Oceanic and Atmospheric Administration (NOAA).

We are pleased that Congress and the NMFS asked the Academy to prepare this important report. Its focus is on the fisheries management system, its regulatory processes, response to litigation, constituent relations, as well as NMFS' program budget and science activities. The Academy Panel directing this study was composed of legal and scientific professionals with extensive background, expertise, and insight in environmental policy issues; as well as individuals with a wide breadth of experience in government management. Its work was aided by excellent cooperation from NMFS, NOAA, the Department of Commerce, and various fishery, conservation, and environmental groups. They generously gave their time and insights.

With respect to the science task, we were pleased to work in cooperation with a Committee of the National Academy of Sciences and its National Research Council. The Committee published a separate report on this task; a summary of their findings and their recommendations is included in this report.

Although the fisheries management system has its strengths, the Panel believes it requires strong leadership and that the Assistant Administrator for Fisheries must take the lead in the system's management. To accomplish this, the Assistant Administrator will need strong support from Congress, the Administration, and NMFS constituencies. The Panel also recommends specific improvements to the system's regulatory processes, in NMFS' program budget system, and its outreach and constituent relations activities. Critical adjuncts supporting NMFS' leadership role are establishing an easily accessible regulatory calendar, streamlining the regulatory process, allocating resources to programs with better defined priorities and objectives, and working more actively and cooperatively with NMFS partners and constituencies.

We want to thank the Congress and the Department of Commerce, including NOAA, for their assistance and support in this study. We are particularly grateful for the cooperation and assistance of officials in NMFS headquarters, its regions and science centers, and the regional councils. Let me also express my thanks to the Academy Panel and the project staff for producing this report.



Robert J. O'Neill, Jr.
President

TABLE OF CONTENTS

FOREWORD iii

EXECUTIVE SUMMARY ix

CHAPTER 1: INTRODUCTION 1

Study Background 1
Evolution of the U.S. Fisheries Management System 1
Structure of the Fisheries Management System 7
The Regional Fishery Management Councils 8
National Marine Fisheries Service 8
NMFS Program and Performance 9
Constituents, Partners, and Fishery Managers 10

CHAPTER 2: FISHERIES LITIGATION 11

The Litigation Workload and Process 11
The Litigation Record 13
Analysis by Stature 16
Magnuson Stevens Act 17
National Environmental Policy Act 29
Endangered Species Act 32
Regulatory Flexibility Act 38
Findings and Recommendations 40
Litigation Docket 41
Administrative Record 41

CHAPTER 3: FISHERY REGULATORY PROCESS 43

Statutory Basis for and Current Status of the Regulatory Process 43
Other Statutory Requirements 44
Guidelines and National Standards 45
Current Status of NMFS Regulatory Process 46
Role of Regional Fishery Management Councils 49
Council Member Conflict of Interest 51
Council Membership and Balance of Representation 52
Role of National Marine Fisheries Service 53
Role of NMFS Regions and Science Centers 55
Findings and Recommendations 56
Council Membership 56

Council Procedures 57
Fishery Management Process 58
Federal-State Relations 59
Fishery Management Plans 59
NMFS Guidance 63

CHAPTER 4: NMFS PROGRAM BUDGET 65

Overview of NMFS Budget 65
Current Resource Management Priorities 68
Stock Assessment 70
Observer Programs 73
Cooperative Statistics 75
Socio-Economic Analyses 76
NEPA Data and Analysis 78
Protected Resources 80
Law Enforcement 81
Findings and Recommendations 84
Hiring and Staffing 84
Contracting Out 85
Plan Implementation and Interconnection 86
Monitoring Plan Performance 87
Program Planning and Budgeting 89
Comprehensive Planning 89
Programming and Budgeting 92
Recent NMFS Management Initiatives 93
The Annual Operating Plan 93
Findings and Recommendations 95

CHAPTER 5: NMFS SCIENCE 97

Adequacy of Scientific Information for Fisheries Management 97
Adequacy of Science Related to Marine Ecosystems and Protected Species 99
Adequacy of Social and Economic Data and Analyses 101
Use of Available Scientific Information and Advice for Management of Marine Fisheries and Protected Resources 102
National Research Council Reports 106
Center for Independent Experts 107
Other Scientific Input from Academic Scientists 107
Marine Mammal Commission and Recovery Teams 107
Adequacy of Scientific Expertise Available to NMFS 108
Priorities for Augmentation of NMFS Science Activities 109
Funding 110

CHAPTER 6: PARTNERS AND CONTITUENCIES IN U.S. FISHERIES MANAGEMENT 113

Overview of Constituent Relations 113
Views of Major Partners and Constituencies 114
Commercial Fishing Industry 114
Recreational Fishing Industry 115
Environmentalist/Conservationist Groups 116
States 115
Opportunities for Improvement 116
Findings and Recommendations 119
Framework 119
Consultation with Constituents and Partners 120
Outreach Opportunities 121
Cooperative Programs 121

APPENDICIES

Appendix A: Panel and Staff Members 123
Appendix B: Methodology 125
Appendix C: Glossary 127
Appendix D: Acronyms 131
Appendix E: Selected Bibliography 133
Appendix F: Individuals Interviewed or Contacted 137
Appendix G: Court Decisions Reviewed 143
Appendix H: Principles of Effective Consultation 147
Appendix I: Principles of the NMFS Regulatory Process 155
Appendix J: Agency Letter 159

CHARTS, FIGURES AND TABLES

Figure 1-1: Total U.S. and Alaska Commercial Fishery Landings 5
Chart 1-1: U.S. Fisheries Management System 7
Table 2-1: Fisheries Litigation, Total Cases by Year Opened 13
Figure 2-1: Total Challenges by Year by Law, 1977-2001 14
Figure 2-2: Overall Win-Loss Record, 1977-2001 15
Figure 2-3: Plaintiffs by Year 16
Figure 2-4: National Standard Challenges, 1977-2001 18
Figure 2-5: MSA: Win-Loss Record, 1977-2001 19
Figure 2-6: National Standard 2: Win-Loss Record by Challenges 22
Figure 2-7: National Standard 8: Win-Loss Record by Challenges, 1997-2001 25
Figure 2-8: National Standard 9: Win-Loss Record by Challengers, 1977-2001 27
Figure 2-9: National Environmental Policy Act: Win-Loss Record, 1977-2001 30

Figure 2-10: ESA: Win-Loss Record, 1977-2001 33
Figure 2-11: Regulatory Flexibility Act Win-Loss Record, 1977-2001 39
Table 3-1: Regional Fishery Management Council Appointed Members Identified By Sector Interests After Appointment with Terms Beginning August 2002 52
Figure 3-1: Streamlined Fishery Regulatory Process 62
Table 4-1: NMFS Budget FY 1996-2003 65
Table 4-2: OR&F Appropriations 1996- 2003 66
Figure 4-1: Pass-Through and Pacific Salmon Funding as a Portion of OR&F Budget 67
Table 4-3: NMFS Personnel FY 1996 – 2003 67
Table 4-4: Funding Increases Recommended in the Resource Requirements Report 68
Table 4-5: Funding Increases for Current Resource Management Priorities, FY 2000-2003 69
Table 4-6: Comparison of SAIP Staffing in FY 2000 and FY 2003 and Full Plan Implementation 71
Table 4-7:Estimated Stock Assessment and Observer Funding and Staffing Fiscal Years 2000-2003 72
Table 4-8: Comparison of Observer Program in FY 2000 and FY 2003 and FY 2007 Goal 74
Table 4-9: Summary of Funding for Cooperative Statistics – FY 2000-2003 76
Table 4-10: Comparison of FY 2000 Socio-Economic Resources to FY 2007 Goal 77
Figure 6-1: Principles Of Effective Consultation With External Groups 118

EXECUTIVE SUMMARY

A GATHERING STORM

In 1976, the Magnuson Fishery Conservation and Management Act established the first federal system to govern fishing in the then newly-declared 200-mile exclusive economic zone (EEZ). This management system was uniquely participatory, composed of representatives of states, recreational and commercial fishers, and the federal government. It was organized into eight regional councils that were charged with developing fishery management plans (FMPs), in coordination with the National Marine Fisheries Service (NMFS) and subject to NMFS review and approval. The councils were established to meet the goals of conserving fishery resources and promoting the U.S. commercial and recreational fishing industry. Under a set of statutory standards, the councils were tasked to make the major management decisions, such as the size of the allowable catch, the length of the fishing season, the allocation of any quotas to states and fishers, and permitting/licensing provisions.

By most measures, this governance system was remarkably successful. The U.S. fishing industry, aided by liberal tax and investment incentives, expanded rapidly. Also, those fisheries in waters located adjacent to U.S. coasts were fully "americanized." By the early 1990s, domestic landings had increased five-fold, and foreign trawlers had virtually disappeared from U.S. coasts.

Since the early 1990s, however, this participatory fisheries management system has been struggling. In some respects, it became a victim of its early successes. Government policies favored domestic exploitation of these fisheries, promoted investment and technological innovations in the industry, and encouraged industry-friendly regulation. In the process, they also fostered industry overcapitalization, which resulted in overfishing many premier species. The clarity of the early objectives became muddled by the growing need for conservation in some fisheries, the demands to protect endangered species and marine mammals, and the desire to preserve marine habitats, sanctuaries, and other protected areas.

It has turned out that the bounty of the sea was more readily harvested than conserved, and the fisheries management system was forced to transition from allocating surpluses to rationing scarcity. A system that performed well in its prior role increasingly struggled under the burdens of conservation, environmental protection, over-exploitation, and increased statutory and policy mandates.

The federal fisheries management system is in crisis, and signs of the system's distress are compelling:

- An increasingly large number of fishery management actions are being challenged in federal courts. This is symptomatic of the system's growing inability to reconcile its objectives and perform the functions for which it was created. Its dual goals of conserving fishing resources and sustaining optimum yields have become more conflicted. Litigation has grown ten-fold since the mid-1990s, reflecting an order of

magnitude increase in fisher and conservationist dissatisfaction. NMFS' early, almost unblemished record of success in defending the system's management actions has deteriorated to less than 50/50.

- Fishery productivity has plateaued, stagnating at about 10 percent below its high in the early 1990s. In 2000, the number of overfished stocks increased to 92, roughly ten percent of the more than 900 stocks. The status of another 70 percent (over 650 stocks) was unknown. In 2001, the number of overfished stocks declined to 81, though 9 of the 11 stocks were taken off the overfished list due to technical changes, not different stock size. Years of unsustainable fish catch have finally caught up with some fisheries and their FMPs. For example, fishing continues for New England groundfish, West Coast groundfish, and other species, but under increasing restrictions. Measures to reduce catches and rebuild stocks have been adopted, but often reluctantly or under the threat of litigation or judicial involvement. The councils are wrestling with competing standards, and NMFS is attempting to meet the demands of multiple statutes for marine mammal and endangered species protection. Both the councils and NMFS cope with intense political pressures from local constituents and frequently from their national representatives. Austere restrictions have improved some stocks, while other stocks to lose ground and are unlikely to return to abundance without additional restrictions.

- The system has been slow to adapt its plans to new national standards and changes imposed by the 1996 Sustainable Fisheries Act (SFA). These include standards to minimize bycatch and consider the impact of regulations on communities, as well as new requirements to protect essential fish habitats (EFHs) and rebuild overfished stocks, whenever possible, within ten years. Recent litigation has focused heavily on these provisions, and court decisions and settlements have highlighted major inadequacies in the environmental analyses used to justify EFH designations, deficiencies in quantifying and reducing bycatch, and delays in rebuilding overfished stocks. The response has been mixed at best, and the system often seems incapable of coordinating the council, NMFS, state, and industry actions needed to address the statutory requirements.

- Pressures on the system seem to be escalating, and the interests of its constituencies diverging. The two major constituencies—fishers and environmental and conservationist groups—regard the system as primarily serving the interests of the other. Even commercial and recreational fishers are increasingly at odds. Recreational interests fear that commercial overfishing will boost demands for enlarging marine protected and closed areas, a prospect that threatens their industry. All parties recognize that the system has vulnerabilities that can be exploited. The councils and NMFS often find it difficult to impose austere measures, and they are reluctant to act in the face of strong opposition and political clout that can be brought to bear on fishery management issues.

- Administrative and legislative requirements have added to the stress. Recent statutory changes have made analyses and actions required under the Regulatory Flexibility Act (RFA) judicially reviewable. Further, administrative actions in a companion executive order forced more explicit consideration of socio-economic consequences in regulatory decisions. There also was a reinvigorated emphasis on the National Environmental

Policy Act (NEPA) and its application to marine fisheries, as well as increased concern about endangered species and demands for recovery plans, particularly in Alaska and the Pacific.

- Until recently, the system's resources were stretched. Its budget and capability to keep up with the growing complexity of fisheries management did not increase proportionately with new statutory requirements and heightened constituent concerns. Throughout the 1980s, NMFS faced greater budget pressure as its $100 million budget remained almost level. The budget increased during the 1990s in response to specific crises, particularly in the West Coast salmon fishery; funds increasingly were earmarked for specific programs or targeted recipients. Yet resources devoted to ongoing management activities remained stagnant in real terms through 2000. Only during the past two years have budget increases begun to address the accumulated backlog.

- Of the 42 FMPs currently in place:

  - 11 plans—including those covering the major Northeast, West Coast, and Alaska groundfish fisheries—have faced adverse court decisions in the past three years, with seven of them encountering additional pending legal challenges
  - 4 more plans have significant pending legal challenges
  - 19 plans are judicially required to have new environmental impact statements (EISs) regarding essential fish habitats between 2003 and 2005
  - 30 plans have not had comprehensive EISs within the last five years, and seven have had no EIS analysis at all
  - 21 plans involve overfished or endangered species

  All 42 plans have at least one of the above difficulties, and most have numerous problems meeting the mandates under which the system operates.

In a real sense, the fisheries management system is in disarray. Management is increasingly exercised by the courts through litigation, by Congress through its annual appropriations and reports, and by constituencies that seek redress through these forums. The regional councils and NMFS, which were assigned this mission by statute, are being driven to management-by-crisis due to a range of problems: litigation-related workload, court-ordered or sanctioned deadlines, process deficiencies, policy mandates, regulatory delays, inadequate resources, deficiencies in data, analyses, and science, and strained relationships between the system's managerial partners and their constituencies. These dynamics have contributed to the current crisis, and this study confirms the many findings from prior studies that addressed these problems.

THE CAUSES OF STRESS

Multiple, long-standing causes exist for stress in the fisheries management system, and for defaulting management to others. Given the highly participatory nature of the system, management responsibility is inherently diffuse with authority distributed among an unusually large number of participants. Not surprisingly, there is an overall lack of accountability. In

addition, management attention has dissipated with an extensive array of statutory mandates, regulatory demands, and political, economic, social, and scientific interests. Further, this diffusion carries over to the organizational structure and operating modes of the councils and NMFS. The eight councils, five regions, five science centers, and three interstate commissions have different organizational structures, assignment patterns, operational procedures, program budget processes, and consultation approaches with each other, state partners and constituents.

Leadership

Within the current statutory and organizational framework, the management system places a premium on leadership. In the Panel's view, this leadership falls on the executive branch, specifically the Assistant Administrator for Fisheries who heads NMFS.[1] The Assistant Administrator oversees the full system and its major components—the councils, regions, and science centers—and has full purview over guiding council planning, council actions,[2] regional administration, scientific research, stock assessments, judicial rulings, federal budgeting and personnel processes, and constituent and political pressures. Within statutory, budgeting, and political constraints, the Assistant Administrator can best reconcile management demands with those of preserving protected species and protecting marine habitats, knit together organizational components and processes, and partner with the states.

The Panel believes the Assistant Administrator needs to lead:

- the fisheries management system. Chapter 3 makes system management the focus of the Assistant Administrator's attention. The councils and regional administrators are focused on fisheries management—planning, analyses, and regulation.

- the planning, programming, and budgeting processes. Chapter 4 recommends mechanisms that the Assistant Administrator can use to set system goals, establish priorities, monitor execution, and evaluate performance, while the regions, centers, and have responsibility for implementation.

- fisheries science. Chapter 5 emphasizes the need for NMFS to maintain and advance its tradition of excellence in this area, and identifies areas for greater emphasis.

- public affairs outreach and partner and constituent relations. Chapter 6 calls upon the Assistant Administrator to take the policy and program lead for these activities; the regions, science centers, and councils should be responsible for implementation in most cases.

[1] The current Assistant Administrator was appointed in Fall of 2001; during his short tenure, he has made a vigorous start on exerting leadership of the fisheries management system.

[2] The councils' role in the current fisheries management system was not within the charter of this study. They are an essential element of the current MSA system and have strong advocates. Within the current governance system, the Assistant Administrator must rely on them heavily. They also have numerous critics. As noted below, the Panel believes further study of governance alternatives is needed.

In assuming this leadership role, the Assistant Administrator must receive strong support from the NOAA Administrator, the Secretary of Commerce, and the Executive Office of the President.

At the same time, this leadership responsibility must be increasingly exercised in cooperation and coordination with Congress. Existing statutory mandates convey multiple and often conflicting responsibilities, giving a sense that each is a priority, and reconciling these laws falls to the Assistant Administrator. NMFS' ability to reconcile these varied mandates—to conserve fisheries, preserve protected species, protect the environment, promote U.S. economic interests, encourage recreational fishing, and address socio-economic issues—would be enhanced if Congress were to clarify their relative priority. Doing so would improve the prospects for meeting critical objectives. Congress—with help from the Administration, states, and parties representing the environment, conservation, and U.S. commercial and recreational fishing—should begin to discuss U.S. fisheries objectives and priorities with a view toward providing legislative guidance.

In commenting on a draft of this report, NMFS expressed its willingness to accept leadership of fisheries management, but noted that strong leadership is not possible without strong, sustained support from NMFS' constituencies, Congress, and the administration. The Panel believes this support extends beyond helping the agency to sort out mission priorities. It requires that they provide NMFS the management discretion to be that leader, as well as the resources NMFS needs to effectively exercise that leadership role. The Panel sees this as the most important recommendation in this report.

The Panel's recommendations are framed largely as incremental changes to the fisheries current management system. The Panel did not have sufficient time to explore alternative governance models or to investigate options for the uniquely participatory governance model created by MSA. Close examination of state, foreign, and international approaches would provide insight into different ways of distributing fisheries management functions. Therefore, the Panel recommends that:

> **Major changes in the fisheries management system—including alternative governance models—be explored as part of the U.S. Commission on Ocean Policy review or during the MSA re-authorization process, both of which are scheduled for completion within the next year or two.**

Fisheries Litigation

Increased litigation, along with the associated workload, uncertainty of outcomes, and pressures of court deadlines, are cited as major problems. Chapter 2 addresses their dimensions and depth by analyzing the increasing caseload, available case law from the past 25 years, and litigation record. The Panel found that the government is losing cases due to significant deficiencies in its analytical, regulatory, and managerial processes. The research also confirmed that cases, as a rule, are not lost on the basis of science, which often goes unchallenged. NMFS lost only two of the 10 MSA challenges in the last five years involving NMFS' use of science. This may be because other deficiencies are easier legal targets. Nonetheless, some court decisions reveal

increasing frustration at delays in the system's response to the law and court-directed actions, and a greater willingness to view "scientific uncertainty" as bureaucratic foot-dragging.

Most of the findings presented in Chapter 2 lead to recommendations on fishery management processes, NMFS' program budget, and constituent relations. However, two findings directly relate to litigation itself. First, the Panel found that litigation analyses are key to identifying process and management deficiencies. Thus, the Panel recommends that:

> **The NOAA General Counsel maintain an up-to-date litigation docket and conduct periodic analyses of the litigation record and pending caseload. The litigation docket should include all cases for on which NMFS is the primary defendant, and should identify the status of each case and the statutory basis. For decided cases, the docket should identify the judgment rendered on each statutory claim and, for MSA cases, the national standard challenged.**

Second, based on the cases reviewed, the Panel found the fisheries management system to be inefficient and occasionally derelict in developing an administrative record that is legally sufficient for the decisions made. Major improvements should be made in this area, and the Panel recommends that:

> **NMFS improve its administrative record keeping by employing standardized methods uniformly throughout the councils, regions, and centers. The administrative record should contain all required analyses, and officials involved in the process—including the councils and the Secretary of Commerce—should ensure through inspection that the record supports the actions being proposed <u>prior</u> to approval.**

Fishery Management and Regulatory Processes

The fishery management and regulatory processes have undergone extensive internal reviews by NMFS and the councils, including a 1995 "charter team" report and a 2001 NMFS workshop study that involved headquarters and field staff and the councils' executive directors. The reviews identified numerous problems, such as unclear assignments and timelines, lack of accountability, lengthy layered reviews, excessive delays, outdated policies and guidance, inadequate analyses, and unpredictable outcomes. As discussed in Chapter 3, the Panel's review confirmed many of the previously identified findings. The resulting recommendations require some minor statutory modifications, but most can be accomplished by administrative action.

To improve the councils' perspective and objectivity, the Panel recommends that:

> **Congress amend MSA to provide for a broader representation of conservation and other interests on the councils including consumers, marine trades, and environmental groups.** This can be accomplished by broadening the requirements for nominations by governors or providing for direct appointment by the Secretary of Commerce (in the absence of nominated candidates).

The Panel also recommends tightening conflict-of-interest provisions for council members (p. 57) by requiring voting recusal when conflicts arise. The Panel found that council proceedings would be improved with active participation by the NMFS regional administrator and a representative of NOAA's General Counsel, and it recommends changes (p. 57) to accomplish that. The Panel further recommends that the Assistant Administrator for Fisheries amend guidelines to require the councils to submit their rationale for management actions they approve, and to provide a limited amount of discretionary funding for the councils to meet critical needs and analytical voids (p. 59).

The MSA does not contain an explicit provision for annual or ad hoc adjustments, other than FMP amendments. "Framework adjustments" and "annual specifications" have been used to more expeditiously address the dynamic aspects of fisheries management. Because of recent legal challenges to this process, the Panel recommends that:

> **Congress amend the MSA to explicitly provide for framework adjustments and annual specifications to facilitate their rapid processing**. The conditions and timelines for doing so should be clearly identified in FMPs to avoid conflicts with the regulatory requirements of the Administrative Procedure Act (APA).

These recommendations reflect the Panel's view that councils must be strengthened if they are to continue to perform the functions assigned to them. At the same time, the Panel strongly believes that the regional administrator's role must be better defined and strengthened. Increasingly, fishery management process has operated informally; tasks often are shunted from one to another without the clear assignment of responsibilities. Transparency and accountability suffer as a result. To accommodate the complexity and diversity of fishery management analyses and actions, and to encourage active interest group and public participation in deliberations, the Panel recommends, as a priority, that **regional administrators:**

> **Establish electronic regulatory calendars in conjunction with planned council actions, and make them accessible to the councils, states, and public.** These calendars should give the current status of actions, including those submitted for NMFS decision. They should be regularly updated and integrated with a national electronic regulatory calendar.
>
> **Have the lead for assigning responsibility for completing analytical requirements associated with council actions.** The regions should establish specific mechanisms, such as the Northeast coordinating council, to prioritize and coordinate activities within the region that provide assurances that assignments are clear and completed on time. The regional coordinating councils should be responsible for developing an agenda of FMP related actions and other management activities in conjunction with a clear division of duties among councils, science centers, and related commission and state activities.

Although regional administrators need increased control to execute some actions required by the system, the Panel also recommends that they take steps to ensure that their approval is both timely and objective (p. 60). They should ensure that individuals do not prepare, review, and approve their own work, and that council actions receive attention within specific timelines, and

we make recommendations to that end (p. 60). To prevent gridlock between the councils and regional administrators in the fisheries management system, the Panel recommends that a new mechanism be introduced to surface disagreements and that:

> **Congress amend the MSA to provide regional administrators with the authority to propose amendment(s) to council proposals.** The proposed amendment(s) must be reasonably supported by the public record accompanying the council's submission. The councils should be provided the opportunity within a specified period of time (30 days is suggested) to accept the amendment(s), withdraw the proposed action, or submit its recommendation on any proposed amendment(s) by the regional administrators to the Secretary of Commerce for final decision.

The councils and regional administrators are, in our view, the most important parts of the existing fisheries management planning process, provide some new authorities, and increase their responsibilities. This is consistent with the Assistant Administrator of Fisheries' recommendation in his Regulatory Streamlining Project (RSP) to require the councils to have complete analyses, draft regulations, and full documentation prior to voting on management actions, to delegate increased authority to the regional administrators, and to streamline the review process at headquarters.

The Panel believes the Assistant Administrator's energies are more appropriately focused on NMFS' policies, priorities, and operational guidance for NMFS' field units and the councils and on NMFS' program budget for resource acquisition, application, and evaluation. Therefore, the Panel recommends that the Assistant Administrator take the lead to:

> **Specify the responsibilities of NMFS offices and the councils in NMFS operational guidelines, wherever possible, and update operational guidelines on a periodic basis, probably annually, to reflect the changes taking place, particularly those related to litigation.**
>
> **Amend guidelines to require that councils submit a statement outlining the reasons and rationale followed in approving management actions**. These statements should provide an explanation of the discretion the council exercised in balancing application of the national standards and the expert testimony they relied on in reaching their decision.
>
> **Identify those actions in the RSP that will be taken immediately within available resources and establish a specific timeline to implement them.** Changes that cannot be accommodated within available resources should be separately identified and prioritized. The cost and schedule of proposed actions and the degree to which they will streamline the fishery management and regulatory process should be specified.

The states play key roles through their participation in the councils and, in the Atlantic states, through an interstate commission, by promulgating and enforcing compatible regulations in state waters, and, increasingly, through cooperative statistics and law enforcement activities. The Panel recommends that the Assistant Administrator:

Review and redefine, wherever possible, the division of management responsibilities with the states. States should be given the responsibility for managing fisheries that occur predominantly in state waters, but complimentary management by NMFS within the EEZ should be retained when appropriate to ensure consistent regulation.

Investigate, with the states, consolidation of permitting regimes to eliminate the cost and confusion of multiple permit requirements.

These recommendations address many of the system's problems and needed improvements to the current system and do not attempt to radically alter the current statutory framework. They seek to place responsibility for the system's management in the hands of the Assistant Administrator for Fisheries and assign increased responsibilities to regional administrators and councils for developing and approving fishery management plans and regulations. The Panel believes that clarifying these responsibilities throughout the system offers the best prospects for correcting the deficiencies within the current system.

NMFS Program Budget

In the program budget area, as in other areas, this study benefited from previous reviews of the NMFS program and budget. Two reports were particularly useful: the March 2000 Academy report entitled, *Improving the NOAA Budget and Financial Management Process*, and a June 2000 internal report for the NOAA Acting Administrator entitled, *An Independent Assessment of the Resource Requirements for the National Marine Fisheries Service*. Congress implemented many of the recommendations for increased resources in the later report, and one objective of this study was to examine how NMFS implemented that report's recommendations and used the additional resources provided by Congress in FY 2001.

Our review confirmed that most of the recommendations made in those prior reports are valid. As discussed in Chapter 4, the earlier Academy report recommended a base budget review and improved planning programming and budgeting. NMFS, as a NOAA component, would still benefit from implementing many of these recommendations. The resource requirements report was extremely useful in identifying seven key areas where NMFS resources appeared inadequate and in estimating the resource shortfall. Our research reinforced the importance of these areas in fisheries management and analyzed the progress NMFS has made in implementing new or expanded programs with the increased resources it received.

Implementation of the programs associated with many of these increases has been uneven. The Panel found solid progress in NMFS law enforcement and observer programs and in some aspects of its cooperative statistics, stock assessment, and protected species programs. The Panel was disappointed, however, in the degree of progress made in implementing its socio-economic analysis and NEPA programs. Acquisition of skilled personnel was hampered by NOAA hiring restrictions, and progress on initiating contract activities painfully slow. Nonetheless, these areas, together with stock assessment improvements, are fundamental to addressing NMFS analytical inadequacies and improving its litigation record.

NMFS has critical personnel issues that need to be addressed aggressively, and the Panel recommends that:

> **The Deputy Assistant Administrator for Operations establish hiring priorities for the personnel required to support the initiatives discussed in Chapter 4**.
>
> **The Deputy Assistant Administrator for Regulatory Programs expeditiously hire a headquarters NEPA coordinator, clarify to regional and council staff what must be done to prepare programmatic EISs and establish a mechanism to assess the status of field efforts with regard to EISs.**
>
> **The Director, Office of Science and Technology, take aggressive action to expand the number of stock assessment scientists and resource economists working in support of NMFS' missions**. As a first step, the Director should assess the quality and quantity of current field efforts to "grow" stock assessment scientists and resource economists. This assessment should, at a minimum, determine the probability that ongoing efforts will provide the right number and mix of specialists, and assess the potentially most effective approaches. Alternative approaches, such as increased pay, scholarships, special hiring authorities, and, as discussed below, increased contracting, should be explored and implemented as necessary where possible.

NMFS has faced personnel hiring restrictions and recruiting difficulties, and these are likely to continue. Thus, the reluctance to contract out that we encountered is perplexing given the priority of many of the tasks that were funded, but are not being done. Therefore, the Panel recommends that:

> **The Assistant Administrator direct line office, region, and center directors to actively seek opportunities to contract for services**.
>
> **The Deputy Assistant Administrator for Operations review program officials' contracting efforts to determine if additional opportunities exist**.

NMFS has a large number of improvement, spending, and resource plans. They often overlap, their status of implementation is unclear, and their contribution to and effectiveness in addressing NMFS problems are difficult to discern. Therefore, the Panel recommends that:

> **The Assistant Administrator designate a responsible official for each of the current, and any future, improvement plans and direct these officials to assess progress, at least annually, toward the resource and outcome objectives set in the various plans.** This assessment should include the extent to which contracting is meeting and can meet those objectives.

The major headquarters component offices under the Assistant Administrator should be assigned specific aspects of the integration needed to make NMFS numerous programs and activities more manageable. In Chapter 4 (pp. 87 and 89), we make specific recommendations to assign certain functions to these headquarters components. These include monitoring field and headquarters

units spending, developing an integrated program that links the various existing improvement plans, conducting a needs assessment for protected species stock assessment and other needed research, and assessing the needs and effectiveness of NMFS' recently established joint enforcement program.

Because of the complexity and diversity of NMFS tasks and its large number of headquarters and regional components, the Panel recommends that:

> **The Assistant Administrator develop a comprehensive management plan integrating all of NMFS' competing objectives. The plan should prioritize the many competing goals and objectives contained in its strategic and other plans within reasonably attainable resources. The process should be guided by the principles discussed in Chapter 4.** To fully implement this recommendation, NMFS will have to carry out other recommendations set forth above to assess needs for protected resources and develop a consolidated program for existing science improvement programs, as well as the recommendation in Chapter 3 to assess funding needs associated with the regulatory streamlining project.

NMFS has taken initial steps to establish a comprehensive planning, budgeting, and evaluation system, including a trial of an annual financial and program operating plan (AOP). In Chapter 4, the Panel recommends that the Deputy Assistant Administrator expedite implementation of this process (p. 96) and that:

> **The Assistant Administrator undertake, as soon as possible, an initial agency-wide program review using the initial AOP data**. This review should be directed at identifying those programs and activities that are clearly highest and lowest priority, redirecting current resources to the extent possible, and making decisions about priorities for FY 2003 funding. It should also assess whether the AOP process will meet the agency's needs for conducting program reviews and what, if any, changes or expansions need to be made.
>
> **By FY 2004, the Assistant Administrator allocate resources based on a full program review process guided by the principles discussed in this report and the content of the comprehensive management plan.**

These recommendations are in line with our earlier recommendations that the Assistant Administrator focus on policies, priorities, programs, and budgetary resources.

NMFS Science

Management of fisheries science activities shares some responsibility for the current crisis. During the past decade, the National Academy of Sciences (NAS) has conducted a series of studies on NMFS and made numerous recommendations for improvements in stock assessments, sustaining fisheries, scientific training, marine protected areas, and other areas of science related to fisheries management. Chapter 5 reviews these actions and the status of NMFS' implementation.

In a companion study, the National Research Council (NRC) of NAS examines the role of science in fisheries management at NMFS. The NRC study concentrated on the nature of the science used by NMFS in managing marine fisheries, the data used as input to scientific analyses, and the use of science by NMFS in developing management recommendations. The NRC study found that the foundation of NMFS science—essentially its models, analytic techniques, sampling methods—is among the best in the world. Even so, new models and data collection must be developed to meet the needs of spatially-based population dynamics, multispecies and ecosystem modeling. Currently, the type of data used and timeliness of their collection is more problematic and has led to some of the recent litigation facing NMFS. The NRC Committee makes 12 recommendations. The Findings and Recommendations from the NRC Committee report are reprinted in Chapter 5. A summary of the major recommendations in that chapter follows.

Although the fundamental science was found to be generally sound, eight of the NRC Committee recommendations addressed improvements to current practices of continuing stock assessments, independent review practices, and enhancing data collection:

1. **NMFS should maintain and advance its tradition of excellence in fisheries science**
2. **NMFS must balance its traditional emphasis on sustainable exploitation with its duty to protect vulnerable species and habitats harmed by fishing**
3. **NMFS should continue to use and seek advice and review from independent sources**
4. **Five areas of science, identified in previous NRC reports, should receive increased emphasis**
5. **Congress should follow previous NRC recommendations to fund continued acquisition and deployment of new vessels and the Fisheries Information System.**
6. **Congress should examine the cost of collection, analysis, and management of data required by NMFS to fulfill its current mandates**
7. **The importance of social and economic data and analysis to marine fisheries management should be recognized in the reauthorization of MSFCMA, resulting federal regulations, fishery management plans, NMFS budget requests, and Congressional appropriations**
8. **NMFS should develop a plan and implement a system for rapid response to research needs in recovery and conservation plans.**

More specifically, the first four recommendations relate to the need for NMFS to develop and implement state-of-the art stock assessments that include the new mandates in MSA to protect essential fish habitat, and to integrate traditional single-species approaches into a broader multi-species approach that considers ecosystem impacts of fishing. As these new stock assessment approaches are developed, review by independent scientists and collaboration with them should improve the quality of science done by NMFS.

The fifth recommendation acknowledges the need for new vessels to conduct fisheries-independent data collection as well as the need to implement better data management systems. The sixth recommendation recognizes the value of estimating the cost of data collection and

analysis needed to meet MSA mandates, while the seventh recognizes the need to collect socio-economic data to meet the national standards set forth in MSA. The eighth recommendation addresses the need for NMFS to respond more quickly to data collection and assessments that involve fisheries interactions with threatened and endangered species.

Two other recommendations are closely related to the issues of fundamental science and address the intellectual environment and workforce needs at NMFS. Specifically, the NRC Committee believes that:

9. **NMFS should create an atmosphere that encourages innovation and rewards excellence, as recommended in previous NRC reports.**
10. **NMFS must build a scientific workforce to meet the future needs of the agency**

NMFS is facing many workforce challenges. One-third of its workforce is due to retire in the near future, and the agency will have to compete in the marketplace for well-trained and new quantitative scientists who will also be drawn to other, better-paying positions. One way that NMFS can better position itself to compete for these scientists is to provide an atmosphere that promotes the excellence that has been a hallmark of the agency in the past.

The last two recommendations concern the use of science in the management process. Here the committee recommends that:

11. **NMFS and councils should develop quantifiable management goals and collect data to measure progress toward these goals.**
12. **Congress should examine fisheries governance and the use of science in governance.**

Once data are collected and stock assessments developed, this scientific information is used in the governance process. The NRC study found that the authority and responsibility between science and management appeared to be unclear when stock assessments were used in developing regulations and that the impact of regulation was not sufficiently quantified, especially regarding the extent that the national standards were met.

NMFS' Partners and Constituencies

The increasing fragmentation of NMFS constituencies and partners is evident in litigation and in views of its major constituents and partners. It is documented in recent reports by the Marine Fisheries Advisory Committee (MAFAC) and by internal review groups. Chapter 6 addresses the problems that NMFS has in public outreach and relationships with its constituencies and partners. Relationships with many are clearly strained, evidenced by their legal challenges and their intercession with Congress to address issues. The Panel found, and NMFS recognizes, that its contacts and relationships need improvement, and a newly established headquarters' Office of Constituent Services is taking the lead in developing programs.

The view of many of NMFS partners and constituents is that it does reach out to involve them in meaningful participation in its activities. NMFS, from their standpoint, does not engage them in

designing policies and programs, implementing projects, and evaluating results. Fishers question NMFS science and its motivation, just as environmentalists challenge its willingness to adopt restrictions; but little is being done to address these concerns. While most acknowledge that NMFS is a willing listener and has an open door, they questioned NMFS responsiveness to suggestions and willingness to engage.

Chapter 6 recognizes the inherent conflicts in fisheries management and NMFS objectives; no amount of outreach and constituent relations will revolve all of the problems. Nonetheless, we recommend aggressive programs of outreach to the public, engagement of its partners, and involvement with its constituencies. Based on work Academy Panels have done in similar environments, a set of principles of effective consultation has been adapted to marine fisheries. They should serve as a basis for the participation of NMFS' partners, constituents, and the public in the fisheries management system and NMFS other regulatory, scientific, and management activities (pp. 117-118). In line with our previous recommendations on the role of the Assistant Administrator, the Panel specifically recommends that:

> **The NMFS' Assistant Administrator issue a policy requiring responses to constituents' and partners' concerns and their recommendations as part of the decision process.**
>
> **The NMFS' Assistant Administrator design and implement processes for developing and evaluating its programs and updating its policies that involve constituents and partners where these groups or individuals have expertise and/or will be affected.**

Clearly, much of the responsibility for public, partner, and constituent relations necessarily will be associated with regional fisheries and local issues, and the regional administrators will need to become much more active participants in these processes. The Panel recommends increased use of an explicit electronic clearinghouse mechanism to afford constituents and partners access to clear and concise information about programs and policies, current science and management issues, and FMP and regulatory actions in the region (p. 121). The Panel recommends that regional administrators designate individuals early in the process of program or policy development as the point of contact to respond to information requests by constituents and partners in a timely manner (p. 121). Regional administrators also need to take the lead in initiating dialogue with constituents and partners, providing forums for discussions and information exchanges (p. 122).

Further, the Panel recommends that the Assistant Administrator establish policies that promote direct contact between council, regional, and science center staff with their constituents and partners (p. 122). Specific opportunities exist to expand the use of cooperative programs in areas of research, statistics, dockside extension services, and, possibly, further law enforcement activities. The Assistant Administrator should take the lead in establishing policies that encourage these activities. (p. 123)

CONCLUDING COMMENT

As highlighted in the leadership discussion, most of the fisheries management problems are systemic and cannot be solved by a single statutory, process, budgetary, or organizational change. The complexity is further exacerbated by the increased involvement by courts, Congress, and constituencies in actions affecting the day-to-day management of fisheries.

Clearly, the most important initial step in remedying these problems is for the Assistant Administrator for Fisheries to play a stronger role in the leadership of the fishery management system. It is critical to empower this individual to establish the policies, priorities, and programs, and request the financial and personnel resources that are needed to manage marine fisheries and perform other activities. The Secretary of Commerce, the NOAA Administrator, and the Administration have key roles to ensure that this happens. The councils, the states, and NMFS regions and their science centers should be the Assistant Administrator's partners in this endeavor, and should be treated as such. Increasingly, all of these partners need to engage the system's constituents in its processes through active consultation and open participation.

Most importantly, the Congress must cooperate with the NMFS leadership and engage NMFS, its partners, and the system's constituents in a dialogue that clarifies priorities of U.S. fishery objectives, either through legislation or other guidance. Without this, fisheries management may continue to fall by default to the courts and Congress, with citizens and constituencies turning to these bodies for response and redress.

CHAPTER ONE
INTRODUCTION

STUDY BACKGROUND

In its conference report accompanying the Department of Commerce's FY 2001 Appropriations Act, Congress called for an independent study of the National Marine Fisheries Service (NMFS) and its ability to meet its legal missions and requirements. This study builds on several recent reports, including a March 2000 National Academy of Public Administration (Academy) report entitled, *Improving the NOAA Budget and Financial Management Process*; a June 2000 National Oceanic and Atmospheric Administration (NOAA) internal report entitled, *An Independent Assessment of the Resource Requirements for the National Marine Fisheries Service*; and a December 2000 Marine Fisheries Advisory Committee (MAFAC) report entitled, *A Perspective on the National Marine Fisheries Service: Issues and Recommendations.*

This study's specific objective was to thoroughly review NMFS' regulatory and legal defense capabilities, financial management capacity, constituent relations, and organizational structure. The principal study tasks were to:

- review the adequacy of the processes and data used by NMFS to meet its regulatory requirements and to respond to litigation brought by constituent groups. In this connection, a National Academy of Sciences (NAS) committee reviewed the adequacy and application of scientific data in fisheries management and litigation.
- review the implementation efforts associated with recent budget and financial management changes
- review the effectiveness of the process and practices followed when consulting with various constituent groups. This includes identifying the steps that NMFS could take to improve the effectiveness of these interactions and their outcomes.
- review the adequacy of the existing organizational structure for the purpose of effectively carrying out the agency's mission, programs, and activities

The Academy conducted this study over an 11-month period, in conjunction with the NAS. A Panel, composed of Academy Fellows and non-Fellows with scientific and technical expertise related to marine fisheries, directed the Academy study. Panel member biographies are included in Appendix A. Appendix B contains the methodology used for conducting the research and analyses, determining findings and recommendations, and coordinating the reports.

EVOLUTION OF THE U.S. FISHERIES MANAGEMENT SYSTEM

The latter part of the 20th Century was marked by significant change in the management, regulation, and harvest levels of U.S. fisheries. The initial framework for managing these fisheries was originally devised in the 1970s, when a spate of legislation affected them. The framework encompassed several statutory provisions.

- The National Environmental Policy Act (NEPA) provided a new way of thinking about nature and mankind's interaction with it. It served as a procedural mechanism for explicitly considering interactions among federal actions, both individually and cumulatively, and the balance of present and future ecological and environmental concern with societal and economic interests.
- The Marine Mammal Protection Act (MMPA) recognized the danger of marine mammal extinction. It established, with certain exceptions, a moratorium on taking most marine mammals in U.S. waters and on importing marine mammals and products. The federal government was charged with maintaining marine mammal species and stocks at sustainable population levels, and with adopting measures to replenish them as necessary.
- The Endangered Species Act (ESA) provided for the conservation of species and populations in danger of extinction, and specifically identified fish, reptiles, and mammals. It established a process for listing threatened or endangered species based on biological data independent of economic consideration, identifying critical habitat for species survival, and preparing recovery plans.
- Additional legislation promoted fishery management and the ocean environment, including the Coastal Zone Management Act and the Marine Protection, Research, and Sanctuaries Act.

Nonetheless, these early statutes were largely piecemeal and independent. Little federal effort was taken to integrate them into a fisheries management system. These activities were then predominantly controlled by coastal states and international conventions.

This legislative explosion in the early 1970s mirrored major changes in federal government organization and management. Most importantly, the Stratton Commission issued a report, *Our Nation and the Sea: A Plan for National Action*, in January 1969. The Commission was tasked to review U.S. marine science activities and recommend a national oceanographic program and governmental reorganization plan. It recommended an independent agency to administer the nation's principal civil marine and atmospheric programs. In July 1970, President Nixon submitted a reorganization plan that incorporated elements of the Commission report, as well as other executive and legislative branch deliberations. The plan proposed a new National Oceanic and Atmospheric Administration (NOAA) within the Department of Commerce that became effective in 90 days.

Most of the Department of the Interior's Bureau of Commercial Fisheries was transferred to NOAA. The Bureau was created nearly a century earlier to identify and define solutions to the problems of commercial fisheries; it became a separate bureau in 1956. Its mission was essentially scientific, and its biological research programs focused on understanding the nature, size, and yield of commercially important fish. The Bureau had few management or conservation responsibilities, and NOAA inherited its activities related to assisting industry, ensuring consumer safety, and supporting U.S. fishing responsibilities under treaties and international agreements. Five of the Bureau's six regional offices, its research centers, and 30 specialized laboratories were placed within NOAA as well. These, along with Interior's marine recreational game fish research program, became the foundation for the National Marine Fisheries Service (NMFS) within the new structure.

The most far-reaching change in fishery management came with the passage of the Magnuson Fishery Conservation and Management Act in 1976. Prior to this statute, fishery management had largely been the responsibility of the industry and the states. U.S. commercial fishing vessels departing and returning to U.S. ports were subject to state—not federal—jurisdiction. Federal jurisdiction over fishing in international waters was accomplished through treaties and international agreements administered by the Department of State, with later assistance from NMFS. In 1966, Congress expanded the U.S.-claimed jurisdiction to 12 miles, replacing the 3-mile limit that was long recognized as subject to state jurisdiction. A "Law of the Sea" treaty proposed to extend this jurisdiction even further, but international agreement stalled in the early 1970s. Meanwhile, a decline in U.S. commercial landings (1.6 billion pounds in 1977) and dramatic increases in foreign catches off U.S. coasts (3.8 billion pounds in 1977) were the impetus for unilateral U.S. action. These offshore areas supported 15-20 percent of the world's traditionally harvested fish resources.

The Magnuson Act responded to these dynamics by:

- establishing a U.S.-controlled fishery conservation zone covering between 3 and 200 miles off U.S. coasts, which was ultimately declared an exclusive economic zone (EEZ) in 1983 when the U.S. sovereign area increased by 3.4 million square miles
- creating a unique, highly participatory management system composed of regional fishery management councils (FMCs) with members coming largely from the two elements with the greatest role in managing U.S. coastal fisheries—the states and commercial and recreational fishers.
- directing the preparation of fishery management plans (FMPs) based on single fish species predominantly caught in federal waters. These FMPs were to consider social, economic, biological, and environmental factors affecting each fishery. Seven national standards provided statutory guidelines for developing and reviewing these plans.
- charging the Secretary of Commerce, acting through NOAA and NMFS, to review, approve/disapprove, and implement FMPs by issuing the associated regulations, and—along with the Coast Guard—enforcing them

In 1976, this new fishery management system, composed of regional councils and NMFS, acquired specific management responsibilities for fisheries in an area roughly comparable to the existing U.S. land mass. NMFS' research and information collection activities, which traditionally provided the scientific underpinnings for industry self-management, became the foundation for this new participatory management system. Initially, a substantial portion of the fish catch was allocated to foreign fishing fleets, but the clear intent was eventually to supplant foreign dominance with American boats off U.S. shores. Fishery management responsibilities, as provided under the Magnuson Act, have become the foundation regulating most EEZ fisheries.

The American Fisheries Promotion Act of 1980 articulated the goal of exercising sovereign rights over the EEZ, and it orchestrated a decrease in foreign catch allocations as domestic fishing and processing capacities expanded. Government incentives and relaxed regulatory

treatment facilitated major growth in U.S. fishing and processing capacity. Key measures included:

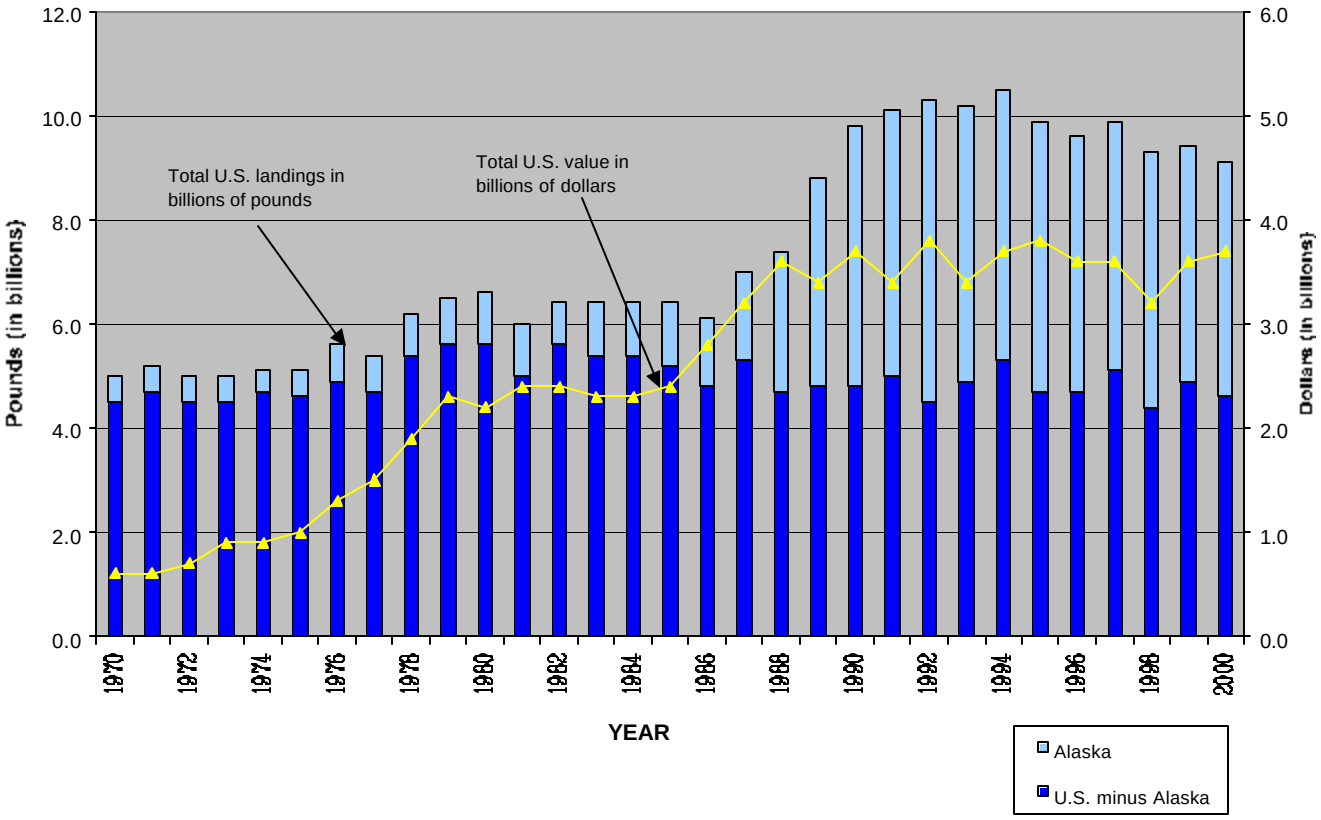
- the Internal Revenue Code that, since the early 1970s, allowed fishers to defer fishing income through set aside accounts, called capital construction funds, to purchase or reconstruct a fishing vessel. These special tax incentives continue to exist, and account balances encourage improvements even when capitalization is widely regarded as excessive.
- A fisheries obligation guarantee program, begun in 1974, that provided government loan guarantees to fishing firms for capital assets, whether a fishing vessel or processing plant. This program financed more than 1,250 new or reconstructed vessels from 1976 through 1998.
- investment tax laws, including general investment tax credits, which became available in the early 1980s

These incentives, coupled with policies favoring "americanization" of fisheries, led to increased investment in the fishing industry and what has been widely regarded as overcapacity in many fisheries. Under a "fish n chips" policy, short-term allocations of fishing rights favored foreign companies that invested in shore-side processing facilities to handle increased U.S. landings. Meanwhile, NMFS worked vigorously to raise the market for U.S. seafood by increasing industry support.

By policy, the quotas provided to foreign fishing rapidly declined and transferred to U.S. vessels as fishing investment and capacity increased. The push to "americanize" EEZ fisheries proved dramatically successful. Foreign catch from the EEZ declined from 3.8 billion pounds to zero in 1992 and subsequent years; domestic offshore catch increased from 1.6 billion pounds in 1977 to 10.3 billion pounds in 1992. Figure 1-1 summarizes the growth in the volume and value of U.S. commercial fishery landings from 1970 to 2000.

Recreational fishing also is an important part of the fishery management system. This industry has a comparatively large impact on the economy given its size and high level of spending, rivaling the commercial industry. Yet the overall U.S. recreational catch is reasonably small—less than 5 percent of the commercial total—and has remained stable since the early 1980s. Participation in the recreational industry has grown by roughly 40 percent. In some fisheries, particularly in the Southeast region, the estimated value of the recreational sector exceeds commercial fishing's.

Figure 1-1: TOTAL U.S. AND ALASKA COMMERCIAL FISHERY LANDINGS



The first signs of strain in the U.S. fishing industry and its governance system became apparent during the process of "americanization". New England groundfish—cod, haddock, and yellowtail flounder—had long been a premier fishery in the United States, but it began to collapse. Annual catches that had risen dramatically—by over 100 percent between 1976 and 1983—precipitiously declined. The cumulative impact of higher-powered trawlers, new technologies, and wider-ranging U.S. fishing operations into the EEZ resulted in a drastic reversal of fortune. A 60 percent decline between 1983 and 1986 quickly erased the gains of the previous decade.

The management system had worked well in an era of expansion and substitution of foreign fishers, but it began to struggle to adjust to a new world of scarcity and limited resources. Given catch reductions, the New England Council, composed of state representatives and fishers, was extremely reluctant to impose the austerity needed to rebuild stocks. NMFS encouraged the councils and fishing constituencies to consider regulations such as hard quotas, closed areas, and constrained days-at-sea. Yet, field and Washington representatives faced considerable constituent dissatisfaction and sought to avoid extreme remedies. An environmental lawsuit,

Conservation Law Foundation v. Mosbacher,[1] was a groundbreaking case in fishery litigation; it forced NMFS and the council to adopt restrictions that temporarily reversed stock declines.

Similarly, severe reductions in Pacific salmon, some species of West Coast groundfish, and other fish began in the 1970s. Nonetheless, these setbacks were localized and not seen as indicative of overall U.S. fishery conditions during the following decade. Total fishery production continued to boom, from the mid-1980s level of 6.4 billion pounds to almost 10 billion pounds in 1990.

The 1990s saw the culmination of several trends in natural resource conservation, environmental protection, and fisheries management. In 1996, the Sustainable Fisheries Act (SFA) reauthorized and renamed the MFCMA as the Magnuson-Stevens Act (MSA). It responded to increased environmental and conservationist pressures by more explicitly defining the natural resource protection elements of the earlier statutes. SFA added significant national standards that required consideration of the impacts of regulations on communities and minimizing bycatch. In addition, FMPs were required to consider and protect essential fish habitats (EFH) and to develop plans to rebuild overfished stocks, whenever possible, within ten years. As a result, the natural resource protection features of MSA heightened.

The U.S. fisheries environmental and conservationist constituency learned in the 1980s that NMFS was weak in the face of strong opposition from the fisher communities and the political clout brought to bear on fishery management issues. It seemed that litigation often provided NMFS with the added ammunition it needed to face other constituency pressures. The number of lawsuits increased in the early 1990s, and the new SFA requirements increased the ability of fishers and conservationists to challenge FMPs, NMFS, and Commerce. The Regulatory Flexibility Act (RFA) also became judicially reviewable in 1996. These all combined to generate an order-of-magnitude increase in court challenges and litigation.

Litigation, or the threat of it, served to increase NMFS' motivation—but not its capacity—to more carefully consider the environmental, conservationist, economic, and social impacts of its fishery management actions. NMFS' $100 million budget stagnated during the 1980s. It increased in the 1990s in response to specific crisis', particularly in the West Coast salmon fishery, but funds were increasingly earmarked for specific programs or targeted recipients.

In some areas, years of increased fish catch caught up with the fishers and FMPs. The fishing of New England groundfish, West Coast groundfish, and other species continued on increasingly restricted quotas. Some improved, but others continued to lose ground, with no hope of returning to abundance without additional restrictions. Concerns about fishery populations were compounded by heightened interest in threatened and endangered species. Recovery plans had to be developed for 29 marine mammal and endangered marine fish species, and rebuilding plans were required for 56 overfished major fish stocks. Thus, it is not surprising that the fishery management system seemed to be operating in crisis at the beginning of the 21st Century.

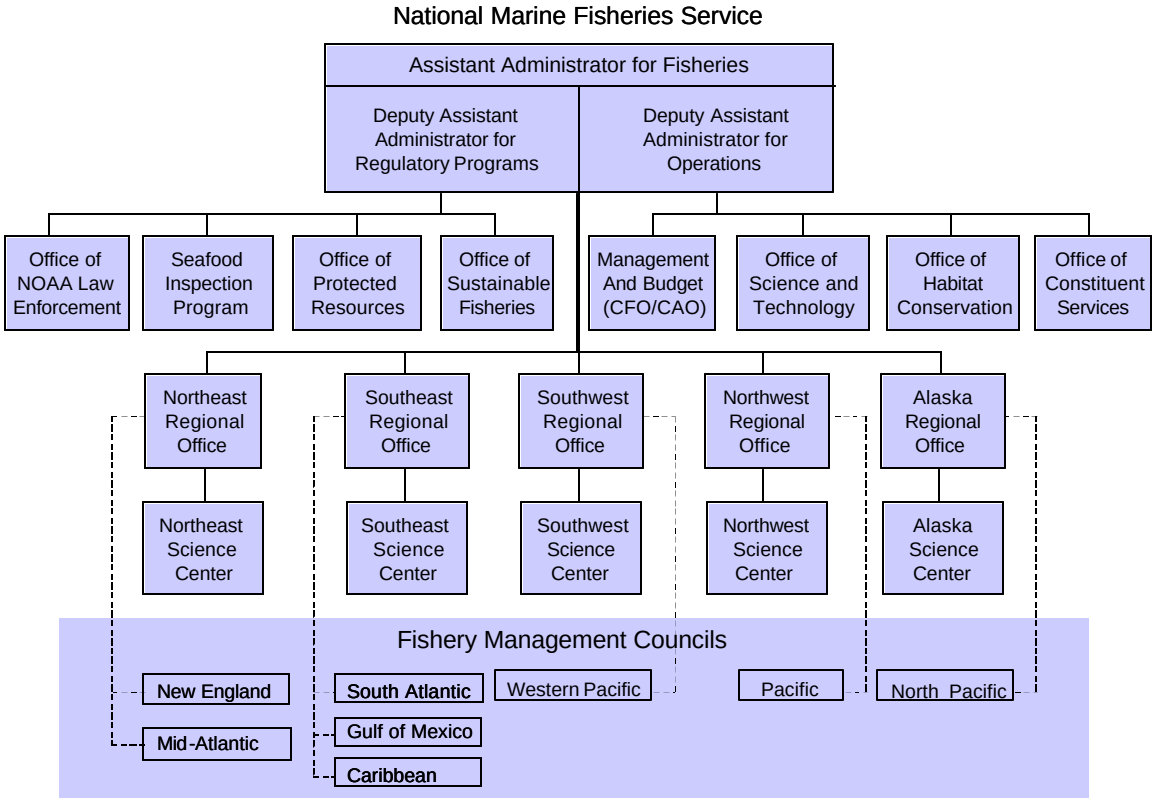
[1] WESTLAW: 1991 WL 501 640.

STRUCTURE OF THE FISHERIES MANAGEMENT SYSTEM

Chart 1-1 outlines the fisheries management structure, composed of two distinct components:

- the eight regional (FMCs), arrayed along all coasts of the United States, including Alaska and areas of the Western Pacific and Caribbean
- NMFS, composed of its headquarters and major offices in Silver Spring, Maryland, and its five regional offices, each with a science center whose director reports to the regional administrator, but whose finances and management is otherwise independent of its region

Chart 1-1: U.S. FISHERIES MANAGEMENT SYSTEM



In addition, three interstate fisheries management commissions address multi-state fisheries, predominantly in non-federal marine waters. Specifically, the Atlantic States Marine Fisheries Management Commission works in cooperation with the federal fishery management system in certain fisheries. This is discussed in greater detail in Chapter 3.

The Regional Fishery Management Councils

Management of the eight regional FMCs is largely independent of NMFS. Each council has statutorily prescribed members—the NMFS regional administrator and representatives of

specified states in each region—as well as members appointed by the Secretary of Commerce from nominees of governors of states in each region. In addition, each council is supported by a small professional staff, consisting of an executive director, a limited number of professional staff (4 to 8) assigned to monitor the individual fisheries subordinate to each council, and support staff. The councils' budgets, funded by NMFS, currently total less than $16 million, an average of less than $2 million each.

Council members elect a council chairman from among the members, set up their own internal operating procedures, schedule meetings, and establish agendas. The councils meet regularly, six-to-eight times annually, and often have subordinate panels or committees composed of state representatives, outside experts, and NMFS employees. Under MSA, the council's primary task is to develop FMPs under the national standards and other provisions set forth in the act. There currently are 40 FMPs[2] in the eight councils, covering individual species, or multiple species composed of several fish stocks often harvested together. Some FMPs are developed jointly by several councils or with one of three interstate commissions—Atlantic, Gulf, and Pacific—that have responsibilities for multi-state fisheries in state, rather than EEZ, waters. The councils have no explicit regulatory or plan implementation functions. That task is left to NMFS.

National Marine Fisheries Service

Compared with the councils' austere workforce, funding, and structure, NMFS has more than 2,500 personnel and an annual budget of about $800 million. The headquarters and regions are composed of three major operational offices:

- Sustainable Fisheries, which works with the councils in developing FMPs, and develops FMPs for the two highly migratory species that NMFS directly manages.
- Protected Resources, which manages NMFS marine mammal protection and endangered species activities, including consultations with federal agencies on actions that might affect endangered species
- Habitat Conservation, which protects marine habitats and reviews actions affecting essential fish habitats

As shown in Chart 1-1, a variety of staff and other offices are subordinate to NMFS Deputy Assistant Administrators, including budget, constituent services, seafood inspection, and law enforcement offices. These offices sometimes are replicated in the regional offices.

On the other hand, the science centers have a more varied array of offices and laboratories. The Southeast center, for example, has a regional structure with offices for sustainable fisheries and protected resources, plus a number of separate research laboratories. Others have divisions focused on fish biology, data acquisition, analysis, environmental conservation, and marine habitats.

The regions and their subordinate science centers engage in activities that support the work of the FMCs, such as stock assessments, socio-economic analyses, environmental assessments,

[2] There are also two FMPs developed directly by NMFS that cover highly migratory species, one for tuna, swordfish and sharks and another for billfish.

observer programs, and data collection. Yet work assignment patterns vary widely. Some councils conduct most analyses themselves except for stock assessments. But there are examples where the responsibility for environmental analyses lies with the regional offices or the science center. Especially in the area of analysis supporting FMP development, there is no set pattern of activities or organizational responsibilities defined by NMFS either in its operational guidelines or in practice.

NMFS receives considerable support from NOAA, especially for information technology, financial management systems, human resources administration, and legal and litigation matters. In particular, NMFS is supported by NOAA's General Counsel and legal staff devoted to fishery and marine resource issues. All general counsel staff, as with most other federal government agencies, are part of a centralized office; in this case, it is NOAA's Office of General Counsel. They serve as legal counsel to the councils, the regions and science centers, and headquarters on issues ranging from FMP procedures to reviewing the legal sufficiency of FMPs, analyses, regulations, and enforcement actions.

NMFS PROGRAM AND PERFORMANCE

NMFS' budget and programmatic goals and objectives closely match the basic organizational structure of NMFS headquarters and regions. Maintaining sustainable fisheries, protecting marine mammals and endangered fish species, and preserving the ocean and estuarine habitats for marine and anadromous species are the goals to which the major program and budgetary activities relate. There are some ancillary programs in seafood inspection, disaster relief, and specialized research that are less directly related; these compose a small fraction of NMFS' program and budget.

NMFS also tracks its performance against these goals. Its performance measures include:

- reducing by 2007 the number of unknown major stocks from 120 to 98, and the number of overfished stocks from 56 to 32
- increasing by 2007 the percentage of overfished stocks that have rebuilding plans from 95 percent to 100 percent
- reducing by 2007 the probability of extinction for 11 out of 29 endangered species, with similar reductions in the number of threatened or candidate species
- increasing by 2007 the number of coastal restoration projects by more than 130 percent, and Coastal habitat acres improved by 20 percent

NMFS' critics use these measures to demonstrate the inadequate performance of the MSA fishery management system during the past 25 years. The conservationists cite the large percentage—42 percent—of major stocks with unknown status and an even larger percentage of minor stocks. Fishers challenge this assessment and point to the number of stocks that are being or have been rebuilt. The environmental community often criticizes the speed and effectiveness of rebuilding and recovery efforts, as it is concerned that these efforts are too weak or will eventually erode under the demands of fisher communities.

CONSTITUENTS, PARTNERS, AND FISHERY MANAGERS

The fishery management system has large numbers of participants and actively involved constituents. The councils, NMFS, and the states principally manage fisheries. Their perspectives vary widely depending on the fishery involved, the influence of their members and constituencies, and the impact on their interests. When the system is stressed by overfishing, reaching agreement on management actions is almost impossible given the demands of rebuilding fish stocks or recovering endangered species; the consideration of social and economic impacts on communities; and economic constraints on government resources and alternative economic opportunities.

There also is a large number of actively engaged constituents and interest groups with a stake in fisheries management and its outcome. These include the fishers, a diverse and famously independent group of entrepreneurs. They have strong interests in short-term outcomes that affect their income and livelihood, the prosperity of their communities, and the health of the industry. They are politically engaged, with strong local, regional, and national representation. Conservationist and environmental groups are perhaps equally as vocal and certainly as engaged. Their position has been strengthened through environmental protection legislation and litigation challenges. They tend to be unified in their objectives, share similar perspectives, and cooperate well in advancing near-term actions that support the longer-term goals of conservation and sustainable ecosystems.

Other parties, including Native Americans, loggers, and power companies in the Northwest, also have strong economic interests in fisheries issues, particularly those affecting Pacific salmon. Consumer interests are more specialized, focusing on food safety and fishing practices favoring protected species. Finally, elements of the scientific and academic communities represent more professional and technical interests. As such, the range of interest groups with strongly held positions on fisheries issues is extremely large, making fisheries management both a political and scientific exercise.

CHAPTER TWO
FISHERIES LITIGATION

Congress, NOAA General Counsel, and NMFS officials have become increasingly concerned with litigation against NMFS. From a constituent relations standpoint, litigation indicates that major constituents are dissatisfied with actions of the federal fisheries management system. Given this widely expressed concern, Congress asked the Academy to conduct a thorough review of NMFS' legal defense capability, and the adequacy of the processes and data used by NMFS to respond to litigation brought by constituent groups.

This chapter includes a comprehensive analysis of NMFS litigation. It examines the overall litigation workload reflected in NOAA General Counsel's open and closed dockets as well as the agency's overall litigation record from 1977 to 2001 based on cases published by Lexis-Nexis. It also considers the cases that NMFS has lost under each of its major statutes. This is done to determine what lessons can be learned from the litigation. The chapter concludes by recommending improvements to NOAA's docket and litigation analyses and NMFS administrative record keeping processes.

THE LITIGATION WORKLOAD AND PROCESS

NOAA's General Counsel for Fisheries (GCF), which provides counsel to NMFS on marine resource laws, has two divisions: (1) Protected Resources and Habitat and (2) Sustainable Fisheries. GCF headquarters consists of 16 attorneys, one paralegal, and two legal secretaries. Each attorney is assigned to one of the two divisions. In addition, regional general counsel offices are co-located in the NMFS regions, with attorneys providing advice to FMCs, regions, and science centers. The attorneys are NOAA employees who report to the General Counsel in Washington, DC.

When a lawsuit is brought against NMFS, the agency must release an administrative record, which consists of all pertinent documents leading to the decision, including notes and emails.[3] The region and council develop a preliminary administrative record for the regional General Counsel. Some records are incredibly long, containing as many as 20 binders of information. General Counsel and NMFS staff acknowledged that compiling a record often is time-consuming and expensive. This is especially true in regions where litigation had not been a significant issue in the past. In such instances, documents are less likely to be current, but this is beginning to change. Both the Alaska and the Northwest regions have full-time records coordinators who maintain an up-to-date index of their administrative record. In addition, the Northwest Region has automated its administrative record for groundfish, and placed its biological opinions on the Internet.

[3] Under MSA, a citizen has 30 days to file suit against an agency action; the agency has forty-five days to file the administrative record and its response to the complaint. The strict timeline for filing and agency response was established under MSA because, unlike ESA, it does not allow plaintiffs to receive a preliminary injunction against agency actions.

Regional attorneys examine administrative records and delete information immaterial to the challenge or subject to attorney-client privilege. NMFS paginates, creates an index, and provides copies of the final version to the Department of Justice, the court, the plaintiffs, and the regional General Counsel. A response must be filed to the plaintiff's legal challenge that admits, denies, or qualifies the challenge in some way. A motion for summary judgment is filed when, as is often the case, no factual disagreements are present; it is only a question of law. Although the NMFS' technical and scientific personnel rarely testify in court, they often provide affidavits or depositions. The court determines whether the agency complied with the law and whether there was a basis for its decision.

The Department of Justice (DOJ) represents the U.S. government in federal court. When NMFS is sued, DOJ attorneys are the primary lawyers, with NOAA's attorneys being "of counsel." NOAA Fisheries and DOJ attorneys work together during a lawsuit. NOAA lawyers sometimes write draft briefs. Also, DOJ does not make a particular argument if NOAA does not want it to; nor does it settle a case without the agency's agreement. Once a district court reaches an initial decision, however, DOJ—not NMFS or NOAA—decides whether to appeal. NOAA attorneys indicated that DOJ does not appeal every case that NOAA or NMFS wants.

NOAA's General Counsel does not conduct comprehensive analyses of caseload and litigation trends, but maintains two summarized dockets of open and closed cases,[4] based on the date the case was filed. Table 2-1 provides the total fisheries litigation caseload, based on the open and closed dockets. The NOAA open docket includes all open cases, including those where a judicial decision has been reached, but is still subject to appeal. The closed docket is a mix of settled, dismissed, and decided cases. It is incomplete and excludes many cases provided in the analysis of decided cases addressed below.[5] From 1997 to 1999, the number of new cases filed increased substantially, partly because plaintiffs tested the new legal provisions established under the SFA. The table shows that the total number of fisheries litigation cases initiated annually has declined since 1999. Because federal cases take an average of about two years from filing to initial court decision, the total number of open cases may begin to decline in 2002. It is not clear, however, whether the decline in new cases is the beginning of a long-term trend or is a temporary phenomenon. In addition, the overall litigation caseload remains substantially larger in the post-SFA environment.

[4] The dockets were originally developed for audit and budget purposes to determine which cases may result in fiscal obligations.

[5] Specifically, 46 of the cases that were published by Lexis-Nexis were in neither the agency's closed nor its open docket. The majority of the missing cases, however, were decided prior to 1998—indicating that NOAA's current open docket is a relatively comprehensive list of open cases. This docket, however, does include a large number of decided cases subject to appeal or continuing court involvement.

Table 2-1: FISHERIES LITIGATION, TOTAL CASES BY YEAR OPENED

Year	Open Docket Cases	Closed Docket Cases	Total Cases
2001	30	1	31
2000	31	20	51
1999	23	36	59
1998	8	26	34
1997	2	26	28
Pre-1997	3	21	24
Total Cases	**97**	**130**	**227**

Source: NOAA Open Docket listing of February 15, 2002 and Closed Docket listing of October 3, 2001

Although the NOAA dockets are useful for analyzing overall and current caseload, they are inadequate for analyzing the overall litigation record, cases won and lost, historical trends on plaintiffs, specific legal challenges, and results. Thus, they do not provide a sufficient basis to judge regulatory or other problems associated with fisheries litigation.

THE LITIGATION RECORD

This analysis of the fisheries litigation record was developed independent of the NOAA open and closed dockets. It is based on decided cases published by Lexis-Nexis; because this database does not publish all decided cases, some fisheries cases are not included in this analysis. The assumption, though, is that Lexis-Nexis publishes the most important cases, which can be used to discern lessons and overall trends. Also, the analysis excludes enforcement cases and purely procedural matters, such as requests for a change in venue that Lexis-Nexis sometimes publishes. They were excluded because the focus is on litigation challenging fishery management actions. Finally, some cases are often decided by both a District Court and a Court of Appeals. This analysis counts the case only once, based on the decision of the highest court that ruled on a given challenge. Appendix G contains a list of the 91 cases included in the analysis.

Figure 2-1 shows the total number of cases from 1977 to 2001 identified according to the four major statutes under which fisheries actions were challenged: Magnuson Stevens Act (MSA), National Environmental Policy Act (NEPA), Endangered Species Act (ESA), and Regulatory Flexibility Act (RFA). Other statutes—such as the Administrative Procedure Act, the Marine Mammal Protection Act, Indian Treaties, and other laws—are included in the "others" category. As some cases involve challenges under multiple statutes, there were a total of 133 challenges against all statutes during this period. Figure 2-1 shows that few cases were brought in the early years, but significantly more were filed in recent years. The total number of challenges by statute by year, for example, has increased from an average of one or two annually in the 1970s and 1980s to ten in 1996, and to the current high of twenty-six in 2001. Overall, there has been a modest increase in the number of MSA challenges but a major increase of NEPA, ESA, and RFA cases in recent years.

Figure 2-1: TOTAL CHALLENGES BY YEAR BY LAW, 1977-2001

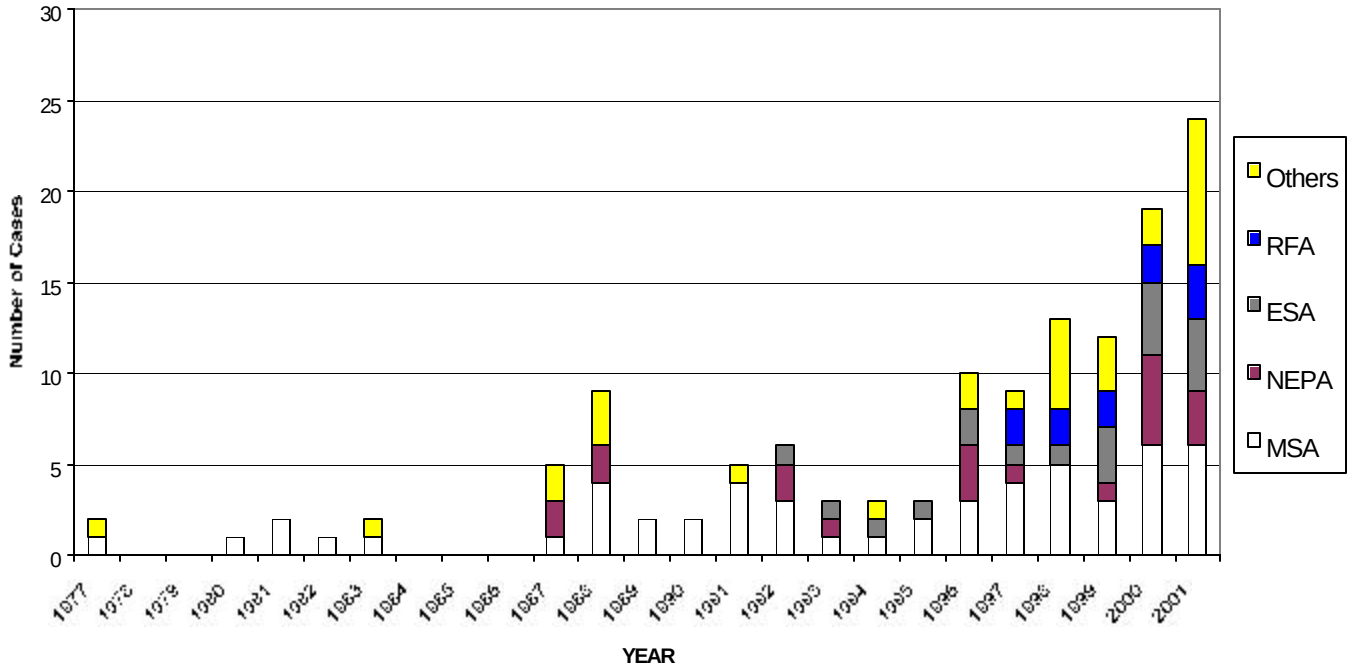
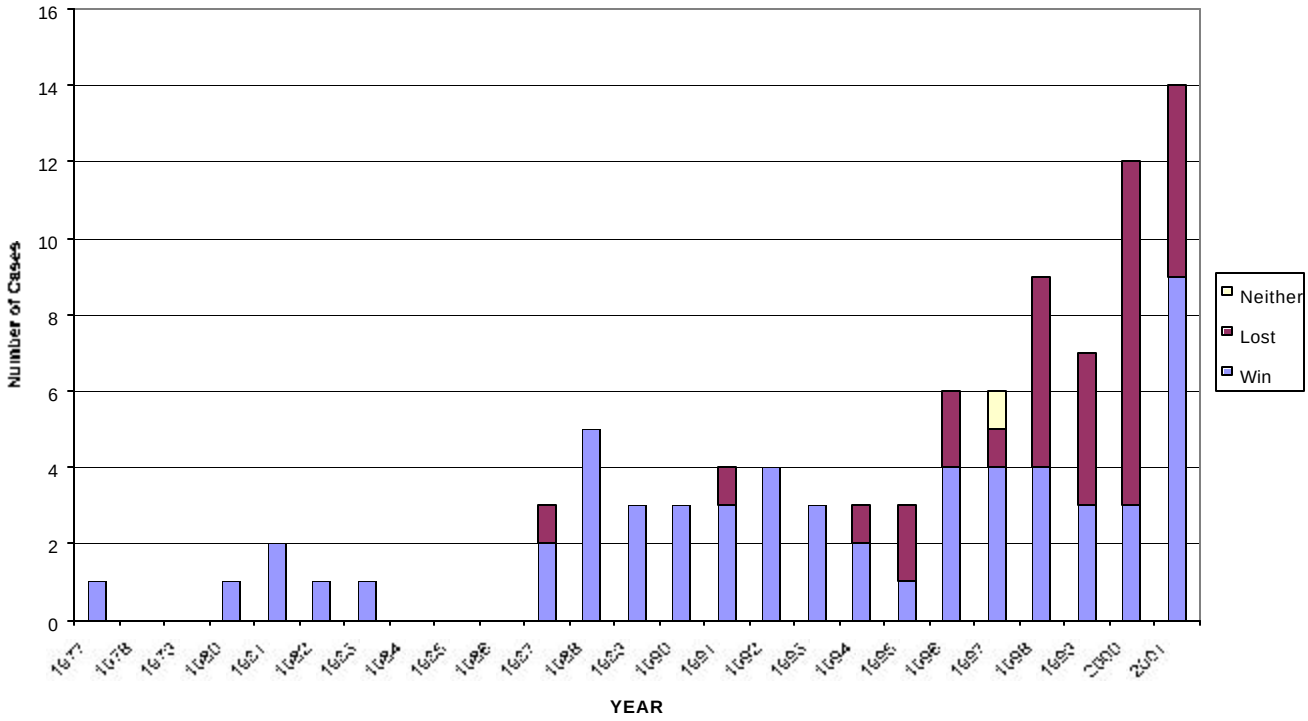


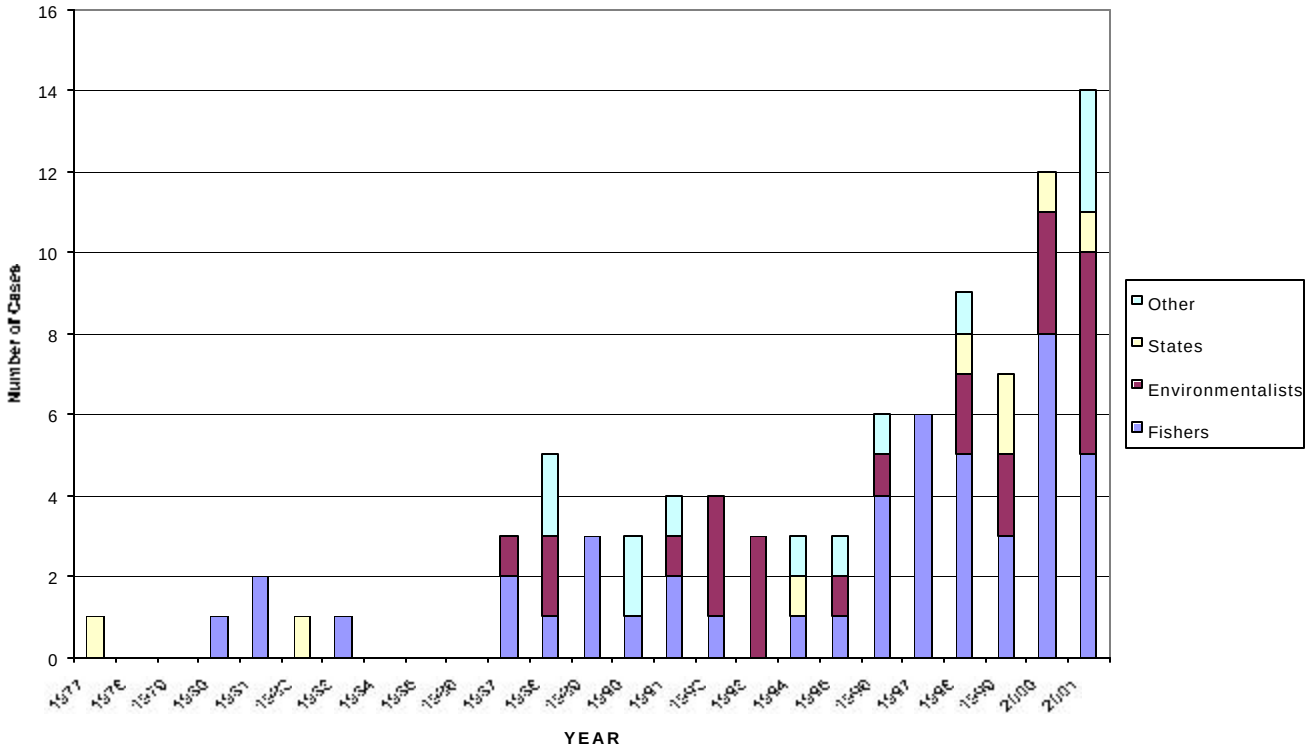
Figure 2-2 shows the overall win-loss record for these fisheries litigation cases between 1977 and 2001. The case was counted as "lost" if the government lost on any statute. Of the 91 decided cases from 1977 to 2001, the record is 59 wins, 31 losses, and 1 that it neither won nor lost. Prior to 1995, the government lost only a handful of cases. The pre-1997 record was particularly favorable to the government defendants, which won 83 percent of all the cases. The deterioration in the government's win-loss record began in 1998 and continues to this day. From 1998 to 2001, the record is 19 wins and 23 losses. Because the government's win-loss record has deteriorated so rapidly, it may be useful for DOJ and NOAA to establish a joint taskforce to determine how NMFS can prevail in court more often. The taskforce could include experts from other agencies that have large caseloads, such as the Environmental Protection Agency or the Forest Service.

Figure 2-2: OVERALL WIN-LOSS RECORD, 1977 – 2001



Recreational and commercial fishers, as shown in Figure 2-3, have brought more than half of the cases. Compared with 1 or 2 cases per year through 1995, fishers have brought an average of more than 5 cases annually since then, rising to a peak of 8 cases in 2000. Environmental and conservationist plaintiffs are the second largest group, accounting for 26 percent of the cases filed from 1977 to 2001. Although they brought very few cases prior to 1992, environmental group filings have increased markedly, rivaling the number brought by fishers in 2001. Environmentalists, therefore, have become more important constituents over time, in part because SFA provided them with new legal provisions under which to bring lawsuits. And because environmentalists typically sue under different legal provisions than fishers, NMFS' conflicting mission has become a more serious dilemma than ever. Fishers are demanding that the agency give priority to alleviating adverse economic effects on fishing communities, while the environmentalists are demanding that it give priority to conserving marine resources. Litigation by states and other plaintiffs—Native Americans and non-fishing industrial groups—has increased in recent years as well.

Figure 2-3: PLAINTIFFS BY YEAR



Overall, the record supports the common belief that litigation has become a major source of concern. Litigation has increased substantially since the mid-1990s, and the government defendant's success has faltered to the point that it is now losing approximately 55 percent of its cases. Further, a wider array of constituents have begun to challenge NMFS; environmental and conservationist plaintiffs are bringing nearly as many cases as fishers.

ANALYSIS BY STATUTE

The overall litigation record has been refined by analyzing the cases and challenges under the four major statutes: MSA, NEPA, ESA, and RFA. The MSA guides the development, review, approval, and implementation of FMPs, most of which are prepared by councils. Nonetheless, NMFS is the federal agency responsible for reviewing and implementing associated regulation. As a result, the agency and the Secretary of Commerce become the defendant in court. This is different for the other acts—NEPA, ESA, and RFA—for which the councils have no defined rule under MSA. Thus, the other statutes fall specifically on NMFS for action, though they affect the process that the councils and NMFS use to develop FMPs and the plans themselves.

Magnuson Stevens Act

The Magnuson Stevens Act,[6] as amended in 1996 by the Sustainable Fisheries Act, authorizes federal management of marine fisheries predominately in the EEZ of the United States. States generally have jurisdiction over fishery resources within 3 miles of their coasts. Beyond that point, the federal government has jurisdiction within 200 miles of all U.S. coasts. This statute mandates that all FMPs, amendments, and regulations comply with ten national standards:

- **National Standard 1** requires FMPs to "prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry."
- **National Standard 2** mandates the use of "the best scientific information available."
- **National Standard 3** requires that, "to the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination."
- **National Standard 4** prohibits discrimination "between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (a) fair and equitable to all such fishermen; (b) reasonably calculated to promote conservation; and (c) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges."
- **National Standard 5** mandates that FMPs "where practicable, consider efficiency in the utilization of fishery resources, except that no such measure shall have economic allocation as its sole source."
- **National Standard 6** requires FMPs to "take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches."
- **National Standard 7** requires FMPs to "where practicable, minimize costs and avoid unnecessary duplication."
- **National Standard 8** requires that FMPs, "consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (a) provide for the sustained participation of such communities and (b) to the extent practicable, minimize adverse economic impacts on such communities."
- **National Standard 9** requires that FMPs, "to the extent practicable, (a) minimize bycatch and (b) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch."[7]
- **National Standard 10** mandates that FMPs, "to the extent practicable, promote the safety of human life at sea."

MSA also has other substantive and procedural requirements. For the purposes of this study, the most important ones are rebuilding plans for overfished stocks and protecting essential fish

[6] The Fishery Conservation and Management Act was enacted in 1976. It was renamed in 1980 to honor Senator Warren G. Magnuson, and in 1996 to honor Senator Ted Stevens.

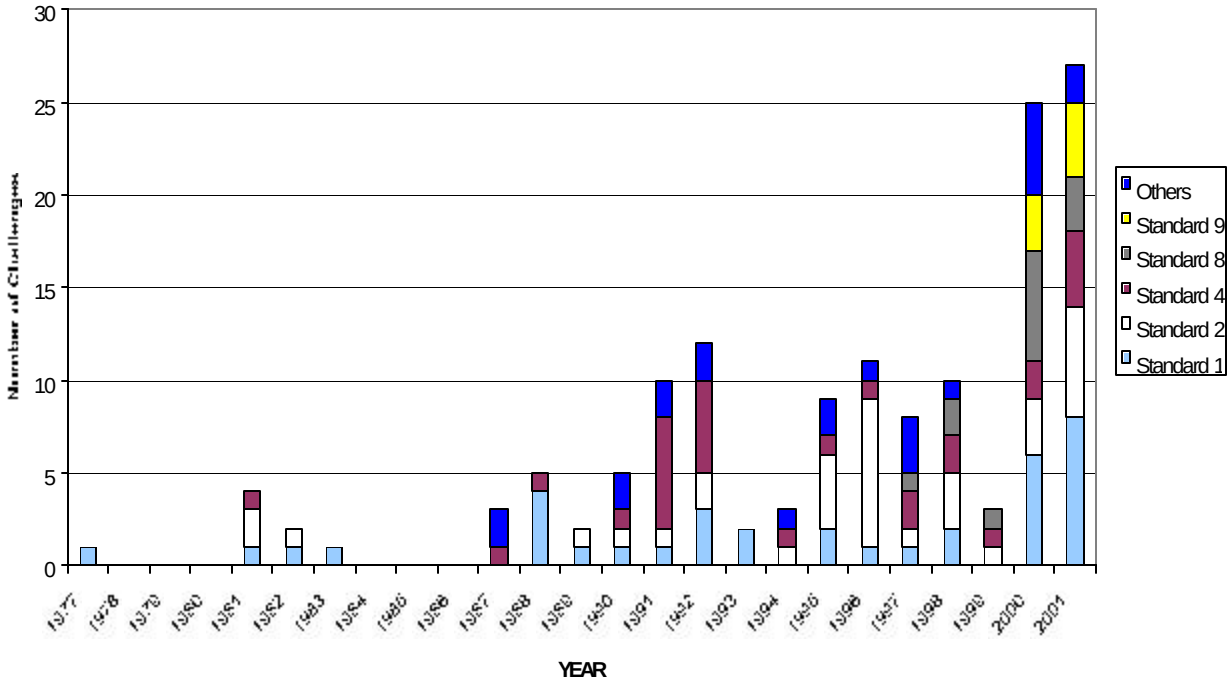
[7] Bycatch are other fish or animals caught incidentally while a fisher is trying to catch a particular species of fish.

habitat (EFH). For our purposes, cases involving rebuilding plans are treated under National Standard 1. EFH cases involved challenges under NEPA and MSA; they are considered under the NEPA portion of the analysis.

As noted in Figure 2-1, MSA provides the basis for more litigation than any other statute, accounting for approximately 40 percent of all challenges from 1977 to 2001. Figure 2-4 shows the total number of challenges (143) brought under the various standards during that period. Again, some of the 53 MSA cases involve challenges to multiple standards or even multiple challenges under the same standard. Each legal challenge is addressed separately. When a plaintiff challenges a fishery management action under one of the national standards, courts review it under the Administrative Procedure Act's arbitrary and capricious standard.

Figure 2-4 shows that the total number of national standard challenges has increased dramatically over time, especially after the Sustainable Fisheries Act was enacted in 1996. The total number of cases brought under the standards increased from eight in 1997 to nineteen in 2001. The bulk were brought under the overfishing standard (#1), the science standard (#2), and the anti-discrimination standard (#4).[8] Post-SFA standards involving community impact (#8) and bycatch (#9) have increased in recent years.

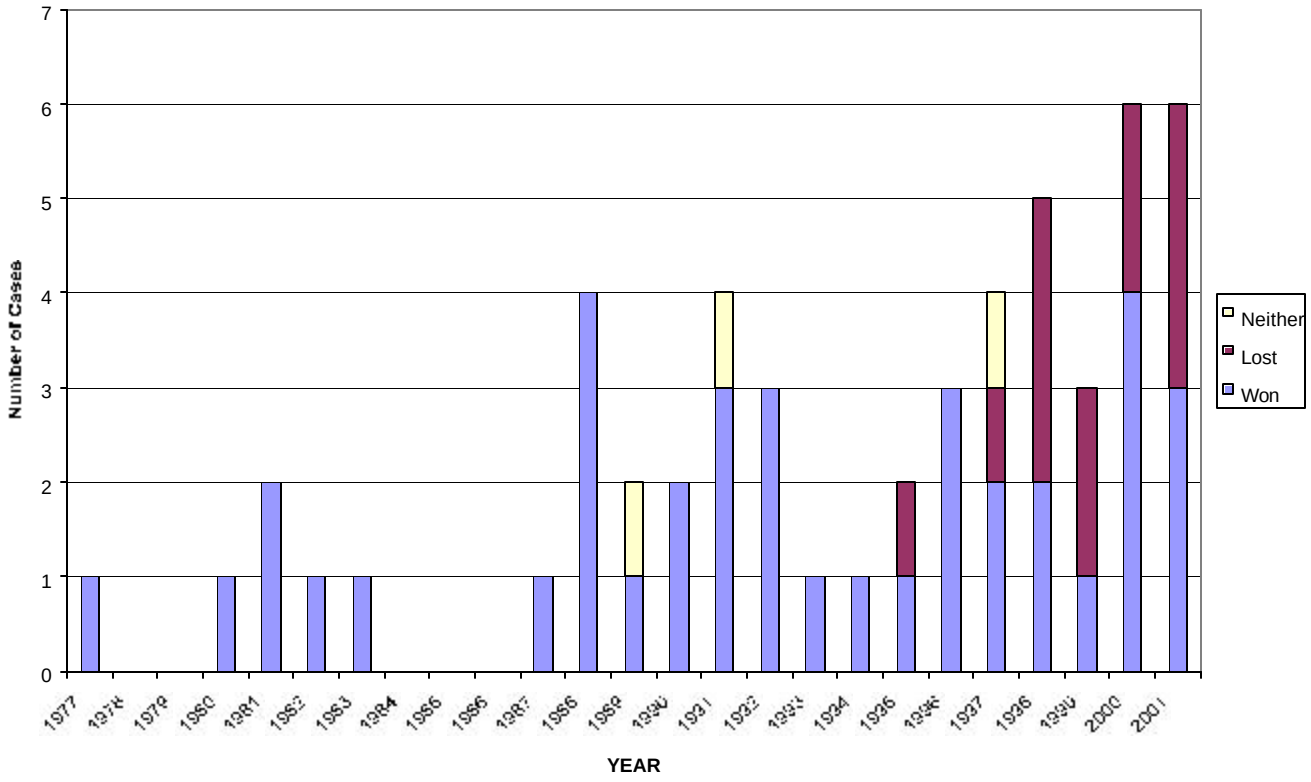
Figure 2-4: NATIONAL STANDARD CHALLENGES, 1977 - 2001



[8] National Standard 4 is not discussed in the more detailed quantitative and qualitative analysis below because NMFS won all but two of the challenges brought under it.

Figure 2-5 shows the government's overall win-loss record under MSA. A case is counted as a loss if the agency lost any part of the suit. NMFS had a perfect record until 1995, when it lost its first MSA case. Over the past four years, the record has deteriorated, as the agency has lost 50 percent of these cases.

Figure 2-5: MSA: WIN-LOSS RECORD, 1977 – 2001



National Standard 1 Challenges: Prevent Overfishing

Courts have recognized National Standard 1 as the most important, since MSA's fundamental purpose is to preserve the continued viability of fishery resources. Prior to 2000, NMFS won all the challenges brought under National Standard 1 because the courts found that its management measures would prevent overfishing and were supported by the administrative record. Recently, NMFS lost three landmark cases on this standard: a Conservation Law Foundation suit in 2001 and two Natural Resources Defense Council cases in 2000 and 2001.

In *Natural Resources Defense Council v. Daley* (2000),[9] plaintiffs challenged the 1999 summer flounder fishing quota, which set a limit on the total amount of fish that could be brought to

[9] 2000 U.S. App. LEXIS 7602

shore by weight ("total allowable landings"). As a supplemental conservation measure, the government adopted restrictions on incidental catches within the EEZ and recommended that the states do the same. The quota itself only had an 18 percent likelihood of achieving the fishing mortality rate to prevent overfishing, and NRDC filed a lawsuit. The District Court upheld the agency's action, concluding that NMFS "reasonably construed [the statute] in light of the competing interest of environmental protection and economic concerns."

The DC Court of Appeals, however, reversed this decision. It rejected the district court's ideas about balancing the ten national standards, holding that NMFS "must give priority to conservation measures. It is only when two different plans achieve similar conservation measures that the Service takes into consideration adverse economic consequences. This is confirmed both by the statute's plain meaning and the regulations issued pursuant to the statute." Because MSA does not prescribe a precise quota figure, the court had to determine whether the quota reasonably fulfilled the statutory mandate to prevent overfishing. It ruled the agency had not done so.

> The 1999 quota is unreasonable, plain and simple … [it] had at most an 18% likelihood of achieving the target F [fishing mortality rate]. Viewed differently, it had at least an 82% chance of resulting in an F greater than the target F. Only in Superman Comics' Bizarro world, where reality is turned upside down, could the Service reasonably conclude that a measure that is at least four times as likely to fail as to succeed offers a 'fairly high level of confidence.'

In this case, the court also rejected NMFS' contention that two additional measures—a provision on minimum mesh size and a recommendation that states establish an incidental catch percentage—made the quota reasonable. Regarding the mesh size restriction, the court found that nothing in the record indicated "larger mesh size would make it likely that the Total Allowable Landings had at least a 50% chance of achieving the target F." Regarding the incidental catch provision, the court faulted it for being "merely a recommendation to the states, not a mandatory requirement." Nothing in the record indicated that the states would adopt this recommendation; indeed, it revealed that some states were resistant to the proposal. In the end, the Court ruled that quotas must have at least a 50 percent likelihood of achieving their conservation goals.

In *Conservation Law Foundation v. Evans* (2001),[10] the court found that NMFS violated both National Standard 1 and the fishery rebuilding requirements of MSA. After the Sustainable Fisheries Act passed in 1996, the New England Fishery Management Council developed an amendment (#9) to their FMP that took effect in November 1999. In April 2000, NMFS approved Framework Adjustment 33—which implemented the higher fishing mortality rates in effect prior to Amendment 9. This earlier amendment had been adopted prior to the SFA and did not comply with the SFA's overfishing requirements.[11] After a lawsuit was filed, NMFS argued that Amendment 9 was technically deficient and failed to comply with SFA. The court rejected

[10] 2001 U.S. Dist. LEXIS 21991

[11] Amendment 9 was adopted with the express purpose of bringing the New England Council's Fishery Management Plan into compliance with the SFA. "Amendment 9 imposed stricter overfishing definitions by which to replenish twelve depleted groundfish species."

this argument: "Since Defendants approved Amendment 9 after the statutory notice-and-comment period, they are presumed to have concluded that it complied both with the SFA and all relevant policy considerations. The Department of Commerce has a statutory responsibility to implement Amendment 9, and must now ensure that the New England Council gives it full effect."

The court expressed concern about NMFS' "record of inaction and delay": "In refusing to implement Amendment 9, Defendants arbitrarily and capriciously short-circuited their rule-making process, and thereby violated both the SFA and APA." For this reason, the court ruled that the action violated National Standard 1. The judge sent this case to a mediator, and some of the parties were able to reach an agreement. Other environmental plaintiffs, however, challenged this agreement, asking the judge to impose more stringent management measures. While accepting many of the provisions of the parties' agreement, the judge's remedial order did impose some additional restrictions. After this ruling was issued, industry plaintiffs and the states of Massachusetts and Maine asked her to reconsider, which she did. In essence, the judge ruled that the agency must comply with the earlier agreement. The ultimate resolution, however, remains unclear.

In *Natural Resources Defense Council v. Evans* (2001),[12] the judge ruled that FMP Amendment 12 for the Pacific Groundfish fishery's rebuilding plans, required under National Standard 1 when a species is overfished, were inadequate. Specifically, MSA mandates that councils must take action "to end overfishing in the fishery and implement conservation and management measures to rebuild affected stocks of [overfished] fish" within ten years or a generation for longer-lived species.

This case did not deal with the substance of the rebuilding plan *per se* but with Amendment 12's specification that "any rebuilding plan subsequently developed by NMFS will not take the form of a fishery management plan, plan amendment, or regulations." Because MSA mandates that rebuilding plans must take the form of a plan, amendment, or regulation, the judge ruled that Amendment 12's rebuilding provision violated the statute.[13]

In conclusion, our analysis of litigation brought under National Standard 1 reveals the following:

- The prevention of overfishing is the most important standard.
- The SFA requires councils to adopt stricter definitions of overfishing and, if a species is overfished, to develop rebuilding plans.
- Management measures must have at least a 50 percent likelihood of achieving their targets.

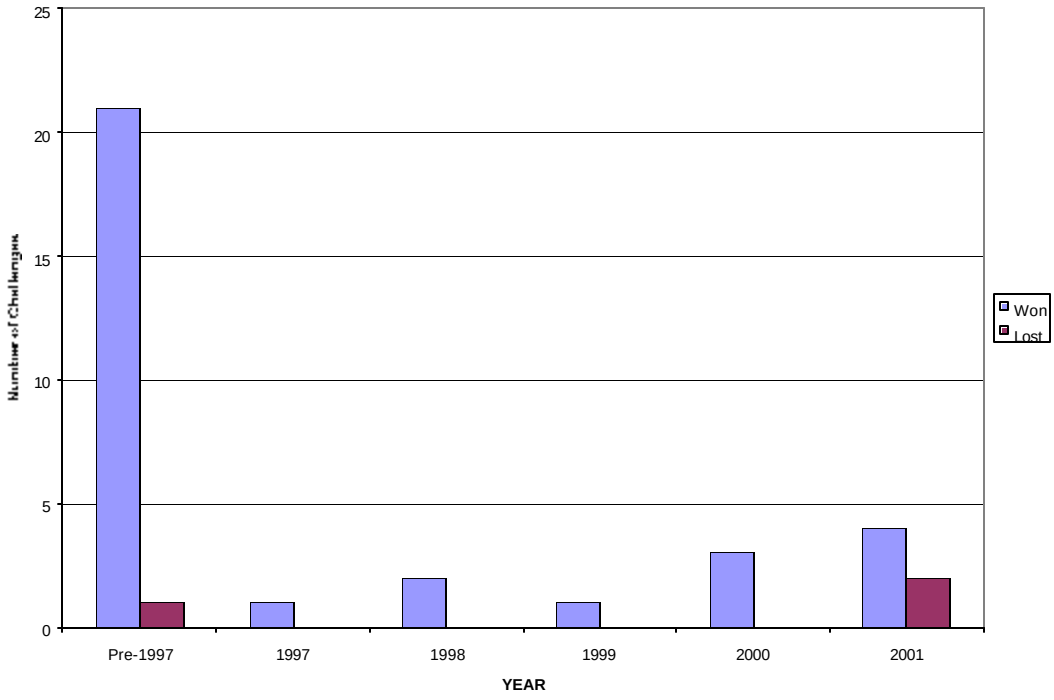
[12] 168 F. Supp 2d 1149

[13] The judge in this case also ruled against the Pacific Council's use of framework actions (discussed in more detail in the regulatory process chapter), finding that they violate MSA's and APA's requirements that proposed regulations go through the Notice and Comment rulemaking process.

National Standard 2 Challenges: Use Best Scientific Information Available

Under National Standard 2, NMFS must use the "best scientific information available" in developing fishery management plans. For every proposed fishery management action sent to the Secretary for approval, the science center and the region must independently certify that it is based on the best science available. It is difficult, though not impossible, for plaintiffs to win on this standard, as Figure 2-6 shows. First, courts are deferential to NMFS' scientific expertise; when experts disagree, the court will not second-guess the agency's judgment as long as it is reasonable. "If there are conflicting facts or opinions relevant to a particular point, a Council may choose among them, but should justify the choice."[14] Second, the standard is not the "best science"—it is the best scientific information *available*. As such, NMFS has the discretion to use what it has, even if it could be improved upon.

Figure 2-6: NATIONAL STANDARD 2: WIN-LOSS RECORD BY CHALLENGES



From 1977 to 2001, NMFS lost four cases on this standard, one of which was overturned on appeal.[15] In *Natural Resources Defense Council v. Evans* (2001),[16] the court rejected the agency's 2001 groundfish specifications for not being based on the best scientific information available. Environmental plaintiffs challenged the mortality rates of 16 percent and 20 percent

[14] *Hall v. Evans* [2001 LEXIS 6038]
[15] In March 2002, it lost another case, *Midwater Trawlers Cooperative*, on National Standard 2 [2002 U.S. App. LEXIS 3419]. That case is not included in the quantitative analysis because it was a recent decision.
[16] Citation above, see note 9.

for two fish (bocaccio and lingcod) whose catch was prohibited and, therefore, discarded. When determining these rates, the agency had relied on 15-year-old data from a study by Pikitch, which surveyed commercial groundfish discard rates along the Washington and Oregon coasts from 1985 to 1987. Yet fishing limits had been reduced in the following decade-and-a-half, meaning bycatch mortality rates certainly had increased. The Court agreed with the plaintiffs that this made the agency's "reliance on 15-year old data unreasonable." "NMFS has no accurate data on bycatch, so it does not actually know if there was overfishing during 1999 and 2000." It also identified other flaws with the study and NMFS' reliance on it:

> There are other problems with relying on the Pikitch Study. Data from the study suggest various discard rates for different groundfish, including one at 52%. Since neither bocaccio nor lingcod were actually included in the Pikitch Study, it would be reasonable to expect NMFS to explain why it assigned a 16% rate of bycatch for bocaccio rather than a higher percentage up to 52%. The Pikitch Study also corroborates evidence that regulatory bycatch increases as landing limits are reduced, and both bocaccio and lingcod have been protected by reduced landing limits. It must follow that bycatch discard has increased since the Pikitch Study was conducted and that the 16% and 20% figures NMFS has arbitrarily set are no longer accurate, if they ever were.

Hall v. Evans (2001)[17] challenged the agency's differing trip allocations for permit holders who trawl fish and those who use gillnet gear. Industry plaintiffs argued that the different allocations resulted from political compromise and were not based on the best scientific information available. In adopting this regulation, the court ruled that NMFS violated National Standard 2:

> There is no evidence offered by the defendants that provides any scientific basis for the regulation … I find plaintiffs' arguments more compelling, principally because there is no discernable, substantive scientific evidence in the Record that supports gear differential regulations. Defendants have not envinced even a scintilla of scientific information that supports the regulations. The 'rationale' defendants cite, which states that 'the trip limits are expected to contribute to mortality reduction and achieve the biological objectives in year two' is nothing more than a conclusory prediction.

In a very recent case, *Midwater Trawlers Cooperative v. Department of Commerce* (2002),[18] industry plaintiffs challenged a NMFS regulation that increased the amount of Pacific whiting fish allocated to four Indian Tribes. The Ninth Circuit Court of Appeals rejected this rule under National Standard 2: "The difficulty with the published justification for the rule is, of course, that it is devoid of any stated scientific rationale. In sum, the best available politics does not equate to the best available science as required by the Act." It also found:

> A plain reading of the proposed NMFS rule, and the undisputed history leading up to the allocation decision, demonstrate that the rule was a product of pure political compromise, not reasoned scientific endeavor. Although the NMFS allocation

[17] 2001 LEXIS 6038

[18] Citation above, see note 12.

> may well be eminently fair, the Act requires that it be founded on science and law, not pure diplomacy.

Accordingly, the court remanded the rule to NMFS, requiring that it issue an allocation rule based on the best available science.

In *Commonwealth of Massachusetts v. Daley* (1999),[19] the District Court ruled that NMFS violated National Standard 2, but the decision was overturned on appeal. In determining the state's quota, an FMP had used a federal database containing landings of scup and other species from 1983 to 1992. The database undercounted landings from fishing in-shore, so it was biased against a state such as Massachusetts, which received 80 percent or more of its summer scup harvest near-shore. According to the court, NMFS "erred in basing the state-by-state quota on historical data that it knew seriously undercounted Massachusetts' past scup recoveries." Yet the "difficulty from the outset," the Court of Appeals determined, was that "the available data do not permit a fully accurate historical allocation between states." Because Massachusetts never provided alternative figures or presented another methodology, it "forfeited any claim that the Secretary failed to use the best scientific information available. If no one proposed anything better, then what is available is best."

In *Parravano v. Evans* (1995),[20] commercial fishing plaintiffs challenged the Secretary's emergency regulation for the Klamath Chinook ocean harvest rate during the fall 1993 fishing season. Under National Standard 2, plaintiffs claimed that the decision to increase the escapement floor and to reduce the ocean harvest had not been based on the best scientific information available. In this case, interestingly, the Secretary deviated from the council's recommendations. Plaintiffs claimed that those recommendations were based on the best available science, and that the administrative record did not support the Secretary's emergency regulation.

The court ruled that the Secretary could reject the council's recommendations because "they were likely to result in overfishing for a fourth consecutive year. As such, the Secretary was entitled to address this problem by accommodating a higher Indian in-river share than the Council recommended." At the same time, the court ruled against the Secretary on National Standard 2 because the current record provided only "conclusory assertions that the higher 38,000 escapement floor, and correspondingly reduced 14.5 percent ocean harvest rate, will achieve the Secretary's legitimate objectives."

In conclusion, our analysis of litigation brought under National Standard 2 reveals the following:

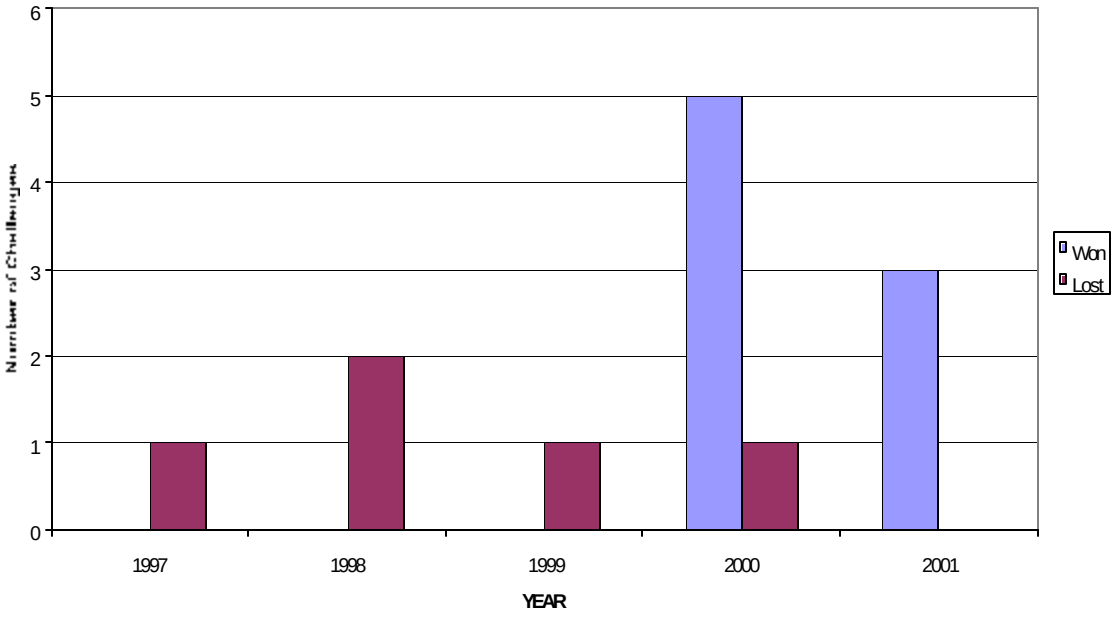
- For the most part, courts defer to the agency's scientific expertise.
- Regulations must be supported by scientific evidence contained in the administrative record.
- Outdated scientific information cannot be used.
- NMFS should collect bycatch data that can be used in formulating fishery management measures.

[19] 1999 US App. LEXIS 2878
[20] 70 F.3d 539

National Standard 8 Challenges: Socioeconomic Impacts on Communities

National Standard 8 requires that the economic impacts of fishery management measures on communities be minimized to the extent possible. Added under the SFA, it has been the subject of considerable litigation. Figure 2-7 indicates that NMFS lost the four challenges brought under the standard through 1999. In 2000 and 2001, however, it won eight challenges, reversing the earlier trend.

Figure 2-7: NATIONAL STANDARD 8: WIN-LOSS RECORD BY CHALLENGES, 1997-2001



In *North Carolina Fisheries Association v. Daley* (1998),[21] the state and industry challenged the Secretary's 1997 summer flounder quota under National Standard 8 and the Regulatory Flexibility Act. The analysis supporting this action indicated that the quota would have adverse economic effects on the fishing community, but that they would be broadly distributed. In the court's view, the methodology used in the analysis systematically understated these impacts by considering "the entire state of North Carolina as one fishing community." The Court rejected the economic analysis:

> After reviewing the Secretary's analysis, this Court finds that the Secretary has completely abdicated his responsibilities under the Magnuson Act. In the report, the Secretary's narrow methodology ignores every relevant fact except where North Carolina's fishing vessels are located. It gives no consideration to the

[21] 27 F. Supp 2d 650

> population size of communities, the significance of the fishing industry on local economies, or to what even constitutes a fishing community. On top of that, the Secretary completely departs from his own empirical findings.

The court retained jurisdiction over the proceedings, overturned the quota, and imposed restrictions on the Secretary's discretion to establish the following year's quota.

Blue Water Fisherman's Association v. Mineta (2000)[22] was an industry challenge to regulations implementing the 1999 Highly Migratory Species Plan. Specifically, the regulations imposed trip limits on Atlantic bluefin tuna, a June closure, annual quotas for blue sharks and subquotas for other sharks, and a mandatory vessel monitoring system (VMS). The case included four challenges under National Standard 8; NMFS won three of them and lost the other.

The court upheld the tuna trip limits under National Standard 8 on the grounds that "while economic effects must be taken into account, such effects were not meant to trump the real purpose of the MSA, which is to preserve and protect United States fisheries." In mandating tuna trip limits, the agency had attempted to minimize economic impacts to the extent possible, so it was not in violation of this standard. The court upheld the June closure, reasoning that NMFS determined that the conservation benefits outweighed the costs. It also upheld the shark quotas because the action had support in the administrative record, and "any income longliners receive from pelagic sharks is incidental." But the court rejected the mandatory VMS system, for NMFS "failed to demonstrate that it gave adequate consideration to significant, practicable alternatives." The court was especially concerned that the agency had imposed a VMS requirement on all pelagic longline fishers, including those who did not operate near the closed areas. "While NMFS must minimize costs only where practicable and not absolutely, NMFS failed to implement practicable cost-minimization alternatives," the court found.

In conclusion, our analysis of litigation brought under National Standard 8 reveals the following:

- NMFS must consider the economic impacts of each fishery management measure on fishery communities.
- "Community" must be defined specifically enough so that a meaningful analysis of adverse economic impacts can be conducted.
- This standard does not supersede National Standard 1, which requires NMFS to prevent overfishing and rebuild overfished stocks. Adverse economic impacts must be minimized only to the extent practicable.

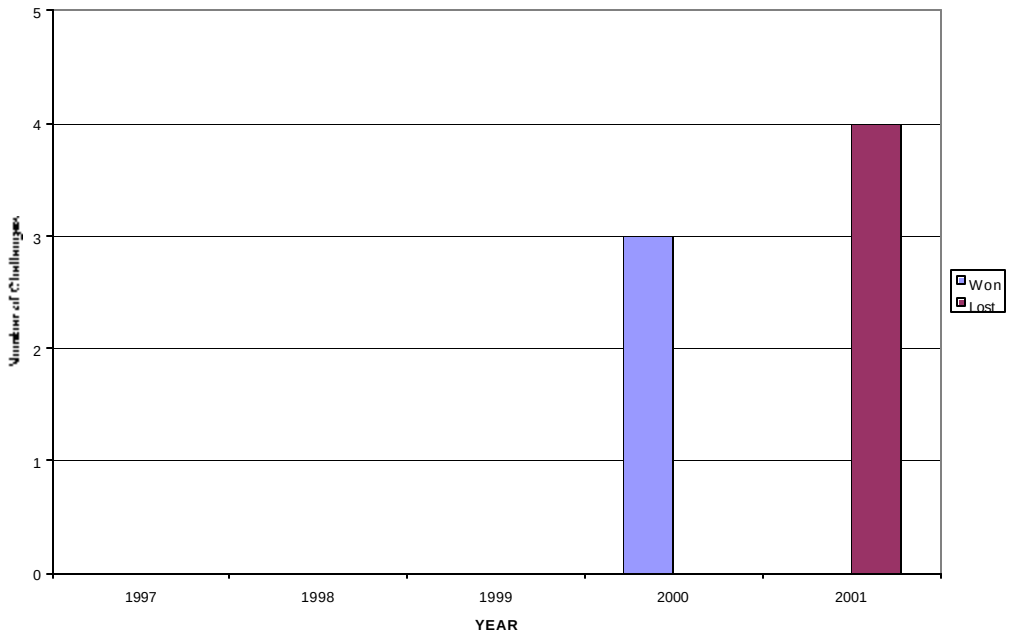
National Standard 9: Minimize Bycatch

Like National Standard 8, National Standard 9 is one of the three added under SFA. It requires NMFS to establish a standardized reporting method for bycatch and to minimize bycatch to the extent practicable. Only four cases have been brought under this standard thus far, and all are recent. Interviews with constituent groups indicated that this standard will play a greater role in future litigation.

[22] 122 F. Supp 2d 150

Figure 2-8 shows the win-loss record for each of the challenges brought against NMFS under National Standard 9.

Figure 2-8: NATIONAL STANDARD 9: WIN-LOSS RECORD BY CHALLENGES, 1997 - 2001



In *Natural Resources Defense Council v. Evans* (2001),[23] the court ruled that NMFS had not established a standardized reporting methodology for bocaccio and lingcod bycatch in the West Coast groundfish fishery. Because NMFS had not fulfilled "its duty to obtain accurate bycatch data," the specifications for bocaccio and lingcod were remanded to the agency for correction. The court explicitly stated, however, that it was "not directing that NMFS arrive at a specific harvest yield or bycatch percentage the court thinks is appropriate, only that it meet its obligations … to engage in reasoned decision-making."

In the 2001 *Conservation Law Foundation* case on New England groundfish[24] discussed earlier, the court ruled that Framework 9 and Amendment 33 violated National Standard 9's bycatch provisions. SFA required all FMPs to establish a standardized reporting methodology by October 11, 1998. When the plaintiffs brought this case three years later, the court strongly criticized NMFS for not having met this requirement. "The record fails to show that defendants have 'reviewed' the New England groundfish fishery to ensure that their management measures comply with the SFA's bycatch reporting requirements," and the defendants have "failed even to comply with their own SFA regulations." In addition, NMFS had not adopted any new bycatch

[23] Citation above, see note 9.
[24] Citation above, see note 7.

reporting measures (such as a dedicated observer program), rejecting these as "impracticable and unnecessary" without providing any analysis to justify that determination. This led the court to rule that the agency had acted arbitrarily and capriciously in not establishing additional bycatch reporting mechanisms.

The court also ruled that NMFS had not met National Standard 9's requirement to minimize bycatch and bycatch mortality. No new bycatch measures were adopted after SFA was enacted, but the agency claimed that three existing measures complied with the requirement. The court rejected this argument, as nothing in the record indicated that NMFS had conducted an analysis to determine whether pre-existing measures did, in fact, comply with SFA's bycatch requirement. Nor had the agency done an analysis to determine whether its plan minimized bycatch and bycatch mortality to the extent practicable. The court found:

> Defendants failed to determine whether Amendment 9 complied with the SFA, and whether they needed to adopt new anti-bycatch measures to come into compliance with the statute. Defendants entirely failed to consider an important aspect of the problem, and thereby violated the APA and SFA.

Also NMFS was faulted for not further studying trip limits and fishing gear selectivity after the New England Council's Executive Director identified them as problems with the groundfish FMP:

> At the outset, it should be noted that the administrative record reveals no subsequent deliberation concerning either issue. Defendants rejected the New England Council MSMC's [Multi-Species Monitoring Committee] recommendations to institute a dedicated observer program and to require less destructive fishing gear for the groundfish fishery; however, the record contains no rationale for this decision.

The other two cases on National Standard 9, which NMFS won, both emphasized that the standard is to reduce bycatch *to the extent practicable*. According to the decision in *A.M.L. International* (2000),[25] this means that any "proposed conservation and management measures that do not give priority to avoiding the capture of bycatch must be supported by analysis." In that case, the court determined that the FMP "has given reasoned consideration to the issue of bycatch" of spiny dogfish because the record indicated that it "reasonably anticipated that the level of bycatch will decrease significantly upon the closure of the directed fishery." A similar result was reached in *Blue Water Fisherman's Association v. Mineta* (2000).[26]

In conclusion, our analysis of litigation under National Standard 9 reveals the following:

- FMPs must establish standardized bycatch reporting methodologies.
- Bycatch data must be collected.
- The administrative record must contain information analyzing additional bycatch-reduction measures.

[25] 107 F. Supp 2d 90
[26] Citation above, see note 19.

- Although bycatch reduction is not an absolute requirement, FMPs must show that it is being reduced to the extent practicable.

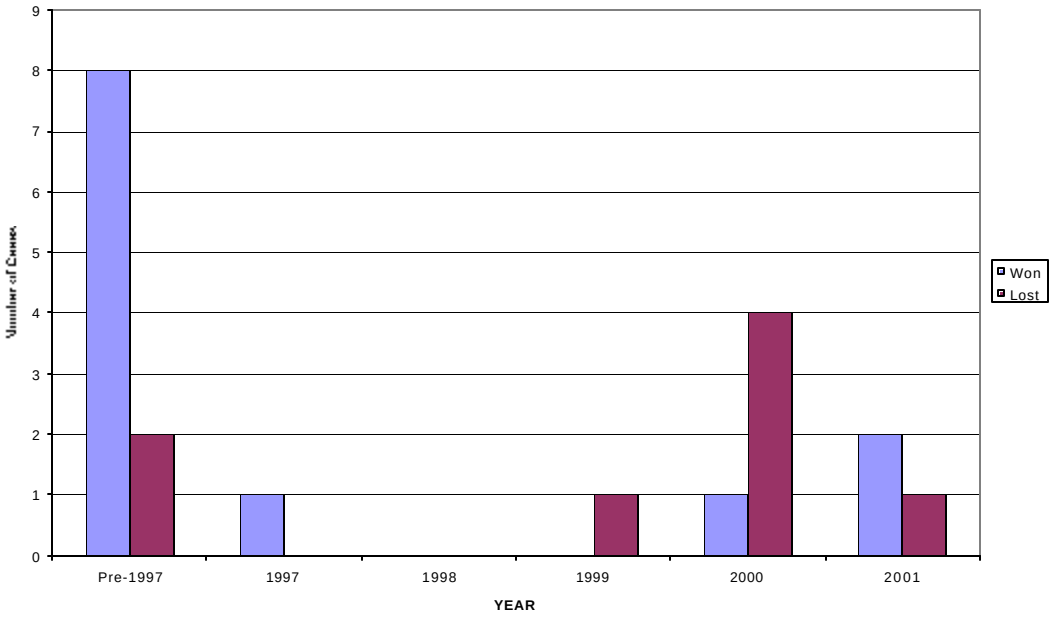
National Environmental Policy Act

The National Environmental Policy Act requires all federal agencies to assess the effects of major federal actions on the human environment. Specifically, they must prepare an Environmental Assessment (EA) or an Environmental Impact Statement (EIS). When an agency plans a major action, it first must conduct an EA to determine whether an EIS is necessary. If the EA determines that the action will not have a significant impact on the environment—that is, a Finding of No Significant Impact (FONSI)—the agency need not conduct an EIS. Otherwise, the agency must complete one. The EIS provides the scientific and analytic basis for comparing and assessing alternatives to the proposed action. It also discloses both the direct and indirect environmental effects of the various options.

NEPA is often referred to as a procedural statute. It establishes a process to ensure that agencies know how their actions will affect the environment, but does not compel a particular outcome. Courts review NEPA compliance under the Administrative Procedure Act; factual disputes are reviewed under the arbitrary and capricious standard and legal ones under the reasonableness standard. If the agency has not acted arbitrarily and capriciously or unreasonably, it will prevail. Although this is a deferential standard of review, courts have not hesitated to reject actions that fail to comply with NEPA, as evidenced by Figure 2-9.[27]

[27] Cases often raise more than one NEPA claim. If the agency lost on any NEPA claim, it is counted as "lost" for this figure.

Figure 2-9: NATIONAL ENVIRONMENTAL POLICY ACT: WIN-LOSS RECORD, 1977-2001



In *American Oceans Campaign v. Daley* (2000),[28] plaintiffs challenged the approval of five essential fish habitat (EFH) amendments covering seven fisheries. They claimed that NMFS violated NEPA because inadequate EAs were prepared for each amendment. In 2000, the court ruled in favor of the plaintiffs. One reason was that none of the assessments included enough evidence or analysis to determine whether an EIS should have been prepared: "All the EAs are couched in very general and vague terms, and spend more time describing the proposed alternative and the requirements of NEPA than they do actually analyzing the proposed alternative and complying with the requirements of NEPA." Even more important in the court's view, each EA failed to "consider all relevant and feasible alternatives and … to fully explain the environmental impact of the proposed action and alternatives." It also found:

> In this case, the Council's failure to weigh any alternatives other than adoption of the EFH Amendments or taking no action prevented the Secretary from considering the possible adverse consequences of adopting the Amendments. Because none of the EFH Amendments recommended that any further protective measures be taken, the two alternatives considered by the Councils were essentially one and the same—that no action be taken. That outcome subverts the very purpose of NEPA, which is to ensure that agencies are fully aware of any adverse environmental effectives of their actions, and of all feasible alternatives that may have lesser adverse effects on the environment.

[28] 2000 LEXIS 15991

The court issued an injunction until "new, thorough, and legally adequate EA or EIS for each EFH Amendment, in compliance with the requirements of NEPA" were prepared. Accordingly, NMFS and the American Oceans Campaign filed a joint agreement in which the agency agreed to prepare EISs for all fisheries challenged in this lawsuit. It also agreed to an ambitious schedule for completing EFH Environmental Impact Statements. The final EIS for two fisheries are to be completed in late 2003, those for the other five by June 2004.

Natural Resources Defense Council v. Evans (2001)[29] challenged EAs that NMFS prepared for plans affecting West Coast groundfish and raised similar NEPA issues. Specifically, the plaintiffs alleged that the assessments did not comply with NEPA's provision that an EA "shall include a brief discussion of alternatives." The court found:

> In formulating its EA on the 2001 bocaccio and lingcod specifications, NMFS considered two alternatives for setting bycatch mortality rates: zero and the 16% and 20%, respectively, set in previous years … NMFS acknowledges that these figures are no longer accurate, if indeed they ever were. Thus, any meaningful consideration of alternatives must include the prospect of raising these percentages to provide adequate protection of these overfished species. NMFS considered two figures for bycatch, each of which it knew to be inaccurate … NMFS' EA for Amendment 12 also considered only two alternatives in addressing the procedures for establishing rebuilding plans for overfished fisheries: (1) the status quo and (2) the agency's own proposed Amendment 12 … As NMFS own counsel suggests, 'the EA supporting Amendment 12 is extremely weak because it only considered the status quo and the preferred alternative.'

As such, the court ruled that the 2001 EA for bocaccio and lingcod as well as the EA for Amendment 12 were inadequate. NMFS was directed to comply with NEPA's provision to "study, develop, and describe appropriate alternatives."

In a major 1999 case, *Greenpeace v. National Marine Fisheries Service*,[30] the court concluded that a programmatic EIS was required for the North Pacific FMPs. Twenty years had passed since an EIS had been prepared for the Gulf of Alaska and Bering Sea fisheries,[31] and enormous changes had occurred in the North Pacific ecosystem during that period. For example, Steller sea lions had not been listed as a threatened or endangered species at the time the original EISs were prepared; the fishing fleet shifted from foreign vessel domination to domestic domination, significantly altering the fishing industry's economic effect on Alaskan communities. Also, the size and capacity of trawlers had increased substantially, allowing more fish to be caught in a shorter time period. Despite these changes, only a supplemental EIS had been done. Plaintiffs attacked it as being too narrow because it analyzed a range of alternatives for only one aspect of the FMP, total catch.

---

[29] Citation above, see note 9.
[30] 55 F. Supp 2d 1248
[31] The EIS for the Gulf of Alaska fishery was published in 1978; the one for the Bering Sea fishery was published in 1981.

Ruling that a programmatic EIS was required, the court found that NEPA "required creation of a document that thoroughly analyzed the cumulative effects of the FMPs." Cumulative effects are defined as "the impact on the environment" resulting from "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions . . . Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." In this regard, the court concluded that the supplemental EIS must be a "broad, programmatic analysis of the FMPs as a whole" and that "the range of alternatives considered was inadequate."

Metcalf v. Daley (2000)[32] challenged a NMFS decision to allow the Makah to resume whaling. According to plaintiffs, the defendants violated NEPA by preparing an EA that was untimely and inadequate, and by refusing to prepare an EIS. NMFS prevailed in the District Court, but lost on appeal.

In its EA, NMFS concluded that the Makah whaling proposal would not significantly affect the environment. The court rejected this determination, however, because the FONSI was reached after the agency had already "signed two documents binding them to support the Tribe's proposal." "It is highly likely that because of the Federal Defendants' prior written commitment to the Makah and concrete efforts on their behalf, the EA was slanted in favor of finding that the Makah whaling proposal would not significantly affect the environment," the court found. It also faulted NMFS for not engaging "the NEPA process 'at the earliest possible time,'" as required by the statute. It did not "even consider the potential environmental effects of the proposed action until long after they had already committed in writing to support the Makah whaling proposal." Accordingly, the court directed NMFS to "set aside the FONSI, suspend implementation of the Agreement with the Tribe, begin the NEPA process afresh, and prepare a new EA."

In conclusion, our analysis of litigation under the National Environmental Policy Act reveals the following:

- Appropriate alternatives must be studied, developed, and described when preparing EAs and EISs.
- Outdated EISs must be updated.
- EISs must consider the cumulative effects of fishery management measures.

Endangered Species Act

The Endangered Species Act protects plants and animals that the federal government lists as "threatened" or "endangered." Under Section 7 of the law, federal agencies must ensure that their actions do not jeopardize the continued existence of a listed species or result in the destruction or modification of its critical habitat. All federal agencies are responsible for consulting with NMFS on actions that may adversely impact threatened or endangered marine species. Under Section 9, it is unlawful for anyone—including private parties—to "take"[33] a

[32] 2000 U.S. LEXIS 12837

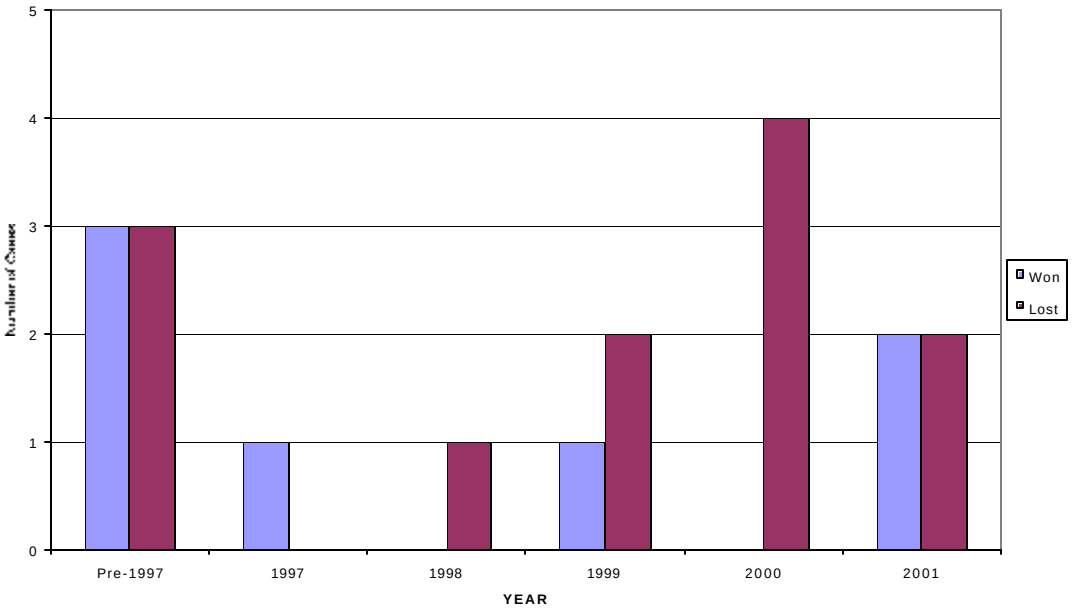
[33] "Take" is defined as killing or injuring wildlife.

listed animal or significantly modify its habitat, unless the responsible agency issues an "incidental take" permit. The councils' proposed FMPs must comply with both of these sections.

To fulfill its obligations under Section 7, NMFS conducts informal and formal consultations with federal agencies. If an agency concludes that its action is "Not Likely to Adversely Affect" the species, NMFS can resolve the issue through informal consultation. The agency would submit its documentation, and the consultation would be concluded if NMFS agreed the action was not likely to adversely affect the listed species. If NMFS disagrees with the agency, a formal consultation must be conducted, which concludes with a biological opinion evaluating the degree of the impact. The biological opinion determines whether the action jeopardizes the continued existence of the species. If it is determined that an incidental take will not do so, the opinion authorizes a specified take level. If it is determined that the action jeopardizes the species (a "jeopardy opinion"), reasonable and prudent alternatives must be presented that allow the agency to avoid jeopardy while accomplishing its basic goals.

Figure 2-10 shows the agency's win-loss ratio on ESA cases. Over time, it has lost more than 60 percent of these cases. Its worst year was 2000, when it lost all four ESA cases initiated.[34]

Figure 2-10: ESA: WIN-LOSS RECORD, 1977-2001



[34] Cases often raise more than one ESA claim. If the agency lost on any claim, it is counted as "lost" for this figure.

Challenges to Biological Opinions

Courts review biological opinions under the Administrative Procedure Act to determine whether they are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." If so, an agency is found in violation of Section 7 of the ESA. In *Greenpeace v. Mineta* (2000),[35] plaintiffs alleged that NMFS ignored the best scientific and commercial data available when it prepared biological opinions on its Crustacean FMP, failing to ensure that the plan did not result in jeopardy for the Hawaiian monk seal or adversely impact its habitat. NMFS' first biological opinion on the Crustacean FMP, released in 1981, admitted that it lacked sufficient information for a detailed assessment of the plan's impact on the monk seal. Although the agency concluded that its biological opinion should not be construed as a "no jeopardy opinion," it "paradoxically recommended implementation of the FMP," according to the court. It also found:

> The conclusions of the 1981 biological opinion are difficult to reconcile with the recommendation of NMFS that the FMP be implemented. Certainly, an agency's assessment of proposed action is limited by the best scientific and commercial information available. Data on the role of lobster in the monk seal's diet was admittedly sparse at the time the 1981 biological opinion was prepared. Nonetheless, when an agency concludes after consultation that it cannot insure that the proposed action will not result in jeopardy, and yet proceeds to implement such action, the agency has flouted the plain requirements of Section 7.

NMFS' next biological opinion, released in 1996, assessed changes made to the Crustacean FMP, which allowed fishers to "retain berried and undersized lobsters in a catch." According to the court, this opinion "in many ways perpetuated the errors of the 1981 opinion" by ignoring data that "should have alerted NMFS that the existing model of calculating the exploitable lobster population was in need of revision." Additionally, it found:

> A review of the 1996 opinion convinces the Court that NMFS did not adequately discharge its duties under Section 7(a)(2). If in the 1981 opinion NMFS was uncertain of the impact of the FMP because it knew too little about the monk seal diet, by 1996 it was emboldened by its ignorance to draw definitive conclusions about the impact. NMFS reiterated in the 1996 opinion that the available information still had not clarified the importance of lobster in the monk seal diet; yet, in a departure from its conclusion in 1981, NMFS this time concluded that no jeopardy to the monk seal would result.

A 1999 informal consultation reached the same conclusions as the previous two biological opinions and thus, in the court's view, suffered from the same errors. "NMFS cannot speculate that no jeopardy to monk seals or adverse modification of their critical habitat will occur because it lacks enough information regarding the impact of the fishery on seals. Such a conclusion is arbitrary and capricious."

[35] 122 F. Supp 2d 1123

In *Idaho Department of Fish and Game v. NMFS* (1994),[36] plaintiffs challenged the agency's framework and methodology used to determine whether hydropower operations would result in jeopardy to listed Snake River species. The court ruled that NMFS had acted arbitrarily and capriciously in selecting a 1986 to 1990 baseline because this did not "consider relevant facts such as the drought condition and low run numbers of the species during the base period." Additionally, the court concluded that NMFS acted arbitrarily and capriciously by "disregarding only the low end, worst case assumptions" in the stabilization confidence intervals underlying its jeopardy analysis.

In *Pacific Coast Federation of Fishermen's Association v. NMFS* (2001),[37] plaintiffs challenged four biological opinions that claimed timber sales would not jeopardize coho salmon or cutthroat trout survival and recovery. The plaintiffs contended that the opinions were "inadequate to ensure or verify the agencies' compliance," and the Court concluded that NMFS had acted arbitrarily and capriciously.

> By failing to require the action agencies to rely on and adequately incorporate watershed analysis into their biological opinions, NMFS has allowed the agencies to ignore the best scientific information available … NMFS acted arbitrarily and capriciously in approving biological opinions that run counter to the evidence before it and that fail to employ the best available scientific information.

In addition to Section 7 challenges, plaintiffs can challenge NMFS under Section 9 by arguing that a fishery illegally takes threatened or endangered species. For example, plaintiffs in the 2000 *Greenpeace* case discussed above[38] claimed that the bottomfish fishery "'takes' monk seals within the meaning of Section 9." Specifically, fishers often responded violently to monk seals that took fish from their lines; bottomfishing gear harmed monk seals; and bottomfish fishers discarded unmarketable fish that contained a toxin that is poisonous to seals. The court found that:

> The evidence in the administrative record confirms that monk seals have been killed, hooked, and poisoned in connection with bottomfishing. Such documented interactions are 'takes' within the meaning of Section 9 of the ESA. It is immaterial that certain of these incidents might have been accidental. NMFS has not authorized any incidental takes of monk seals.[39]

Under ESA, plaintiffs also can challenge the reasonable and prudent alternatives contained in the agency's biological opinion. Valid reasonable and prudent alternatives must meet four requirements. They must be consistent with the purpose of the underlying action; be consistent with the action agency's authority; be economically and technically feasible; and must avoid the likelihood of jeopardy or adverse modification. In the 1999 *Greenpeace* case,[40] the court

[36] 850 F. Supp 886
[37] 2001 U.S. App. LEXIS 19742
[38] Citation above, see note 32.
[39] The court also emphasized that NMFS could not authorize incidental takes of monk seals, even if it wanted to, because this species is a "depleted species" under the Marine Mammal Protection Act. "Any takes of monk seals as a result of bottomfishing are a violation of Section 9," the court concluded
[40] Citation above

rejected the agency's alternatives as arbitrary and capricious: "The voluminous record does not contain a single sentence reflecting the reasons why NMFS found the final alternatives to be adequate." In this case, the court agreed with the plaintiffs' claim that some of the individual management measures "do not seem to accomplish the RPAs' principles of temporal dispersion, spatial dispersion, and protection of rookeries and haulouts." The court also ruled that NMFS acted arbitrarily and capriciously by failing to analyze how certain measures avoided jeopardy or adverse modification, or how they were economically and technically feasible.

Listing Criteria

When determining whether a species is threatened or endangered, ESA requires NMFS to consider five factors: (1) present or threatened destruction of its habitat; (2) overutilization of the species by humans; (3) disease or predation pressures; (4) the inadequacy of existing regulatory mechanisms; and (5) other natural or manmade factors affecting the species' continuing existence. Determinations must be made "solely on the basis of the best scientific and commercial data available." According to the ESA, species includes "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife that interbreeds when mature." Decisions to list or not list species as threatened or endangered—and the criteria to be used in these decisions—have been the subject of lawsuits. When plaintiffs challenge the listing decision, courts review these cases under the Administrative Procedure Act's arbitrary and capricious standard.

Citizens can petition NMFS to list a species—defined by geographical population segments called Evolutionary Significant Units (ESU)—as threatened or endangered under the ESA. If the agency concludes that the petition has merit, it conducts a review of scientific data as well as historical and present conditions to determine whether the species will be threatened or endangered in the foreseeable future. If the species is threatened or endangered, NMFS publishes a proposed rule to list the species and, after receiving and reviewing public comments, publishes a final rule.

Federation of Fly Fishers v. Daley (2000)[41] challenged NMFS' decision not to list an ESU of steelhead as a threatened species under ESA. The agency did not list this ESU because "existing and recently implemented state conservation efforts and federal management programs such as the Northwest Forest Plan have ameliorated risk to this species." Its determination raised the question of whether it "can consider an effort being made, existing regulatory measure, or even a Memorandum of Agreement as in this case, that includes components to be implemented in the future." The court concluded that NMFS "may not rely on future conservation actions" when declining to list a species as threatened or endangered.

Oregon Natural Resources Council v. Daley (1998)[42] raised similar issues. Environmental organizations challenged a decision not to list the Oregon Coast ESU of coho (silver) salmon as threatened or endangered. In April 1997, NMFS issued a final rule withdrawing the Proposed Rule it published 20 months earlier listing the Oregon Coast salmon as threatened. The agency justified its action on "the basis of the harvest and hatchery improvements together with the

[41] 2000 U.S. Dist. LEXIS 20450
[42] 6 F. Supp 2d 1139

habitat protections in the NFP [Northwest Forest Plan] and given the improving trends in escapement, the Oregon Coast Coho is not likely to become endangered in the interval between this decision and the adoption of improved habitat measures by the State of Oregon."

The court ruled that NMFS applied the wrong legal standard in deciding not to list this ESU as threatened. Under the ESA, a species is threatened if it is "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." NMFS, by contrast, "only determined that the Oregon Coast ESU would not become endangered within the next two years, falling far short of any reasonable definition of the 'foreseeable future.'" The Court also concluded that the final rule was arbitrary and capricious because NMFS relied on "improper factors" and provided "an explanation for its decision that runs contrary to the administrative record." The agency's reliance on the State of Oregon's Coastal Salmon Restoration Initiative was rejected by the court, which concluded "voluntary or future conservation efforts by a state should be given no weight in the listing decision." Following this decision, NMFS published a final rule in 1998 listing the Oregon Coast ESU coho salmon as threatened under ESA.

In response, Alsea Valley Alliance filed a lawsuit, alleging that NMFS should have considered both hatchery and wild stocks when making its listing determination [*Alcea Valley Alliance v. Evans* (2001)].[43] Congress did not define "distinct population segment" for pacific salmonid species, so NMFS interpreted it as meaning "evolutionary significant unit." In listing the Oregon Coast salmon as threatened, NMFS only "listed all 'naturally spawned' coho salmon inhabiting streams between Cape Blanco and the Columbia River … the hatchery populations were not deemed 'essential' to recovery." The court concluded:

> After reviewing the administrative record and the relevant statutes and legislative history, the court finds that the NMFS August 10, 1998 listing decision is arbitrary and capricious and therefore invalid because it relied on factors upon which Congress did not intend the NMFS to rely. The NMFS decision defines the ESU and thus DPS [distinct population segment], but then takes an additional step, beyond its definition of an ESU, to eliminate hatchery coho from its listing decision … the central problem with the NMFS listing decision of August 10, 1998 is that it makes improper distinctions, below that of a DPS, by excluding hatchery coho populations from listing protection even though they are determined to be part of the same DPS as natural coho populations.

The Department of Justice did not appeal this decision, but environmental groups have intervened as plaintiffs. They appealed to the Ninth Circuit Court of Appeals, which stayed the District Court's decision, so Oregon Coast Coho is still listed as threatened. Unless the Appeals Court rejects the decision, however, the fish will be de-listed in the future. Meanwhile, NMFS has reinitiated a public rulemaking process to determine the standard to apply to salmon populations that include fish reared in hatcheries. If the court's decision is not overturned, the agency acknowledged that this ESU may not "again be determined to merit ESA protection" and that a "total of 23 out of the 25 listed salmon and steelhead on the West Coast are potentially affected by the decision and the upcoming status reviews."

[43] 161 F. Supp. 2d 1154

In conclusion, our analysis of litigation under the Endangered Species Act reveals the following:

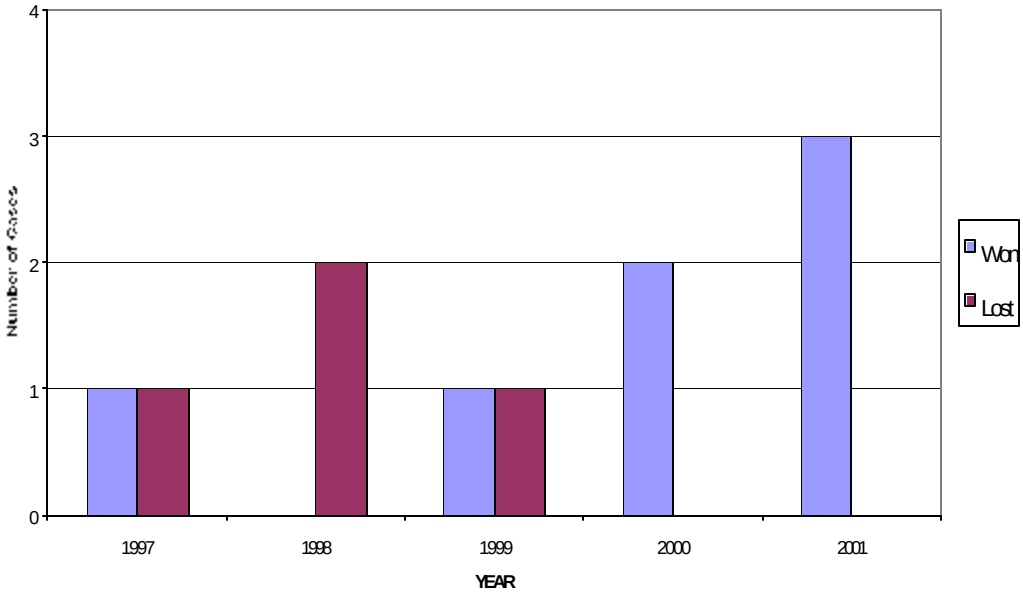
- Threatened and endangered species must be listed under the appropriate legal standards.
- Biological opinions must be based on the best scientific information available.
- Reasonable and Prudent Alternatives must ensure that the action under consideration does not jeopardize the species or adversely modify its critical habitat.
- When FMPs are adopted, the interaction between endangered species and fisheries must be considered.

Regulatory Flexibility Act

Under the Regulatory Flexibility Act, federal agencies must prepare regulatory flexibility analyses on proposed rules to determine their impact on small businesses—unless the agency head certifies that the rule will not have "a significant economic impact on a substantial number of small entities." An initial regulatory flexibility analysis, published with the proposed rule, is subject to public comment. The final regulatory flexibility analysis accompanying a final rule must summarize these comments and respond to them. In particular, it must describe what has been done to minimize impacts on small entities and why significant alternatives to the rule were rejected. Because almost all fishery management actions affect a substantial number of small fishing entities, NMFS has had a long-standing requirement to conduct a regulatory impact review as part of fishery management actions.

There were no cases involving RFA prior to 1996 because the law did not provide for judicial review. After Congress amended the statute to provide for judicial review of the agency head's certification and the analyses themselves, there have been an average of two per year. As Figure 2-11 shows, NMFS has lost approximately 35 percent of these cases, but these losses were all prior to 2000. It won the five most recent ones.

Figure 2-11: REGULATORY FLEXIBILITY ACT: WIN-LOSS RECORD, 1997-2001



In *Southern Offshore Fishing Association v. Daley* (1999),[44] the court rejected NMFS' certification and ordered the agency to conduct an economic analysis, which was rejected because the agency "inadequately considered, and perhaps overlooked altogether, feasible alternatives or adjustments to the 1997 quotas that may mitigate the quotas' pecuniary injury to the directed shark fishermen." *North Carolina Fisheries Association v. Daley* (1997)[45] raised similar issues. There, the court ruled that NMFS erred by failing to conduct a regulatory flexibility analysis of the 1997 summer flounder quota.

The overall trend under RFA, however, has been to defer to the agency—as long as a regulatory flexibility analysis has been conducted. *A.M.L. International v. Daley* (1997),[46] for example, held that the statute "does not command an agency to take specific substantive measures, but, rather, only to give explicit consideration to less onerous alternatives." Similarly, *Hall v. Evans* (2001) [47]rejected an RFA challenge to a monkfish plan amendment, finding that NMFS had "considered the economic effect of the plan as a whole upon small entities." The administrative record contained various charts and projections on the proposed actions' effects on small entities. It also showed that the councils considered, and rejected, less onerous alternatives.

[44] 55 F. Supp. 2d 1336
[45] 16 F. Supp. 2d 647
[46] Citation above, see note 22.
[47] Citation above, see note 14.

In conclusion, our analysis of litigation under the Regulatory Flexibility Act reveals the following:

- NMFS must conduct the required regulatory analyses using methodologies that are analytically defensible.
- When the agency head certifies that a rule will not have an adverse impact on small entities, this determination is subject to court challenge. Courts do not hesitate to order that an economic analysis be done.
- The required economic analysis must fully explain why less costly alternatives would not achieve the rule's objectives.

FINDINGS AND RECOMMENDATIONS

As the litigation analysis illustrates, NMFS is losing many cases due to serious deficiencies in the operation of the fishery management system. It has failed to conduct required analyses, used outdated information, and not analyzed relevant alternatives. For example:

- Under the MSA, preventing overfishing is the most important standard, and management measures must have at least a 50 percent likelihood of achieving their conservation objectives, including mandated rebuilding deadlines. Courts generally defer to the agency's scientific expertise, but fishery management actions must be supported by the administrative record. Adverse economic impacts as well as bycatch must be minimized to the extent possible. The record must actively consider these issues and provide sufficient evidence to support the proposed actions.
- In recent years, NMFS' record under NEPA has not been good. Courts have become increasingly adamant that the agency must conduct adequate EAs that consider reasonable alternatives and cannot use EISs dating back fifteen to twenty years. The cumulative effects of the many federal actions impacting fisheries must be considered.
- NMFS recent record under the ESA also is poor. Biological opinions must be based on the best scientific information available. Interactions between endangered species and fisheries must be considered and reflected in the administrative record. Species must be listed under the appropriate legal standards.
- Under the RFA, NMFS' record has improved greatly. The courts require the agency to conduct required analyses using methods that are analytically defensible and explain why less costly alternatives were not adopted—requirements that NMFS has begun to meet.

Many of these findings do not lead to specific recommendations within this chapter. Rather, they provide the basis for many recommendations in the following chapters on the regulatory process, NMFS budget, and constituent relations.

NOAA's General Counsel does not conduct periodic litigation analyses of NMFS' caseload and trends. The closed and open dockets it maintains, originally developed for audit purposes, are not sufficient for conducting analyses of litigation caseload and trends. The dockets exclude

some cases, and the statutory basis of lawsuits often is unclear. MSA litigation is not identified by national standard, so it is impossible to determine whether the case deals with overfishing, best available scientific information, bycatch, or other issue. The closed docket frequently is unclear about the disposition of the case, making it impossible to determine whether the case was won, lost, settled, or dismissed. And for cases based on more than one statute or national standard, it is generally unclear how the court ruled on each statutory claim.

Therefore, the Panel recommends that:

- **The NOAA General Counsel maintain an up-to-date litigation docket and conduct periodic analyses of the litigation record and pending caseload. The litigation docket should include all cases for which NMFS is the primary defendant, and it should identify the status and statutory basis for each. For decided cases, the docket should clearly identify the judgment rendered on each statutory claim and, for MSA cases, each national standard challenge**. Based on this up-to-date docket, the General Counsel should conduct periodic analyses on the status of its lawsuits and the results of litigation, providing a guide for Congress, NMFS, and the councils. These analyses, in turn, should be used to help NOAA and NMFS make more informed decisions about using resources to improve the prospect for success in litigation and, in the long run, alleviate the litigation workload.

Regarding administrative record keeping, administrative record requirements are not part of the NMFS operational guidelines. Each region has determined how it will develop this record.

- The current system is inefficient; most regions do not compile the record until after the regulatory action has been approved and a lawsuit filed.
- The Alaska and Northwest regions provide useful models on how to organize the administrative record process. Both have a full-time records manager who compiles an index of the administrative record for regulatory actions as they proceed through the system, ensuring that relevant documents are readily available.
- The Northwest region also has moved toward electronic record keeping by automating its groundfish record and making its biological opinions available on the Internet.
- A standardized system of administrative record keeping increases the likelihood that the necessary documentation is produced. The litigation analysis revealed that the administrative record must support the agency's decision, and all relevant analyses must be conducted.

Therefore, the Panel recommends that:

- **NMFS improve its administrative record keeping by employing standardized methods uniformly throughout the councils, regions, and centers. The administrative record should contain all required analyses, and officials involved in the process—including the councils and the Secretary of Commerce—should ensure through inspection that the record supports the actions being proposed *prior* to approval**.

CHAPTER THREE
FISHERY REGULATORY PROCESS

The conference report accompanying the Department of Commerce's Fiscal Year 2001 Appropriations Act directed NMFS to contract with the Academy to review the adequacy of the federal fisheries management processes and the data that the Agency uses to respond to litigation. These processes include the development and approval of FMPs and the issuance of federal regulations to give the plans the effect of law. The federal process specifically involves a large number of participants, including regulated fishers, the states, NMFS, NOAA, and the Secretary of Commerce. It also entails extensive procedures for public meetings and comments on both the plans and the regulations. This process has been criticized for the large number of layers of review, the length of time required to implement changes, unnecessary delays, unpredictable outcomes, and a lack of accountability. This chapter discusses these regulatory processes, addresses their strengths and weaknesses, and makes recommendations for improvements. It does not examine alternative governance models, but further analyses and study appear warranted.

STATUTORY BASIS FOR AND CURRENT STATUS OF THE REGULATORY PROCESS

The principal processes used in the federal fishery management system are (1) those mandated under the MSA for the development, review, and approval of FMPs and (2) the regulatory rulemaking processes of the APA and its complex process for notice, comment, and final rule issuance. Both processes have complicated procedural requirements for advance notice of meetings, public participation and comment, extensive review, and approval.

As discussed in Chapter One, MSA is the primary legislative authority for federal marine fisheries management in federal jurisdictions. It created a unique participatory governance system with FMPs as the basis for regulating fisheries in the 200-mile EEZ, consisting of the eight regional FMCs. Councils' voting members include the appropriate NMFS Regional Administrator, designated state officials, and members of the public. The last are appointed by the Secretary of Commerce from a list of three or more qualified individuals nominated by the governors of the states in each council. Non-voting members are the Fish and Wildlife Service Regional Director, regional Coast Guard Commander, Executive Director of the appropriate Interstate Marine Fisheries Commission, and a State Department representative.

The councils develop FMPs to regulate the type, means, and extent of fishery exploitation. Once adopted by the councils and approved by the Secretary of Commerce, FMPs serve as the basis for federal regulations under the APA for fisheries[48] under federal management. Two or more councils may jointly develop FMPs when fishery boundaries overlap. Also, some plans are developed and implemented in cooperation with states operating through three regional interstate fisheries commissions—for the Atlantic, Gulf of Mexico, and Pacific regions. In addition,

[48] The terms "fisheries" and "fishermen" are intended to include recreational fishers, charter "for hire" fishers, commercial fishers, and their respective industries.

NMFS is directly responsible for preparing and implementing plans for highly migratory fish species such as tuna, swordfish, and other billfish. These plans are prepared with the advice of the councils and a public advisory group. In some cases, the FMPs reflect U.S. obligations under international agreements.

FMCs also have a substructure of advisory committees, composed of council and non-council members, academic specialists, and knowledgeable state officials. Councils typically establish a separate committee for each fishery management plan and specialized committees for statistical and scientific, habitat, law enforcement, and other crosscutting concerns. The council membership, supporting committees, and staff are neither large enough nor intended to do extensive data collection and analytic tasks for fishery management decision-making. Instead, they rely heavily on NMFS regional and science center staff for support and inputs for basic data sets, stock assessments, socio-economic data, complex analyses, and other information.

This FMP process covers fisheries where the catch takes place predominantly in federal waters. Other ones fall under the general jurisdiction of the coastal states. MSA does not extend or diminish any state's jurisdiction or authority within its boundaries. A state may regulate fishing vessels registered there, including those operating outside its boundaries under no federal fishing regulation.

The Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA) established an interstate authority to manage coastal fisheries on the Atlantic Coast (Maine through Florida), under the Atlantic States Marine Fisheries Commission (ASMFC). This commission adopts FMPs for species caught predominantly in state waters and under state regulations: some are jointly developed with the councils and NMFS. Many of the plans operate under conservation equivalency, and some management actions give discretion to the states subject to ASMFC approval. States must comply with these FMPs or face a "non-compliance" finding by other member states, subjecting them to a moratorium on the applicable fisheries until they comply. Each state promulgates its own regulations to achieve FMP objectives adopted by ASMFC. Plans developed by the commission may recommend complimentary regulatory actions in the EEZ.

No similar legislative authority exists for interstate management in the Gulf of Mexico or Pacific areas. Twenty FMPs have been adopted by ASMFC, five of which are managed under joint FMPs with the Mid-Atlantic and New England councils. Thus, 62 interstate and federal FMPs are in effect, many of which require multiple regulatory actions in the course of a year.

Other Statutory Requirements

In addition to MSA and ACFCMA, other federal statutes directly affect fisheries management in federal and state jurisdictions or significantly impact the implementation of management actions. The MMPA and ESA pre-empted state authority and assigned responsibility for protecting and conserving marine mammals and marine threatened and endangered species to the Departments of Commerce and the Interior. Responsibility for most marine mammals has been delegated to the NMFS, as has responsibility for such marine endangered species as sea turtles. These designated species must be protected when fishing operations impact them. Regulations

designed to do so sometimes prohibit specific fisheries practices or severely restrict fishing operations.

When fulfilling their primary responsibilities under the MSA, MMPA, and ESA, fishery management actions and processes also must adhere to additional statutes and directives that impose specific requirements, analytical responsibilities, or timetables. These include:

- Coastal Zone Management Act (CZMA)
- Executive Order 12866 (regulations with a significant impact)
- National Environmental Policy Act (NEPA)
- Paperwork Reduction Act (PRA)
- Regulatory Flexibility Act (RFA)
- Executive Order 12612 (federalism impact on states)
- Executive Order 12630 (real or personal property "takings")

Appendix I details the various federal requirements. States often have administrative statutes and procedures that are similar yet separate and distinctive.

Guidelines and National Standards

Each FMC is responsible for preparing and submitting an FMP to the Secretary of Commerce for review. It also must do this for every amendment to a plan and every fishery under that council's authority.[49] The councils' FMPs and regulations must be consistent with the ten national standards mandated in the MSA.[50] Guidelines published by NMFS; which do not have the force of law; provide detailed guidance on the application of the national standards when preparing FMPs and amendments.

In addition to these guidelines, NMFS issues other instructions that guide the agency's and the council's staff in developing and approving FMPs and associated regulations. NMFS' "Operational Guidelines for the Fishery Management Plan Process" incorporate all statutory requirements, executive orders, and policies that must be addressed. These umbrella guidelines include procedures and divide responsibilities among the councils, NMFS regions, science centers, and headquarters, and NOAA's General Counsel. For example, councils should use the General Counsel for legal advice and rely on the appropriate region or science center for technical expertise, data, and information. The guidelines also include instructions on FMP planning, drafting, public review, council adoption as well as NMFS review and approval. Further, they describe how to implement FMP changes through amendments, develop emergency actions, and undertake other regulatory changes. These guidelines were issued in September 1979 and have been revised periodically to reflect statutory changes, new case law, and process adjustments. The last revision took place in 1997 following passage of the SFA. NMFS has announced plans to revise the guidelines in 2002.

[49] Section 302 (h) of the Magnuson-Stevens Act
[50] Section 301 of the Magnuson-Stevens Act

The operational guidelines are a basic approach to FMPs and regulatory practices, but they are interpreted and applied differently among the 8 councils and 5 NMFS regions and science centers. They implicitly accommodate regional differences in fisheries and practices and differing cooperative management arrangements with coastal states. This makes it difficult to uniformly implement national policies and contributes to varied procedures and extended timelines for implementation. It also results in unevenly applying national standards to important problems, such as overcapacity and overfishing. The current process does not work well. Many participants believe it neither serves their interests well nor adequately maintains economically and environmentally sound fisheries. Frequently, implementing management actions under the current regulatory process is not timely. Responses to overfishing, habitat, and bycatch issues are slow, and regulations often are unknown prior to the start of fishing seasons. Many constituents find the process confusing and frustrating, while others believe the management system and its associated regulatory process are badly broken and need significant overhaul.

Current Status of NMFS Regulatory Process

The fishery management and regulatory processes are complex, cumbersome, and confusing. Outlining the full process, NMFS lists sixty-one different steps in developing and adopting fishery management actions and regulation. There are multiple opportunities for public comment in the process including 4 Federal Register notices announcing intent to initiate a regulatory action, public hearings, availability of the FMP, and the proposed regulations. In addition, notice is given for council meetings, and opportunities provided for public participation when management actions are being developed. Further, NMFS and NOAA's General Counsel provide multiple levels of review. In many respects, regulatory process mechanics seem to overshadow the system's primary purposes of managing fisheries and conserving marine mammals and endangered species. They also hamper productive relations with the public and coastal states.

NMFS and the councils provided information to the project team concerning the timelines of 115 major actions over the past five years. It shows a wide disparity in the time required to develop and implement FMPs, amendments, framework actions, and regulations. It also highlights differences in approach used by the councils and regions. The time required to process new FMPs ranged from less than two years to six. This includes the period from the council beginning the action to adopting the implementing regulations. Amendments required as little as seven months or as many as seven years. Most amendments took between one and two years for completion, yet others took more than two years. Further, the time to promulgate associated regulatory amendments ranged from two months to over two years. Framework actions [51] ranged from three months to one year from council initiation to adoption of implementing regulations; roughly 50 percent were accomplished in less than six months. Framework actions

[51] The term "framework" is derived from a mechanism developed by the councils and NMFS to allow a more expeditious processing of management actions if the possible future actions were anticipated and identified in the underlying FMP. A framework action is intended to avoid the longer time periods required to process a plan amendment when quicker action is needed to adjust a fishery management regulatory regime. A framework action under the Pacific Coast Groundfish FMP was overturned by the court in *NRDC v. Evans* (2001) because only final rules were published without proposed rules for public comment.

initiated by the Pacific Council were more extended, requiring from less than two years to more than four. NMFS has not conducted a comprehensive review and analysis of the reasons for these diverse and extended time periods.

Numerous studies and reports have identified problems with the regulatory process. These include:

- In 1995, a NMFS charter team on regulatory effectiveness offered 22 recommendations to improve the quality of NMFS regulations and to streamline the internal regulatory process. As of December 2001, about half of the recommendations were implemented.
- A Congressional Research Service Report, updated in early 2001, expressed concerns over delays in implementing some provisions of the 1996 amendments to the MSA and contended that "…standards established by NMFS guidelines are unrealistic, given the dearth of scientific information…and timetables established by the 1996 amendments were unrealistic."
- An April 2000 General Accounting Office report; "Problems Remain with NMFS Implementation of the MSA" recommended ways to improve NMFS management activities, including data collection, communications with the fishing industry, economic analysis, and estimates of costs associated with fulfilling the MSA provisions.
- In 2001, NMFS conducted a facilitated study and workshops to identify problems and make recommendations to enhance the decision making process for federal fishery management actions. They identified numerous problems, including confusion and lack of clarity about respective roles and responsibilities, conflicts among missions, inadequate knowledge and experience in NEPA processes, outdated policies and guidance, and inadequate analyses.
- MAFAC and the Council Chairs recommended improvements in such areas as outreach, science, management, budget, and legislation.
- The 2000 Resource Requirements Report noted that the fishery management process included multiple layers of review, and suggested that NMFS streamline the regulatory process by reducing the number of reviews. It also recommended delegating more responsibility to the field, clarifying relationships, eliminating funding and revenue allocation processes that pit regions and centers against each other at headquarters, and fostering teamwork between headquarters and the field.[52]

At the direction of Congress, NMFS developed a regulatory streamlining project (RSP). In March 2002, a draft report assessed the regulatory process and its problems and outlined a series of planned actions. The RSP states: "The current system of producing and reviewing regulatory documentation of the Magnuson-Stevens Fishery Conservation and Management Act and all the associated mandates … is not meeting mandated timeframes for review, publication, and implementation of fishery management plans, amendments and related regulatory actions. This appears to result from a combination of the number of layers of reviews, organizational issues, interaction of regulators with attorneys, and lack of sufficient resources for data analysis and documentation."

[52] The NMFS regulatory streamlining project acknowledges that "…inconsistent advice can occur at different points along the process…" and "…conflicting reviews sometimes occur at the end of the process…"

The RSP emphasized the need for greater resources to achieve significant progress in streamlining the regulatory process and improving timeliness. It concluded that reprogramming by re-prioritizing current funding and changing the internal process can only produce incremental benefits without additional resources. The RSP contended that improving regulatory performance requires more people, data acquisition, greater operational capability, and standardized nationwide fishery and marine mammal surveys. Most of the deficiencies identified, however, require immediate attention based on currently available funding. Initial streamlining efforts likely will result in extending the time required to process fishery management actions, a likelihood that NMFS acknowledged. In response to the RSP, the regions indicated that completing documentation usually will require at least an additional council meeting; one region proposed a schedule that requires up to six or more. The time required for this more deliberative process may be mitigated by streamlining NMFS' review and approval process, as discussed later.

The RSP recommends measures to improve the fishery management process over the next two years. They include:

- front-loading the regulatory analysis process based on what NMFS views as the most demanding analytical tasks—those required by NEPA
- revising the operational guidelines
- setting up an ongoing national training program
- hiring headquarters and regional environmental policy coordinators
- delegating increased signature authority to regions and eliminating some layers of headquarters review
- using electronic rulemaking and permit administration
- initiating a series of interactive "roundtable" forums with stakeholders and partners
- redistributing existing resources as prudent and necessary and identifying new resources that may be required.

The RSP does not identify the funding that NMFS believes is necessary to implement the plan. The regional offices have, however, submitted draft plans for implementing the recommendations; they call for approximately 100 additional full-time new employees and $20 million annually to begin implementing regulatory streamlining. The figure does not include the new data acquisition, ships, or research needs identified in the RSP. Neither the RSP nor the regional implementation plans address whether existing funds—already appropriated to improve NEPA compliance, socio-economic analysis, stock assessment improvements, and other ongoing initiatives—will be used to implement the RSP recommendations. These ongoing funded increases are discussed in Chapter 4.

ROLE OF THE REGIONAL FISHERY MANAGEMENT COUNCILS

The council system and its mandates and authorities are unique among federal regulatory agencies. Each regional FMC is responsible for preparing and submitting FMPs, amendments, framework actions, annual specifications[53], and regulations for every fishery under its authority. Regarding overfished stocks, councils must take action designed to end overfishing and submit time-specific plans or amendments to rebuild the fish stocks within mandates. NMFS is required to approve, disapprove, or partially disapprove the councils' management actions. If an action is approved, NMFS publishes proposed regulations for public comment and final regulations to implement the action.

When preparing management proposals, councils are responsible for making many determinations, including:

- identifying the need being addressed
- developing the objectives to be obtained
- identifying and analyzing alternative courses of actions
- selecting technical parameters, such as optimum yields and biological reference points based on the best scientific information available[54]
- setting fishing mortality targets or quotas
- determining the length of rebuilding schedules for overfished stocks
- conforming to the 10 national standards in MSA
- allocating quota or other fishing privileges to the fishing sectors involved
- accommodating public participation and comment
- compiling an administrative record for proposed actions and regulations

It is a complex task to analyze proposed actions required under MSA,[55] NEPA, and other statutes, and to identify their impacts in conjunction with multiple alternatives. It is the rule rather than the exception that considering one action has a cascading effect that changes the impact of other actions contained in FMPs. Hundreds of potential impacts may be possible given different combinations of quotas, size limits, seasons, closed areas, gear requirements, allocations, rebuilding schedules, and other management measures. Because fishery participants, industries, and communities are so geographically diverse, the impacts are not uniform across the entire spectrum of groups affected. Specifically, selecting and assessing a reasonable range of alternatives can be extremely difficult and subjective under NEPA. Even though voluminous tables of data and scientific reports often are appended to analytical documents, the sheer volume and quality can constrain the analysis being performed on the possible combinations of alternatives and impacts.

---

[53] Annual specifications are determinations of catch quotas, allocations between different segments of the fishery, allocations of daily catch limits, seasons, and other details of the next annual fishery which must be identified annually when required under an FMP.

[54] National Standard 2 provides that "Conservation and management measures shall be based upon the best scientific information available."

[55] Section 303 of the MSA specifies the required and discretionary provisions of fishery management plans

Council staff members usually are responsible for developing FMPs, amendments, and draft regulations. The councils provide guidance and are responsible for the plan's approval. Some use plan development teams that include council and NMFS staff, state representatives, council members, and others with particular expertise. Different councils and regions have variations of these teams in the development process. Councils receive and act on information and testimony obtained from their public committee and council meetings and hearings. The administrative record supporting the council's decision contains full documentation of the council deliberations, including public hearing records and meeting transcripts or recordings.

Councils also have a committee system to help develop recommendations on fishery management actions. These committees typically receive public comment during their deliberations, and frequently other council members who are not members of the committees will participate. The committees play an important role by allowing public participation during the development of proposed actions, reviewing the information available, identifying alternatives, and clarifying and narrowing the issues brought to the council. The time, place, and agenda for committee and council meetings must be published in the Federal Register two weeks prior to scheduled meetings to give the public an opportunity to participate. Committee chairs present committee recommendations or proposed actions to the council.[56]

Following approval, the council submits a description of the proposed action, with supporting analyses and draft regulations to the regional administrator. The procedure is to transmit these with a cover letter that does not provide an explicit basis for the decision beyond what is included in the attached documentation. The documentation usually is a consolidated package that addresses all of the applicable laws; it is not separate documents for each issue or applicable law. Chapter 2 detailed several cases where the courts found the administrative record deficient in providing adequate rationales.[57] Regulations associated with a management package often are in draft outline form. Final regulations ready for the Federal Register are often not prepared until later in the process. Because most major fisheries operate under FMPs, the councils predominately offer amendments to existing plans, framework actions, annual specifications, and regulatory amendments.

Council staff size varies depending upon funding and staffing levels included in the NMFS budget. There is no set formula for allocating staff and funds to the councils. The practice has developed over time in response to council needs, congressional appropriations, and NMFS decisions on allocating available resources to the eight councils. Although the MSA assigns responsibility for preparing FMPs to the councils, practices vary among the regions. For example, the Mid-Atlantic council prepares the entire suite of required analytical documents and relies on the region and center for certain data and information. The Alaska region and center, on the other hand, are substantially involved in preparing documentation required for council

[56] Each council adopts standard operating practices (SOPs) for committee procedures and practices.

[57] In *Hall v. Evans (2002)*, the court noted that, if there are conflicting facts or opinions relevant to a certain point, councils may choose among them but should justify the choice. In *Parravano v. Evans* (1995), the court noted that the administrative record provided only conclusory assertions that higher escapement of salmon would achieve the Secretary's legitimate objectives. In *Conservation Law Foundation v. Evans* (2001), the court observed that the record contained no rationale for the decision (it referred to the NEFMC decision to institute a dedicated observer program and less restrictive fishing gear).

actions. Still others have adopted arrangements where regions and centers prepare some portions and councils prepare others. For the most part, councils depend on the NMFS regions and centers for compiling and maintaining databases and other information needs to complete analytical documents. Prior to 1984, councils received funds—commonly referred to as programmatic funds—in addition to their staff and operating funds with which they could contract for data, analytical needs, research, and services not immediately available from NMFS. Recently, specific appropriations for improving NEPA documents have been given to the councils to contract for services and add staff.

As a group, states have a strong influence on the councils and bring specific expertise to the council deliberations and decisions. They consider themselves to be partners in managing U.S. fisheries; they gather and supply some landings and technical data to NMFS and the councils, participate in plan development and plan review efforts, and contribute to council committee activities. Where federally managed fisheries also occur in state jurisdictions, states must implement complementary or identical regulations in their jurisdictions in conjunction with federal regulations. Coordinating the implementation of actions and announcements of events—such as achieving a quota or closing fisheries during a fishing season—often is required but can pose difficulties. The joint management of fisheries sometimes involves duplicate and overlapping actions that extend the time required to implement resource management actions. It also sometimes results in different regulations or effective dates in state and federal jurisdictions. Given this situation, states have been given lead responsibility for some fisheries, with NMFS oversight and complementary action in the EEZ.

Council Member Conflict of Interest

In establishing the councils, the MSA specifically included fishing industry representatives in their membership, and made special provisions to cover potential member conflicts of interest. Individuals nominated for appointment and voting council members must disclose financial interests in harvesting, processing, or marketing activities for any fishery over which the council has jurisdiction. Those disclosing a financial interest cannot vote on a decision that would have a significant—10 percent or more—and predictable effect on that interest relative to others in the same gear type or fishery sector. Although affected individuals cannot vote after disclosing such an interest, they may continue to participate in council deliberations and state for the record how they would have voted if allowed.

Some believe that conflict of interest is a major concern in the MSA's fishery management system. However, council chairs point out that the number of members is sufficiently large to avoid overt influence by any one member. They believe that current provisions are adequate protections against significant financial conflicts, and that knowledgeable members can, by definition, be directly involved with the fisheries business. Environmental and conservation interests desire a broader interpretation of conflict of interest, pointing out that council members who are fishers have a direct stake in the outcome of management decisions; therefore, they may be influenced to ignore scientific advice that would be adverse to their interests. An additional issue is that there is no provision for possible conflicts of interest in appointing council members who may have no direct financial interest in a fishery, yet be affiliated with lobbying or interest groups with a financial or other interest.

Council Membership and Balance of Representation

When making appointments to the councils, MSA directs the Secretary "…to the extent practicable, ensure a fair and balanced apportionment, on a rotating basis, of the active participants (or their representatives) in the commercial and recreational fisheries under the jurisdiction of the council." However, it does not require governors to nominate—or the Secretary to appoint—members who represent consumers, fish product dealers, retailers, or environmental/conservation interests. Nonetheless, about one-fifth of current appointed council members are categorized as representing an interest other than commercial or recreational fishing. Some question whether the current concentration of fishing members represents the broader public interest. Consumer, producer, and environmental groups have few representatives even though concerns over these interests have increased. NMFS reports annually to Congress on the membership apportionment. Figure 3-1 shows that appointed membership of councils in July 2000 consisted of 32 members (44 percent) categorized as commercial; 26 members (36 percent) categorized as recreational, and 14 members (19 percent) categorized as "other" with knowledge or experience in biological, economic, or social sciences; environmental or ecological matters; consumer affairs, and associated fields. There are 113 members—seventy-two (64 percent) of whom are appointed members. The remaining members are the NMFS Regional Administrator and state officials with marine fishery responsibility and expertise, representing the broad interests of all constituent groups and state and federal responsibilities for fisheries management.

Table 3-1: Regional Fishery Management Council Appointed[1] Members Identified by Sector Interests after appointments with terms beginning August 2000

Council	Commercial	Recreational	Other	Total
New England	8	2	2	12
Mid Atlantic	5	5	3	13
South Atlantic	3	4	1	8
Caribbean	1	1	2	4
Gulf of Mexico	4	7	0	11
Pacific	3	3	3[2]	9
North Pacific	4	1	2	7
Western Pacific	4	3	1	8
TOTAL	**32**	**26**	**14**	**72**
Percentage[3]	**44%**	**36%**	**19%**	

[1] Designated members such as state officials and NMFS are not included. Non-voting members are not included.
[2] Includes one Indian Tribe representative required by the MSA.
[3] Does not add to 100 percent because of rounding.

ROLE OF NATIONAL MARINE FISHERIES SERVICE

NMFS' stewardship role for U.S. fisheries includes the responsibility to review and approve or disapprove FMPs and implement and administer proposed management actions and regulations submitted by the 8 regional FMCs pursuant to the MSA. As noted earlier, NMFS is organized with a headquarters office in Silver Spring, MD, 5 regional offices and 5 regional science centers: Northeast (including the Great Lakes), Southeast (including the Gulf of Mexico and Caribbean), Southwest (including Hawaii and Pacific islands), Northwest, and Alaska.

NMFS headquarters guides and establishes operating practices and policies that assign roles and responsibilities and set timelines for action; reviews (with NOAA's General Counsel) regional submissions for completeness and approvability; facilitates the processing of management actions through public comment on proposed plans and regulations; and promulgates final regulations in the time periods required by MSA and other statutes.

NMFS' daily interaction with the councils is primarily done through the regional offices that exercise NMFS' regional management and science responsibilities. The agency also has an enforcement role with 100 investigative agents and 20 enforcement (patrol) officers located throughout the United States. In addition to its responsibility under MSA, NMFS exercises responsibilities for other national policies, international commitments, habitat, and protected species. It must integrate these activities with the council and fishery management duties.

When a council submits a proposed action to NMFS for review, NMFS operational guidelines call for it to include the relevant FMP or amendment and the proposed implementing regulations. With respect to an FMP or amendment, MSA provides that the Secretary of Commerce "…shall immediately (defined as on or before the 5th day after council transmittal) commence a review…and immediately publish in the Federal Register, a notice stating that a plan is available…" for public review during a 60-day period, and approve a proposed action within 30 days of the end of the comment period or the plan takes effect as approved. This public notice and comment process satisfies the NEPA and MSA requirements.

With respect to proposed regulations, MSA provides that the Secretary shall immediately initiate a review of the proposed regulations to: within 5 days, determine whether they are consistent with the plan or amendment; within 15 days, determine that the regulations are consistent with MSA and other applicable law; and either publish them for a public comment period of 15 to 60 days, or return them to the council with recommendations for revision. Final regulations must be published within 30 days after the end of the comment period, explaining any differences between proposed and final regulations.

Procedures vary for handling council proposals—plans, amendments, and other actions—before being sent to headquarters for formal adoption. In some cases, regional offices will determine that a package is incomplete or insufficient and return it to the council. This sometimes is done informally, with a request for supplemental information rather than full disapproval. The key point is that delays at the regional level means the review "clock" does not start until the regional administrator submits the formal decision memorandum to headquarters. When the official does so, the Office of Sustainable Fisheries enters the action into its tracking system—its regulatory

calendar—to track compliance with the time requirements. Regions and councils often maintain their own informal tracking systems but these are not integrated to provide a continuous status review of pending actions.

Following their submission to headquarters, proposed plans, amendments, and framework actions are controlled by stipulated MSA time requirements for processing. Although proposed regulations are subject to these limits, they are usually handled separately. As a result, they often are not finalized until well after the FMP or amendment is approved.

Timeline information revealed varying periods in the time from when the headquarters review started to when final regulations were published. The interval between publishing a proposed regulation and final regulation has been as brief as 35 days. However, it is not unusual for 4 to 9 months to elapse. Some observe that the NMFS headquarters review results only in "editing," slowing the process with little benefit. Others believe that the review is beneficial as it identifies and corrects areas of potential disapproval or aspects susceptible to litigation. Following the Regional Administrator's submission and publication of the proposed regulation, NMFS is committed to implement the action or disapprove it and return it to the council. There have been very few instances of NMFS headquarters disapproving actions; the agency could only identify three during the past 5 years. However, processing management actions and regulations is a major workload. Headquarters often substantially re-drafts proposed regulations to conform with Federal Register format requirements, clarifies intent, improves readability, and addresses enforcement concerns. The Office of Sustainable Fisheries handles approximately 1,000 Federal Register publications annually for fishery management and protected species actions.

Councils and NMFS face the major problem of conforming analyses and documents such as EISs required under NEPA, to meet statutory requirements. Some council staff and regional offices indicate they have not received clear and adequate guidance particularly in preparing new and updated programmatic EISs. NMFS believes that many adverse court decisions are linked to its inadequate understanding of NEPA and other requirements for analytical documents. Internal and external reviews of the regulatory process produced recommendations for improvement, such as clarifying roles and establishing a training program. The RSP includes many of these recommendations, some of which are scheduled to be implemented over the next two years. Yet NMFS indicates it cannot accomplish others without additional resources. For example, comprehensive NEPA training program has been consistently recommended, and NMFS has conducted workshops and individual training sessions in the past. Yet RSP calls for setting up an ongoing national training program over the next two years. Regional proposals include some limited training, but most indicate that the regions expect headquarters to implement an agency-wide program.

Some recent changes in delegation of authority from NOAA to NMFS headquarters and regions are intended to facilitate streamlining and reduce time-consuming headquarters review. The RSP indicates, "Delegation is being implemented for several parts of NMFS mandates … In general, further delegations for document clearance will depend on how well the front-loading of the process are implemented, including identification of national policy issues."

Role of NMFS Regions and Science Centers

As noted earlier, councils initiate FMPs, amendments, frameworks, annual specifications, and regulatory amendments based on the decision that an action is warranted or required, or upon notification that a stock is overfished and a rebuilding schedule is required. Most councils develop schedules of upcoming actions to consider staff time, committee review and inputs, and council meetings. As the Regional Administrators and staff and science center personnel attend council meetings, they are generally aware of the council's calendar of actions. In addition to the Regional Administrator's participation as a voting member, NOAA's General Counsel provides legal advice to the councils and the regional science centers impart scientific advice.

Close coordination between council staffs and NMFS regions and centers is necessary to ensure that data and information, analyses, and stock assessments are available in a timely manner. Councils and regions use various methods to accomplish this coordination. A coordinating council has been formed in the Northeast—composed of the Regional Administrator, Science Center Director, the Executive Directors of the two councils in this region, and the executive director of the ASMFC—to coordinate and prioritize activities for completing scheduled actions. NMFS regional and science center staff, council staff, ASMFC, and sometimes states are tasked by agreement of the coordinating council to provide information or complete assessments by certain dates.

Council staff may submit draft management actions and required documents to NMFS regions and centers for comment prior to preparation of the final documents. This usually occurs in difficult areas of analysis such as environmental assessments, EISs, and socio-economic analysis. These informal reviews are intended to provide an opportunity for NMFS to identify other potential problems like protected species or habitat issues, or inadequate analyses that might cause a delay or disapproval of the final council package. Yet the review is sporadic and does not always guarantee that NMFS will accept all portions of the council's final package.

Science center and regional office personnel and NOAA General Counsel representatives are requested to provide specific information to, or answer questions from, the council, council staff, and public during the council's consideration of an action. Time limitations often preclude an informal review and do not allow full opportunity to exchange views and comments. Legal advice is especially difficult to obtain. Counsels often are conflicted in their roles as legal advisors to both the councils and NMFS, and they are sometimes reluctant to provide advice whether an action should be approved at open public forums. Consequently, some councils believe they do not receive adequate legal advice and have suggested that they be permitted to employ their own legal counsel or contract for such advice.[58]

In most cases, regions and science centers know the substance of an action being submitted for approval. In some cases, they have been directly involved in preparing or informally reviewing analyses or other documents related to it. They review the council submission, certify that the best scientific information available was used, and advise the Regional Administrator on

[58] Section 302 of MSA provides that councils may close any meeting, or portions of meetings, for briefings on litigation in which the council is interested.

approval or disapproval. The Regional Administrator can approve or disapprove all or a portion of council submissions. Disapproved portions are returned to the councils with an explanation of the reasons for disapproval and suggested remedies. Approved portions, forwarded to NMFS headquarters would be subject to the stringent 15-day timeline for review and publication of the proposed regulations for public comment.

Regional administrators routinely abstain from voting on issues that they feel might compromise NMFS' final decision. This practice is exercised differently according to region. State and appointed council members feel disadvantaged that they are obliged to vote on controversial issues when the regional administrator can abstain, particularly when the final decision is made out of the sight of NMFS' state and other council partners. This introduces a heightened level of uncertainty in the process as to whether actions will be approved or disapproved following submission to the Regional Administrator. It also engenders significant strains in relationships among NMFS and the councils and states, which consider themselves NMFS' partners in the fishery regulatory process. In some cases, this frustrates the public and fishers who often are left not knowing the outcome of proposed regulations until immediately prior to, or after, fishing seasons have started.

Regional offices also are responsible for administering federal permit requirements for FMPs; these are required in addition to state fishing permits. It is not unusual for full-time fishermen to have multiple state and federal permits to participate in multiple fisheries. Administering this system is a major burden for NMFS regions. For example, more than 28,000 vessels were federally permitted in the Northeast region in 2000. These are in addition to state permit requirements under FMPs in effect by the Mid-Atlantic and New England FMCs. Also, there are over 10,000 permit holders in the salmon fisheries located in the EEZ off Alaska. Most permits must be renewed annually.

FINDINGS AND RECOMMENDATIONS

Findings on Council Membership

With respect to council composition, the Panel finds that:

- The credibility of the council system can be enhanced by including other interest groups on the councils. Current membership does not represent the overall societal values of fisheries and habitat conservation, their economic contribution to coastal areas, and other objectives under the MSA. A better balance may correct what many see as a serious flaw in the system, leading to the perception that the councils are overly influenced by fishing interests to the exclusion of other legitimate interests.
- There is little evidence of direct personal financial conflicts of interest in most council decisions. Concerns about potential conflicts may be as much ideological as financial. However, council decisions directly impact recreational and commercial fishing industries, and industry members often are perceived as acting in the interest of the industry and neglecting the MSA's conservation requirements.

Therefore, the Panel recommends that:

- **Congress amend MSA to provide for broader representation of fishing and conservation interests on the councils, including consumers, marine trades, and environmental and conservation groups.** This can be accomplished by broadening the requirements for nominations by governors or providing for direct appointment by the Secretary of Commerce (in the absence of nominated candidates).
- **Congress amend MSA to require a council member to recuse him or herself from voting upon management actions affecting his or her personal financial interest.** This should pertain to members with conflicts that would arise from substantial involvement and participation in a fishery affected by a council approval and to those with direct personal financial conflicts. Recusal should not bar participation in other council activities, including committee assignments or council deliberations.

Findings on Council Procedures

With respect to council procedures, the Panel finds that:

- The councils and NMFS share responsibility for the analyses required to support most aspects of fishery management planning. Joint participation through management planning teams is used to facilitate cooperation on these shared responsibilities. However, this often results in confused assignments, particularly as multiple iterations of alternative management actions are considered.
- Having the NMFS Regional Administrator abstain from management actions introduces considerable uncertainty into the council process. Councils, states, and fishers would benefit from knowing the likely outcome on proposed management actions at the council level before they are submitted to regional administrators.
- Given the growing significance of litigation in the fishery management system, the councils would benefit from more explicit legal advice when developing fishery management actions. Currently, the councils and states feel distanced from the litigation process, lacking information on decisions on cases, the status of pending cases, or proposed settlements. These directly impact the councils' responsibilities for fisheries management. Although Regional Counsels often feel constrained in proffering advice in public, particularly on pending cases and settlements, the Panel sees no statutory bar to holding closed meetings to allow for this advice.
- The statutorily prescribed time limits for review and relations with the councils and states are adversely affected when Regional Administrators do not process council actions expeditiously. When timeframes are extended, the status of the action is not readily known; confidence in the system is eroded; and relations are strained.

Therefore, the Panel recommends that:

- **Regional Administrators only abstain from council votes on issues that transcend regional interests that would impact national policy, or require extensive coordination between other regions, councils, and government agencies.** This would

be consistent with the recent NMFS guidance that councils have complete documentation and analyses available before they vote.

- **Regional Administrators establish electronic regulatory calendars in conjunction with planned council actions, and make them accessible to the councils, states, and public.** These calendars should give the current status of all actions, including those submitted for NMFS decision. They also should be regularly updated and integrated with a national electronic regulatory calendar.
- **Regional Administrators and the councils establish guidelines and procedures for closed council meetings to receive legal advice and briefings on litigation, including pending cases and proposed settlements.**

Findings on the Fishery Management Process

With respect to the councils' fishery management process, the Panel finds that:

- Councils exercise responsibility for allocating fishing quotas and privileges among fishery sectors. NMFS strongly supports this council role.
- Councils frequently vote on plans and actions prior to having the full analyses required by the various statutes. Council staff often prepare final documentation for transmittal to NMFS after the decision has been made. Similarly, regulations associated with a management package often are in outline or draft form. Final Federal Register ready regulations frequently are not prepared until later in the process, resulting in delays in publishing proposed and final regulations. The councils would best be served by having the full documentation, analyses, and regulations before voting. NMFS recently tasked the councils to do this, even though it will slow the process at the council level.
- Council documentation supporting decisions is voluminous, but it often fails to provide an explicit rationale for the decision. When the available scientific evidence is sufficiently ambiguous and could support multiple alternatives, an explicit rationale is needed to clarify the decision. It would improve the government's ability to defend fishery management action decisions in litigation.
- Councils have limited financial resources (an average of $2 million), and their discretionary funding to complete increasingly comprehensive analyses required by court decisions is constrained. As such, the councils have limited flexibility to fulfill analytical requirements and obtain needed information, research, and services.
- Councils and NMFS have adopted a practice known as "framework actions" in order to make frequent adjustments to management regimes. Through framework actions, the agency publishes a final rule without having first published a proposed rule. However, this process was found to violate APA. (See Chapter 2, *NRDC v. Evans*, 2001)

Therefore, the Panel, recommends that:

- **Congress amend the MSA to explicitly provide for framework adjustments and annual specifications to facilitate their rapid processing**. The conditions and timelines for doing so should be clearly identified in FMPs to avoid conflicts with the regulatory requirements of the APA.

- **The Assistant Administrator for Fisheries and the councils amend guidelines to require that councils submit a statement outlining the reasons and rationale followed when approving management actions**. These statements should explain the discretion used in balancing application of the national standards with the expert testimony in reaching their decision.
- **The Assistant Administrator for Fisheries allocate a limited amount of discretionary funds to the councils to address unmet needs and analytical voids when information is not available from NMFS**.

Findings on Federal-State Relations

With respect to federal-state relations, the Panel finds:

- States are partners with NMFS in regulating U.S. fisheries and, increasingly at the urging of Congress, in enforcement and protected species programs.
- Opportunities exist to devolve additional responsibilities to the states without statutorily changing fisheries management to eliminate duplicative and overlapping management activities. Outlining and defining responsibilities in FMPs is one way to accomplish this purpose. Cooperative statistics programs are examples of agreed-upon divisions of responsibilities between state and federal management agencies, as noted in the accompanying NRC report.
- Multiple state and federal permit requirements are costly and confusing to the issuing agencies and fishers. Opportunities exist to streamline the permit processes.

Therefore, the Panel recommends that:

- **The Assistant Administrator for Fisheries review and redefine, wherever possible, the division of management responsibilities with the states.** States should have the responsibility for managing fisheries located predominantly in state jurisdictions. Complimentary management by NMFS within the EEZ should be retained when appropriate to ensure consistent regulation.
- **NMFS, with the states, should investigate consolidation of permitting regimes to eliminate the cost and confusion of multiple permit requirements.**

Findings on Fishery Management Plans

With respect to fishery management plan development, the Panel finds:

- The relative roles of the councils, NMFS regions and centers, and the states are poorly defined, leading to uncertainties and inefficiencies in developing FMPs and other management actions. Implementing management actions often is not timely. Fishers and associated marine trades often find it difficult to plan and conduct their business due to delays in the process. A critical first step in streamlining the regulatory process is identifying responsibilities.
- Compliance with NEPA and other statutes is a continuing problem for NMFS in the fishery management process. Council and NMFS practices, procedures, and staff

capabilities have not kept pace with the challenges and responsibilities posed by various statutes and regulations.

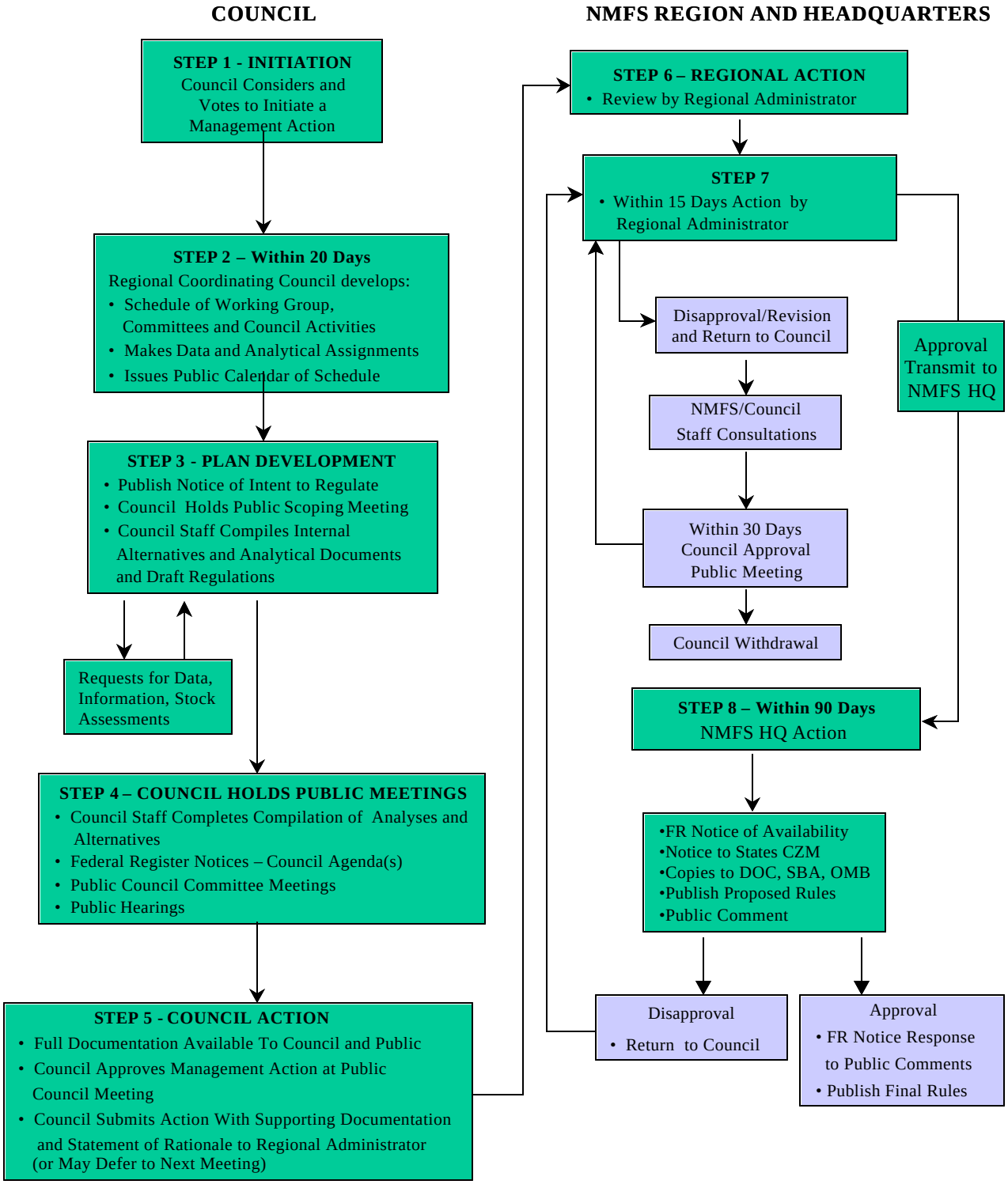
- Revised NMFS guidance requires the councils to have all documentation completed before approving actions. Unfortunately, the likely outcome is that these additional requirements will slow, not accelerate or streamline, the regulatory process.
- Neither NMFS nor the regions have comprehensive plans to guide councils, regional offices, their science centers, and headquarters on programmatic priorities among FMPs, protected species, and habitat goals. Information collection and analytical activities frequently occur as a result of personnel availability and institutional preferences.
- The informal review and comment process seems to delay, not facilitate, review of council recommendations. Some actions remain pending over long periods of time under this route.
- Regional Administrators have no ability to amend council plans, even if there is compelling justification.
- When NMFS offices are substantially involved in preparing documentation for council actions, their staff sometimes is in a position of preparing, reviewing, and approving their own work. This could increase the risk of analytical and procedural deficiencies. Normally, internal controls preclude this practice.

Therefore, the panel recommends that:

- **NMFS regional administrators have the lead for assigning responsibility for completing analytical requirements associated with council actions.** The regions should establish specific mechanisms, such as the Northeast coordinating council, for prioritizing and coordinating activities within a region to ensure that assignments are clear and completed on time. Regional coordinating councils should develop an agenda of FMP-related actions and other management activities in conjunction with clearly defined duties among councils, science centers, and associated commission and state activities.
- **NMFS Regional Administrators clearly separate the assignments of preparing documents related to council proposals and approving them.** The accompanying NRC report suggests that NMFS assign some of its new social scientists exclusively to monitoring and peer-review activities, pointing out that the agency must ensure that the personnel who prepare analyses for management plans are not called on to act in a review capacity as well.
- **NMFS regional administrators formally review and take action on council proposed actions within specific timelines.** Informal coordination should not be curtailed, but it must not become a substitute for formal action. Given the delegation of review and approval for plan review and approval to the regions and the guidance for councils to have full documentation available before approval, a 90-day period for FMP actions should be sufficient to accommodate regional and headquarters review and process regulations. The SFA eliminates the requirement to simultaneously process approval of a proposed action and publication of proposed rules, but there is no bar to NMFS administratively determining that proposed and final regulations be handled within 90 days, and that it take place concurrently with plan review and approval. Figure 3-1

illustrates the streamlined fishery regulatory process that could result from effectively implementing the above recommendation.

Figure 3-1: STREAMLINED FISHERY REGULATORY PROCESS



Findings on NMFS Guidance

With respect to NMFS procedural guidance and its implementation, the Panel finds:

- NMFS Operational Guidelines must be updated to reflect the impact of numerous recent court decisions affecting the fisheries management and regulatory process. The regulatory streamlining project includes action to update the guidelines in 2002; future updates are likely to be needed as cases are decided.
- NMFS guidelines provide substantial flexibility on the timing and the assignment of responsibilities for information collection, analysis, and planning activities. These accommodate different regional and council operating styles and practices, but do not adequately define responsibilities.
- The NMFS review and action process on FMPs and associated regulations is lengthy, involving multiple layers of informal and formal review. Along with uncertain and confusing assignments of responsibilities, this has eroded the process and timelines specified in the MSA.
- Regions, science centers, and council staff need more guidance and training for meeting complex analytical requirements, such as programmatic EISs and socio-economic community analyses. Staff prepare documents that they believe conform with guidelines, but face conflicting advice and guidance on the documents' scope and content.
- NMFS has not established a comprehensive long-range training program to improve and maintain staff awareness of regulatory process and analytical needs. One is clearly needed; a program possibly in conjunction with the U.S. Fish and Wildlife Service should be carefully considered.
- Implementing the RSP depends on relocating existing, or the availability of, new resources. The detailed resource needs of the RSP are not fully identified, justified, or prioritized.

Therefore, the Panel recommends that:

- **The Assistant Administrator for Fisheries update operational guidelines periodically, probably annually, to reflect the changes taking place, particularly those related to litigation.**
- **The Assistant Administrator for fisheries, wherever possible, specify the responsibilities of NMFS offices and the councils**. As responsibilities are not "nationally" assigned, the regional administrator should be tasked to establish a process for assigning those responsibilities through a regional coordinating committee.
- **NMFS identify actions in the RSP that can be taken immediately within available resources and establish a specific timeline to implement them**. Changes that cannot be accommodated within the available resources should be separately identified and prioritized. The cost and schedule of proposed actions and the degree to which they may streamline fishery management and regulatory processes, should be specified.
- **Congress amend the MSA to provide regional administrators with the authority to propose amendments to council proposals.** Amendments must be supported by the public record accompanying a council's submission. The council should have the

opportunity within a specified period of time (30 days is suggested) to accept the Regional Administrator's amendment, withdraw the proposed action, or submit its recommendation on the amendment to the Secretary of Commerce for final decision.

CHAPTER FOUR
NMFS PROGRAM BUDGET

The June 2000 report, *An Independent Assessment of the Resource Requirements for the National Marine Fisheries Service*, assessed NMFS' resource needs and planning and budgeting process. It concluded that, in spite of significant funding increases for some activities, the agency was struggling to manage an increasing workload in most areas and had reached a point where additional resources and reprioritized programs were needed. The report also raised concerns about NMFS' planning and budgeting process and its ability to communicate what it does and what it accomplishes. The report found this situation to be a key cause of diminishing trust in NMFS among constituents and Congress.

This chapter assesses how NMFS has used increased funding appropriated after the resource requirements report was issued and the impact the funding is has had. In addition it identifies NMFS' efforts with regard to the report's recommendations to develop a comprehensive management plan and conduct a base budget review.

OVERVIEW OF NMFS BUDGET

NMFS' budget is composed of three categories. The largest is the Operations, Research, and Facilities (OR&F) account, which includes funds for most of the agency's operating programs and personnel. The second is the Procurement, Acquisition, and Construction (PAC) account, which includes funds for construction of NOAA fishery research vessels. A third category includes all other accounts; it consists of funds for Pacific Coast salmon recovery—a program of grants to states—that represents more than 90 percent of the category. As shown in Table 4-1, OR&F comprised about 90 percent of NMFS' total budget from FY 1996 to 1999. As funding increased for NOAA fleet replacement and Pacific Coast salmon recovery, the OR&F percentage decreased marginally.

Table 4-1: NMFS BUDGET, FY 1996-2003
(in thousands of dollars)

	1996	1997	1998	1999	2000	2001	2002	2003
OR&F	281,642	323,396	346,235	382,550	421,726	635,445	579,196	587,941
PAC	16,100	27,950	21,665	13,885	62,817	62,600	37,184	17,000
Other Accounts	12,370	2,027	4,833	34,525	60,214	121,732	180,340	120,781
Total NMFS, All Accounts	$310,112	$353,373	$372,733	$430,940	$544,757	$819,777	$796,720	$725,722

Table 4-2 shows annual funding in the OR&F account for FY 1996 to FY 2003, as well as annual and cumulative percentage increases since 1996. There were relatively small increases, about 10 percent annually during that period. The major funding increase of $214 million - over 50 percent - in FY 2001 was sustained in FY 2002 and the FY 2003 request. The apparent decrease in OR&F in FY 2002 is an anomaly, resulting primarily from the transfer of a data

acquisition program to another NOAA office ($27 million) and reduction in disaster relief ($30 million).

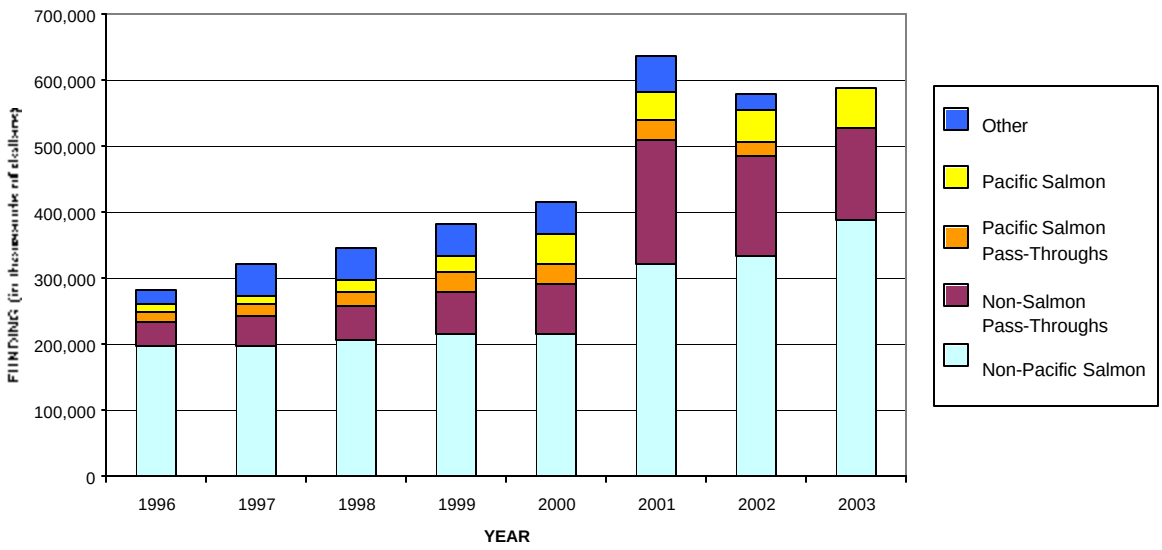
Table 4-2: OR&F APPROPRIATIONS, FY 1996-2003
(in thousands of dollars)

FISCAL YEAR	APPROPRIATION	CHANGE FROM PRIOR YEAR	PERCENT CHANGE FROM PRIOR YEAR	PERCENT CHANGE FROM 1996
1996	281,642			
1997	323,396	41,754	14.8	14.8
1998	346,235	22,839	7.1	22.9
1999	382,550	36,315	10.5	35.9
2000	421,726	39,176	10.2	49.7
2001	635,445	213,719	50.6	125.6
2002 (conference mark)	579,196	(56,249)	(8.8)	105.6
2003 (request)	$587,941	$8,745	1.5%	108.8%
Total Change		$306,299		

Although NMFS' responsibilities increased substantially with passage of the SFA—in such areas as bycatch mitigation, habitat restoration, and socio-economic analysis—the administrations' budget requests through FY 2000 did not include significant funding increases. Figure 4-1 shows that the majority of increases occurring between 1996 and 2000 were for Pacific salmon or directed pass-throughs, specifically congressionally directed funds to non-NMFS grantees. Untargeted NMFS funding virtually stagnated through 2000. Even NMFS' traditional activities, such as stock assessments, conservation planning, and research, were reduced in real terms, accounting for inflation. In effect, NMFS became increasingly crisis driven through FY 2000, as opportunities narrowed to take preventative or ameliorative action.

Congress substantially increased NMFS funding in FY 2001. Further increases were provided in FY 2002 and are requested in FY 2003. These largely support activities for NMFS' three strategic goals: building sustainable fisheries, recovering protected resources, and sustaining healthy coasts.

Figure 4-1: PASS-THROUGH AND PACIFIC SALMON FUNDING AS A PORTION OF OR&F BUDGET



* Other includes items such as, central IT funding, NOAA Corporate Costs, NMFS Management Fund, and transfers to other line offices.

Table 4-3 shows that NMFS' staffing levels decreased in 1997 but increased by about 1 to 3 percent every year between 1998 and 2001.[59] Therefore, additional project management needs were met largely within current staff levels. NMFS budgeted a significant personnel increase, about 8 percent, in FY 2002. Yet the new level was substantially above its current staffing ceilings, and NMFS is working with NOAA to raise them. Personnel costs per full time equivalent (FTE) have grown, in part to accommodate pay raises, including those associated with a pay banding experiment covering headquarters and some field staff.[60]

Table 4-3: NMFS PERSONNEL, FY 1996–2003*

YEAR	STAFF IN FULL TIME EQUIVALENTS	COSTS PER FULL TIME EQUIVALENT
1996	2458	$50,860
1997	2402	$58,410
1998	2439	$62,140
1999	2476	$65,420
2000	2557	$68,840
2001	2611	$71,440
2002 (est)	2832 [1]	$73,490
2003 (est)	2866	$77,070

*NOAA's current FY 2002 FTE ceiling for NMFS is 2,643, 1.3 percent above FY 2001.

[59] NMFS staffing decreased by more than 450 between FY 1994 and 1997 as part of overall government downsizing.

[60] Pay banding covers all of headquarters and four of the five regional offices. The science centers, which account for over one-half of the agency's personnel, are not covered.

CURRENT RESOURCE MANAGEMENT PRIORITIES

The resource requirements report recommended increased funding in seven areas viewed as important to improving NMFS' performance. As Table 4-4 shows, the report recommended a $186 million increase, some of which would be phased in over several years. The report did not include funding for Pacific salmon activities, but recognized that a significant part of increases prior to FY 2001 were related to them. The Panel estimates that these seven activities accounted for $214.9 million, or more than 60 percent, of the $342 million in non-Pacific salmon OR&F funding in FY 2000.[61]

Table 4-4: FUNDING INCREASES RECOMMENDED IN THE RESOURCE REQUIREMENTS REPORT

PROGRAM AREA OR ACTIVITY AND PURPOSE OF FUNDS	RECOMMENDED FUNDING (in millions)
Adjustments To Base: Restore accumulated losses of funds for yearly non-discretionary increases, such as pay raises	$32.3
Stock Assessment: Improve fisheries and marine mammal stock assessments to address information needs on marine resources; phase in funds over several years	$100.0
Observers and Cooperative Statistics: Increase data to better assess and manage marine resources and strengthen relationships with state/industry partners	$9.0
Socio-economic Analysis: Build data collection and improve capabilities to provide quality analyses to address requirements such as Regulatory Flexibility Act and National Standard 8	$10.0
NEPA and Court-related Activities: Better address regulatory requirements and comply with NEPA and court orders, including funds to do tasks such as preparing required documents and analyses, and providing legal assistance and record maintenance	$15.0
Protected Species: Better address requirements under ESA and MMPA for non-salmonoids	$10.0
Law Enforcement: Increase enforcement capabilities by increasing geographical coverage and optimal use of new technologies	$10.0
Total	$186.3

In FY 2001, Congress appropriated an additional $213.7 million to NMFS. With members of the resource requirements report team, NMFS staff identified those portions of the increases that addressed the areas cited in the report. These included the extent to which the funds addressed key priorities that NMFS retained rather than passed to other recipients.[62] As shown in Table 4-5, using this estimate, funding increased for these areas by $109.3 million in FY 2001. In most cases, the increases continued in the FY 2002 appropriation, and NMFS has included them in the

[61] NMFS does not track the use of discretionary funds by program or activity areas.

[62] This allocation was made based on conference report data for FY 2001. NMFS officials reported that some of the funding did not meet the report's goals as well as expected, and that some changes would occur if they did the analysis again. It is doubtful, however, that they would be substantial enough to alter conclusions in this report. In a few cases,a Academy staff included additional funding which it believed was directed at the key areas, but which NMFS had not identified.

FY 2003 request. If that request is approved, funding for these areas will have increased by about 58 percent since FY 2000.

Table 4-5: FUNDING INCREASES[1] FOR CURRENT RESOURCE MANAGEMENT PRIORITIES, FY 2000-2003

(in millions of dollars)

PROGRAM OR ACTIVITY	ESTIMATED FUNDING 2000	INCREASE 2000-'01	INCREASE 2001-'02	INCREASE 2002-'03	INCREASE TOTAL 2002-'03
Adjustments to base[2]	0.0	4.9	7.4	0.4	12.7
Expand Stock assessment	110.0	1.7	0.3	9.9	11.9
Specific stock assessment		16.6	-0.3	-1.5	14.8
Observer Program	13.0	7.0	4.3	4.0	15.3
Cooperative Statistics	12.6	2.1	3.4	0.0	5.5
Socio-Economic analysis	5.0	3.0	0.5	1.5	5.0
NEPA/courts	0.0	8.0	-3.0	3.0	8.0
Protecte d species	56.5	51.9	4.5	-17.7	38.7
Enforcement	17.8	4.0	0.7	5.4	10.1
Joint Enforcement with states	0.0	15.0	0.0	0.0	15.0
Total for programs/activities	$214.9	$109.3	$10.4	$4.6	$124.3

[1] The net increases are those identified as related to the intent of the resource requirements report. Changes in total spending may be different, depending on changes in use of base and other earmarked funds.
[2] Appropriations not included in program/activity funding total.

Funding for adjustments to base was not treated in the manner recommended in the resource requirements report. Nevertheless, a change in NOAA policy seems to have allayed these concerns. From 1996 to 2000, NOAA directed its line offices to absorb certain base funding adjustments as a matter of policy. These adjustments consisted largely of inflationary-type cost increases, such as pay raises, locality pay increases, and cost-of-living adjustments. Most of these costs were non-discretionary, and this budgetary approach required NMFS to absorb such increases through reductions in personnel, average salaries, reduced programmatic activities, and other cost-cutting measures. The report recommended increased funding of $32 million to cover past years' accumulated loss of non-discretionary adjustments to base. Restoring prior year losses proved difficult to justify, and NMFS was not permitted to request these increases. Beginning in FY 2001, however, NOAA's budget request began seeking inflationary-type increases with some success. Congress appropriated $4.9 million for adjustments to base in FY 2001 and an additional $7.4 million in FY 2002. Although this level of funding did not cover all inflationary costs, NMFS expected it to cover all mandatory pay increases and a large portion of

other inflationary costs, such as rents. The FY 2003 budget requests a slight increase, raising the total to $12.7 million.

By FY 2002, funding for observer and cooperative statistics programs, protected resources, and enforcement met or exceeded the level recommended in the resource requirements report. NMFS officials emphasized that the increases supported these key areas, but that they sometimes were earmarked for specific fish or mammal needs. For example, the FY 2001 increases included $8 million in stock assessment funding for red snapper monitoring and $38 million in protected resources funding for Steller sea lions. Stock assessment, socio-economic analysis, and NEPA analyses funding remains below the recommended levels, even if the FY 2003 budget request is fully funded.

Although funding in some areas remains below the level recommended in the resource requirements report, the 50 percent increase in FY 2001 substantially infused funds for key NMFS activities. The following sections address NMFS' use of those increased resources. Since the 2000 report, other areas, such as bycatch reduction and habitat restoration, have emerged as areas of increasing litigation. Although this study did not specifically focus on all activities required to support NMFS' strategic goals, many contribute to work in these emerging areas.

Stock Assessment

Stock assessment includes collecting, analyzing, and reporting data on fishery harvests, age and demographic information, stock size, and health. It is essential to determining the effects that fishing and other factors have on fish populations. Also, it helps to determine the status of fish stocks and serves as a basis for evaluating alternative strategies for fisheries management. NMFS stock assessments are generally considered to be high quality. Yet there are significant limits on the extent to which existing assessments can guide management decisions.

In 2001, NMFS accepted an internal task force's recommendations, which were contained in the Stock Assessment Improvement Plan (SAIP). They included raising stock assessment proficiency to adequately assess all 287 major stocks at a defined level of quality[63] and providing basic data for the remaining 618 federally managed stocks. At that time, the assessment quality was below the recommended level for 141 - or 49 percent - major species. The status relative to being overfished was unknown for 120 - or 42 percent - other species.[64]

The SAIP also had recommendations for significantly increased staffing. Table 4-6 compares the requirements identified for full plan implementation with actual staffing levels in FY 2000 and requested staffing for FY 2003. The SAIP did not cite a dollar figure for the plan. Using

[63] The task force developed 5 quality measures for assessments: catch data, abundance, life history, frequency, and assessment level. Assessment levels ranged from basic catch data to eco-system models that include multispecies, environment, spatial, and seasonal analysis. The minimum recommended level of assessment quality used production models, which aggregate age or species.

[64] In 2000, NMFS' status of fisheries report included 905 federally managed stocks; the status was known for 245 stocks and was unknown for 660 stocks. The April 2002 report for 2001 shows 959 federally managed stocks—304 known and 655 unknown stocks. The status was unknown for 120 major stocks and for 535 minor stocks. The reports do not include information on the quality of NMFS' stock assessments.

$150,000 per staff year, the plan would require stock assessment funding increase of about $50 million, more than 45 percent above FY 2000 estimated spending. Nor did the SAIP specify whether staffing needed to be internal, contract or other. The NRC and NMFS officials believe finding sufficient numbers of specialized stock assessment scientists is the most critical and difficult recommendation to implement.

Table 4-6: COMPARISON OF SAIP STAFFING IN FY 2000 AND FY 2003 AND FULL PLAN IMPLEMENTATION*

	ACTUAL STAFFING 2000	REQUESTED STAFFING 2003	FULL PLAN IMPLEMENTATION
Assessment Scientists	140	162	244
Biological Sample processors/data managers	362	386	453
Observers	79[1]	90	125
Data collection (biological samples and fishery-independent data)	196	196	301
Total	777	834	1123

* NMFS has revised the total number of observers shown in the base year. This change altered the total additional staffing needed. The original estimate required an increase of 388 for a total of 1165.

As shown in Table 4-5, NMFS received a more than $18 million increase in stock assessment funding in FY 2001. Of that, $1.7 million could be applied at NMFS' discretion to expand stock assessment; the rest was directed to specific fisheries, such as red snapper and West Coast groundfish. Funding for stock assessment did not increase in FY 2002, but NMFS is requesting a $9.9 million increase in discretionary funding for FY 2003. The request includes about $5.1 million to recruit and train stock assessment scientists and support staff, $900,000 to develop advanced sampling techniques, $2.4 million to increase survey days on fisheries and chartered vessels in support of needs identified in the Data Acquisition Plan,[65] and $1.5 million for fisheries oceanography studies.[66]

Table 4-7 summarizes NMFS funding and staffing for stock assessment and observers from FY 2000 to FY 2003. Although nearly a $25.3 million increase was appropriated in FY 2001, staffing increased by only 8 people. Plans for FY 2002 call an additional $4.3 million and a staffing increase of four. In FY 2003, the budget is more directly related to the SAIP's emphasis on personnel growth, with an additional $12.4 million and the planned addition of 45 staff.

[65] The 1998 Data Acquisition Plan estimates needs for survey days at sea - in charter vessels or NOAA-owned fisheries research vessels - to obtain fishery independent data necessary for stock assessments.
[66] NMFS also received increased funding for observers. The observer program is discussed in the next section.

Table 4-7
ESTIMATED STOCK ASSESSMENT AND OBSERVER FUNDING AND STAFFING, FY 2000-2003
(funding in millions of dollars)

FISCAL YEAR	2000	2001	2002	2003
Funding				
Expanded Stock Assessment	$110	$111.7	$112.0	$121.9
Specific Assessments	-	$16.6	$16.3	$14.8
Observers	$13	$20.0	$24.3	$28.3
Total Funding	$123	$148.3	$152.6	$165.0
Annual Funding Increase		$25.3	$4.3	$12.4
Personnel				
NMFS Staff	491	499	503	548
Other FTE (e.g. contract)	286	286	286	286
Total Personnel	777	785	789	834
Annual Staffing Increase		8	4	45

Use of FY 2001 Funds

NMFS planned to use the $18 million in increased stock assessment funds to:

- hire 6 new senior stock assessment scientists—one for headquarters and each of the 5 science centers—to coordinate development of new assessment methodologies and to work with universities to develop educational and training opportunities for fisheries science
- work with universities to develop research and training opportunities to help increase the supply of assessment scientists and accomplish other needed tasks
- conduct a variety of fisheries science and related activities, including hiring staff, for the specific fisheries funded

As of March 2002, NMFS had hired 3 new senior-level stock assessment scientists using the discretionary funding; three existing senior scientists also were being paid from these funds. By that time, NMFS had designated a part-time national stock assessment coordinator, located in the field; one center also had designated a coordinator. The targeted funds were used to expand assessments in the designated fisheries, including hiring staff. NMFS did not know the extent to which these new staff met personnel needs identified in the SAIP. Overall, the number of completed stock assessments rose from 85 assessments in FY 2000 to 114 assessments in FY 2001.

Most discretionary funding was used for a wide variety of research efforts with universities, including efforts to develop new assessment models. Science centers have funded post-doctoral positions, graduate student research, and interns. They also have supported faculty positions and

funded development of web-based courses to facilitate fisheries science teaching. A key objective is to develop interest in fisheries science and train future scientists.

NMFS officials view the impact of the increased 2001 funding as "sowing the seeds" for improved capability of new fisheries scientists and the assessments for the specific fisheries/stocks funded.[67] However, there is little detail on the expected impact of the FY 2001 funds regarding the level of improvement or the extent to which personnel reassignments, new hires, and contracted effort met the need for stock assessment scientists and other personnel identified in the SAIP.

If the FY 2003 budget request is funded and executed in a timely fashion, NMFS expects that the current level of 120 unknown major stocks will be reduced to 118 stocks by the end of FY 2003. NMFS further projects that 98 major stocks will remain unknown in FY 2007. There is no performance measure concerning the quality of assessments.

Observer Programs

Observers collect and validate at-sea information that is otherwise unavailable from other sources. The program originated with efforts under MMPA and ESA, but it since has become increasingly important to collecting general fishery scientific information. Observer data also are critical to obtaining bycatch information needed to support National Standard 9.

In FY 2000, NMFS spent about $13 million[68] on observer programs, providing coverage in 18 of 360 fisheries, including federally managed ones, others in federal waters, and state and federal fisheries having significant interaction with protected marine mammals. In FY 2000, NMFS appointed an observer program coordinator. The following year, the NMFS Science Board approved a 5-year initiative to substantially improve the program to help meet NMFS' strategic goals of building sustainable fisheries and recovering protected species. The agency cites a need for about $55 million annually, $42 million more than spent in FY 2000, to provide adequate coverage in 65 to 75 fisheries.

Table 4-8 compares FY 2000 data on days at sea and number of fisheries observed with estimated data for FY 2003 and the national observer 5-year program goals for FY 2007. The 65 to 75 fisheries represent the current estimate of coverage, if full plan funding ($55 million) is provided for the highest priority fisheries. According to NMFS officials, the 2007 estimate is "one benchmark towards measuring the agency's performance" but does not necessarily represent the agency's ultimate need for observer coverage. NMFS is revising estimated observer requirements as a result of changing fishery management council and departmental policies and priorities.

[67] Officials pointed out that other funding sources support stock assessment, including cooperative research funds, which have been used to increase research days at sea using chartered vessels.

[68] The FY 2000 estimate includes a one-time emergency appropriation for observers in the Hawaii long line fishery. It was not renewed in FY 2001.

Table 4-8: COMPARISON OF OBSERVER PROGRAM IN FY 2000 AND FY 2003 AND FY 2007 GOAL

	2000	2003	2007
Annual Observer Days at Sea			
NMFS-Funded	7,823	25,105	55,000
Industry Funded*	44,272	60,000	95,000
Fisheries Observed	18	36	65-75

* The fishing industry provides approximately $10 million annually to fund observer coverage in the North Pacific groundfish fishery.

Congress increased the funds appropriated specifically for observers by about $7 million in FY 2001; these were all directed to specific fisheries, such as the West Coast groundfish fishery and the Hawaii long line fishery. In addition, NMFS used about $2.5 million in increased red snapper monitoring funds for observers in the shrimp trawl fishery, which contributes heavily to red snapper bycatch levels. At the end of FY 2001, $1.5 million in funding for Atlantic coast observers were not obligated.

Congress increased observer funding in FY 2002 by an additional $4.3 million; about $3.6 million were earmarked for specific fisheries, and about $700,000 for observer programs. However, funding for red snapper monitoring was reduced by $2.5 million. Regional officials said much of the decrease would be in the observer program.

The FY 2003 budget request seeks $4 million for the national observer program, and level funding for other observer programs. NMFS intends to use national program funds to increase the number and quality of the others, including developing national observer data quality standards and establishing policies related to security, safety, and insurance.

Use of FY 2001 Funds

NMFS reported that it improved coverage in 3 fisheries and expanded coverage to 8 new ones in 2001.[69] The number of observer days at sea rose by 23 percent, from 7,823 days in FY 2000 to 9,641 days in FY 2001. Because of the lag time in setting up programs, officials expected a more significant impact in FY 2002, with an increase to about 12,000 days this fiscal year. In its FY 2003 request, NMFS expects to further increase the number of observer days to more than 25,000 days. The regions visited for this study received over half of the increased observer funding. For example, the Southeast region reported that it significantly increased the shrimp trawl observer program, using $2.5 million in red snapper monitoring funds. That region also reported being able to meet its obligations under an international treaty using other observer increases. Similarly, the Northwest science center used $2.3 million to implement a program for

[69] Observer programs are complex and comparatively expensive: NMFS estimates the average cost of an observer day at sea at $900 (ranging from $500 to $2,000). NMFS knows how to implement these programs relatively quickly.

West Coast groundfish. Center officials said they were able to get the program running within 4 months of receiving funding.[70]

Officials pointed to an increased focus on fishery observers, as opposed to protected species observers. The latter provide valuable qualitative data on such issues as catch and discards used in fisheries stock assessments. Because they are targeted at fisheries where vessels and gear interact with marine mammals, however, they do not provide statistically valid samples needed for more rigorous fishery stock assessment.

Cooperative Statistics

NMFS participates in 5 regional fishery information networks: Alaska, Western Pacific, Pacific, Gulf, and Atlantic States. These networks operate under cooperative agreements with states and interstate commissions for coordinating collection, management, and dissemination of a variety of commercial fisheries statistics. Additionally, there is a national network for recreational fisheries data, which are collected from a wide variety of sources, including vessel log books, trip tickets, quota entry reporting systems, and port sampling systems. Federal funding for these networks approximated $12.6 million in FY 2000.

In 1998, NMFS collaborated with states, FMCs, interstate commissions, industry, and environmental and other constituency groups to improve cooperative statistics programs.[71] The resulting report noted that, despite some regional successes, the quality and completeness of the data were inadequate. It found that data are not always timely or accessible to those needing it and that collection methods are sometimes burdensome and inefficient.

NMFS recommended a system to improve, expand, and integrate the existing regional systems under a nationwide umbrella. As envisioned, the regional networks will standardize and improve data collection systems. This Fisheries Information System will also link the regional networks and provide opportunities to develop, support, and transfer new data integration tools and standardized systems across regions. This will be a web-enabled state-federal database system encompassing the existing types of commercial and recreational fisheries information and expanding information to observer, socio-economic, and biological sampling data. Currently, the latter are included only sporadically in the information networks. NFMS estimated that $51 million in increased funding will be needed to fully implement the system.

The 1998 report did not establish a schedule to complete implementation. Table 4-9 summarizes funding for cooperative statistics programs, from FY 2000 to 2003.

[70] The only observations in this fishery in the past were done by observers in an Alaskan program who also participated in West Coast fisheries when not needed in Alaskan waters. This was not always the most appropriate time for statistically valid data.

[71] The SFA mandated that NMFS undertake this effort. The 1998 report outlined a proposal for a "Fishing Vessel Registration and Fisheries Information System."

Table 4-9: SUMMARY OF FUNDING FOR COOPERATIVE STATISTICS, FY 2000-2003*
(in millions of dollars)

	2000	2001	2002	2003
Fishery Information Networks/Recreational Data	$12.6	$14.7	$15.5	$15.5
Fisheries Information System	0	0	$2.6	$2.6
TOTAL	$12.6	$14.7	$18.1	$18.1

* This is appropriated funding. The regional networks also are supported by NMFS base funding, as well as funding, from regional partners, such as the interstate commissions.

The $2.1 million increase in FY 2001 predominantly was a first-time appropriation to implement the Atlantic Coast Cooperative Statistics Program (ACCSP), operated by the Atlantic States Marine Fisheries Commission. The Atlantic States Commission, along with other data partners, had developed the ACCSP for several years. The other major funding increase, $500,000, was for the Alaska network.

For the first time, Congress in FY 2002 appropriated funds—$2.6 million—for integrating regional networks into a national Fisheries Information System. As outlined in the NMFS plan, these funds would be used to begin implementation, specifically developing national standards for data quality and confidentiality; harmonizing the data (for example, developing consistent coding systems so that regional data can be combined with other NMFS data); and identifying gaps in data across regional systems and finding ways to fill them. Other major increases included $500,000 for ACCSP and $200,000 for the Alaska network. Level funding is requested for FY 2003.

Implementing of ACCSP and the Fisheries Information System represents significant, initial progress toward improved data. However, these collection activities can further be improved through better cooperation among NMFS and its partners, including states and interstate commissions. For example, NMFS does not have reliable data on the number of vessels fishing in U.S. waters; this could be improved by increased reliance on state licensing data.

Socio-Economic Analyses

Socio-economic analysis is important for NMFS in meeting statutory requirements for NEPA analyses and MSA's National Standard 8. Problems with the adequacy of economic analyses supporting management decisions have been at the heart of many recent court cases.

In early 1999, NMFS analyzed its social science needs. It found serious deficiencies, including:

- a need to increase the number of economists and social scientists, from 36 staff to 140 staff. Of the 104 person increase, 45 people were needed for critical management support functions in field and headquarters, and 59 people for research into community, commercial and recreational fisheries, and for cost-benefit analyses of habitat, ESA, processing, and trade assessments.

- a need for 14 economists and social scientists to augment council staff
- an eight-fold increase in data collection on communities, employment, and the commercial and recreational fishing industries

NMFS recommended a minimum 5-year program to increase staff and community and industry socio-economic data collection. It estimated that an $18.2 million increase was needed to achieve these levels. No funding was recommended regarding council requirements, however.

Table 4-10 compares the resources required by the 5-year program with those available in 2000. NMFS estimates that 140 economists and social scientists still are needed. The 2007 figure of 114 people reflects the expectation that the number of specialists required under the plan will not be available.

Table 4-10: COMPARISON OF FY 2000 SOCIO-ECONOMIC RESOURCES TO FY 2007 GOAL

	2000	**2007**
Staffing (FTE)	36	114
Funding for Data Collection and Research	$1.0	$8.5

In FY 2001, NMFS requested and received for the first time specific funding to increase its socio-economic analysis capability; $3 million were appropriated. For FY 2002, Congress appropriated $3.5 million, and NMFS has requested another increase of $1.5 million - for a total of $5 million - for FY 2003.

Use of FY 2001 Funds

According to the NMFS spending plan, the $3 million appropriation was to be used as follows:

- $280,000 for hiring 10 social scientists - 1 economist and 1 social scientist for each of the 5 science centers - in the last quarter of FY 2001[72]
- $1 million for cost-earnings data on fisheries for all science centers
- $1.7 million, largely for one-time costs, contract labor, Census employment and demographic data, initial data analysis, and impact models

NMFS did not add any social scientists in 2001, due to NOAA-wide hiring restrictions and the difficulty finding qualified personnel. By March 2002, NMFS had hired 3 new social scientists.

Most of the funding was used for grants and contracts to universities, foundations, FMCs, and commissions to purchase economic or social data, collect industry cost-earnings data, design data

[72] There is considerable variation among regions in terms of economic analysis capabilities. One region only had 1 economist while another had ten. In spite of this variability, the funds were distributed essentially equally among regions. Officials did not want to penalize those that had invested in a social sciences program and claimed that regions with higher staff levels potentially have greater capability to spend funds on data collection and research.

collection templates, and develop collection methodologies and analytic impact models. At the end of the FY 2001, almost $1 million remained unobligated.

NMFS officials believe that the FY 2001 funds have resulted in significant initial data collection efforts. Even if the FY 2003 budget request is fully funded, however, NMFS anticipates that it will be able to obtain complete social and economic data on only 30 percent of fisheries and fishing communities by FY 2007.

NEPA Data and Analysis

NEPA mandates that NMFS analyze the impact of alternative federal actions on the environment and economy. A key problem identified in the resource requirements report was that many EISs supporting FMPs were incomplete or outdated. Recent court settlements and decisions have made updating EISs an urgent concern. The report recommended that NMFS dedicate staff to carrying out NEPA analyses and maintaining proper records of that process.

NEPA analyses and litigation-related support have not been discrete activities conducted by dedicated staff or contracts. Consequently, NMFS cannot identify previous costs associated with these activities or estimate current spending on them. In FY 2001, Congress appropriated $8 million for agency-wide NEPA efforts as well as $3 million for Hawaiian sea turtles and $10 million for Steller sea lions and pollock, to be transferred to NOS, OAR and the North Pacific Fishery Management Council. Congress reduced agency-wide funding in this category by $3 million in FY 2002. NMFS has asked that it be reinstated to $8 million in FY 2003.

Use of FY 2001 Funds

NMFS intended to use Congress' $8 million appropriation for agency-wide activities to better respond to the NEPA workload. NMFS' spending plan allocated funds as follows:

- $1.1 million to the 8 FMCs to study actions needed to meet NEPA requirements and obtain staff support dedicated to compliance work
- $5.6 million for contracts to produce specified EISs to comply with deadlines resulting from court settlements or judicial decisions
- $750,000 to the regional offices - $150,000 each - to contract for services to coordinate activities, improve procedures, and work with the councils
- $400,000 to headquarters for council and regional staff training, and ongoing efforts to improve the process for federal fishery actions

NMFS was reluctant to hire staff with the NEPA funds until it was clear that the funding would continue. Recognizing an immediate need, however, the agency proposed that regions contract for NEPA support with the intent of hiring one full-time coordinator for headquarters and each region once funding seemed secure. Progress in obtaining NEPA support has been slow. Councils have been more aggressive in obtaining personnel than regions, as indicated below:

- NMFS has been slow to hire a headquarters NEPA coordinator. Officials said this vacancy would significantly limit the pace of improvements. NOAA approval to fill this position was obtained in March 2002.

- One of 5 regions had originally contracted for a NEPA coordinator who was subsequently hired. Another was not in the process of seeking a coordinator, while the other three were planning to hire theirs in FY 2002.
- Four of 8 councils have hired 7, mostly term, employees to assist in NEPA analysis. Two FMCs were in the process of hiring, and the other reported contracting for expert support. One assigned a staff member to act as a NEPA focal point, but intended to rely on the regional coordinator when that individual was hired.

The status of EIS contracts is less clear. NMFS reported that work was complete or almost complete for those related to coral reef and bottomfish, and that much work was completed on programmatic EISs for EFH for amendments to the FMPs for scallops and groundfish. Work on other EISs, including Steller sea lions, also went forward. In the regions visited, some - but not all - of the contracts to support EIS analyses and updates had been signed. In some cases, regional and council officials were unclear on what the EISs required, especially the programmatic EISs, which are the focus of NMFS efforts. Agency guidance on these needs is lacking, though the NOAA General Counsel issued more explicit legal guidance in December 2001.

- In one region, less than $500,000 were used for EIS-related contracts, rather than the $1 million allocated. Significant funding instead was used for improving infrastructure to carry out NEPA activities.
- One council received $850,000 for specific EISs. The council had one contract underway, but $785,000 remained unobligated in January 2002. The council seemed unclear of NEPA requirements. In March 2002, the council contracted for preparation of a programmatic EIS for a generic EFH FMP amendment.
- One region provided almost $1 million of its EIS funds to an interstate commission to lead this effort. The commission hired a coordinator for the program, but at least $700,000 remained unobligated as of March 2002. Commission officials awaited regional and council guidance on what needed to be done.
- One region had obligated all of its NEPA funds for 2 supplemental EISs and NEPA training. It also used other available funds to support an additional supplemental EIS.

Some ad hoc NEPA training took place during FY 2001, although NMFS has not yet established a training program.

- NMFS reported conducting 6 workshops on economic and social impact analysis requirements.
- Two of the 5 regions reported sending some staff to training focused on NEPA issues.
- Two of the 8 councils reported conducting NEPA-focused training for members or staff, three reported sending at least some staff to NEPA-related workshops, and three reported no training at all.

Including funds that had been passed to the councils and commissions, it appears that at least $3 million of the $8 million appropriated for agency-wide activities had not been obligated as of the end of FY 2001. During this study, NMFS was developing, at the request of Congress, a regulatory streamlining program. As discussed in a previous chapter, meeting NEPA

requirements was a key part of these efforts. No estimate has been made of total costs or personnel needed to meet the agency's NEPA responsibilities.

Protected Resources

NMFS is charged with conserving and recovering most marine and anadromous species protected under the ESA and MMPA. It has jurisdiction for more than 144 stocks of marine mammals for which it conducts stock assessments; identifies strategic stocks; evaluates the extent of human impacts, including fishery impacts; and develops plans to mitigate impacts to assist in recovery and conservation.

Under ESA, NMFS responds to petitions, or acts on its own, to list species as threatened or endangered. It develops and implements portions of recovery plans for them. Under Section 7, NMFS reviews all proposed federal actions potentially affecting endangered or threatened species, consults with the acting agency, and issues a biological determination on whether the action would cause jeopardy to the species. These consultations comprise a large and increasing workload, particularly in the Northwest where NMFS has designated a large number of endangered salmon.

Recovery and conservation efforts depend on reasonably reliable and precise stock assessments. Poor quality assessments raise the probability that species will be misclassified, resulting in unnecessary restrictions on fisheries or increasing the risk of extinction. NMFS does not have needed abundance or trend information on all species. Conservation efforts, in the form of take reduction plans, are being implemented or developed for half of the marine stocks in need of such plans. NMFS has completed 18 of the 25 recovery plans deemed necessary for non-Pacific salmon species listed as endangered or threatened under ESA.

Since 1998, NMFS has not completed the statutorily mandated status reports on marine mammal and endangered species. The resources needed to accomplish the strategic goal of recovering protected species are unknown; some officials estimate that well over $40 million in increased funding would be needed. However, NMFS is beginning efforts to develop a stock assessment improvement plan for protected species, similar to the plans developed for fisheries. Officials pointed out that stock assessment is only one aspect of the scientific research needed. Other research, most importantly gear research, is critical to support efforts to mitigate fisheries' impacts on protected species.

As shown in Table 4-5, appropriations for non-Pacific salmon protected resources activities increased by $51.9 million in FY 2001. A significant part - $38 million - was for Steller sea lions; the issue arose from a judicial ruling that suspended an important commercial fishery, Alaska groundfish. The net change in appropriations for protected resources in FY 2002 was about $4.5 million. The budget request for FY 2003 includes increases for sea turtles and other species ($2 million and $2.5 million, respectively) and decreases for bottlenosed dolphins and Hawaiian sea turtles ($1.2 million and $3 million, respectively). The biggest change is a decrease of about $18 million for Steller sea lions.

At the FY 2003 requested funding level, NMFS expects that by FY 2007 the probability of extinction will be reduced for 12 of 30 non-Pacific salmon endangered or threatened species.

However, the agency has not yet set targets for the number of recovery plans it anticipates starting or completing.

Use of FY 2001 Funds

NMFS used about $21 million of the Steller sea lion funds for research, including $15 million for grants. Additional vessel research time was supported, and eco-systems issues related to Steller sea lions were addressed. The number of individual Steller sea lion projects increased from 12 in 2000 to 140 projects in 2001. The remaining $17 million were congressionally earmarked for other entities, including the Alaska Sea Life Center, the State of Alaska, NOAA's Oceanic and Atmospheric Research office and National Ocean Service, and the North Pacific Fisheries Management Council.

The other funding increases also were directed to specific species or activities:

- $4 million for a grant program to respond to and rehabilitate stranded marine mammals. These efforts previously were conducted on a volunteer basis. All of these funds were carried over for use in FY 2002; as of March 2002, NMFS was hiring a coordinator for this program.
- $8.4 million for specific species: $3 million for Hawaiian sea turtles, $2.5 million for Atlantic salmon, and $2.9 million for other species, such as bottlenosed dolphins. The funds appear to have improved NMFS' capabilities with respect to these species in the regions visited. For example, NMFS staff worked on developing the recovery plan for Atlantic salmon and increased Atlantic salmon research. In some cases the funds were used for increased staffing to work on targeted species. Most hiring was done in late 2001 or in 2002.
- $1.3 million for candidate and "other" species provided flexibility for NMFS to address species for which no funds were earmarked. NMFS hopes to be more proactive in identifying endangered and threatened species. In at least one region visited, these funds were used to hire at least one person to focus on these efforts.

NMFS officials said its capabilities improved for the specific species funded, though headquarters officials could not specify how all of the funds were spent. Some expressed the view that the agency received too much too fast for some species, possibly lending support to less effective programs. Officials also noted that headquarters does not formally monitor field actions against headquarters spending plans; consequently, the level of knowledge about field activities and spending is incomplete.

Law Enforcement

Enforcement is critical to the NMFS mission, as it helps to ensure compliance with management actions. The enforcement workload has grown in recent years due to the increased number and complexity of fishery regulations, complex investigations of illegal fisheries operations, wider ESA enforcement demands, and the expanded number of marine sanctuaries, closed areas, and protected areas. This workload could further increase if NMFS must offset a decrease in Coast Guard support, especially since the events of September 11th.

At sea, the U.S. Coast Guard cooperates to enforce NMFS regulations within the 200-mile EEZ and to enforce international fishing agreements in open ocean areas. These activities, as well as the deterrent effect of the sea patrols, significantly complement NMFS' enforcement. The number of cutter hours supporting NMFS enforcement has declined by 25 percent since 1996 and is expected to be reduced another 12 percent in 2002.

In FY 2001, NMFS requested and received a $4 million increase, including funds to be used for cooperative enforcement agreements (CEAs) with states and territories ($2.5 million) and improvements to the Vessel Monitoring System (VMS) ($1.3 million).[73] In addition, Congress appropriated $15 million for joint enforcement agreements (JEAs) with states. Congress continued funding JEAs and CEAs in 2002 and increased VMS funds by $700,000. NMFS' FY 2003 budget request continues funding for JEAs and CEAs and increases VMS funding by $5.4 million, which would bring the latter's total appropriation to $7.4 million.

Use of FY 2001 Funds

Under voluntary, non-reimbursable CEAs, state agents either are deputized to enforce federal laws or report suspected violations to NMFS for enforcement action. NMFS had CEAs with 25 states and territories in FY 2000 and spent about $500,000 to administer these partnerships. With the $15 million added by Congress, NMFS is funding JEAs with coastal states and territories.

- Unlike the voluntary CEAs, these agreements provide funds to states specifically to support NMFS enforcement activities.
- If specified, the states can use JEA funds to purchase ships and equipment and hire agents and staff.
- The states commit to conduct increased patrol activities and provide leads and contacts on suspicious activities or possible violations. In some cases, states will conduct investigations and prosecute violators.

The spending plan for the JEA funding was approved in September 2001. Therefore, most states did not receive funds to initiate activities until FY 2002. As of March 2002, 17 states had received JEA funding, and 5 agreements were in process. Some states had begun operations under the agreements, while others were developing their programs.

NMFS intended to use most of the $2.5 million in new CEA funding to support the JEA program. The agency anticipates that expanded state activities will increase the number of investigations and generate additional agent workload. Using these and other 2001 enforcement funds, NMFS sought to add about 26 new agents/investigators. As of March 2002, NMFS had hired 5 additional agents/officers and had 6 outstanding offers of employment. There were 22 vacant agent/officer positions agency-wide. NMFS also had hired 9 more technicians and other support staff. Nine additional support positions were vacant.

JEAs may enhance NMFS' enforcement capability.

[73] NMFS also requested and received an increase of $200,000 for protected species enforcement, used to hire 2 new agents to expand the Protected Resources Enforcement Team in the Southeast.

- State enforcement efforts can increase the scope of fisheries enforcement, and officials believe they can help offset some Coast Guard reductions.
- Regional and headquarters officials agree that states could and would be willing to do more if additional funding were available for JEAs.

NMFS is developing an assessment protocol to monitor state activities and assess the program's overall benefit. Having a clear picture of what states can accomplish—and whether there is significant variation among them in terms of accomplishments—will help determine the extent of future funding. EPA's experience with cooperative state enforcement activities can serve as a guide to it activities in this area and help NMFS assess accomplishments under the JEAs.

NMFS also believes VMS can significantly enhance its enforcement capability, especially in the EEZ.[74]

- Where areas are closed to fishing, VMS can identify violators without an at sea presence. The number of these closed areas resulting from FMPs or Marine Protected Areas is likely to rise.
- VMS also can help target the limited Coast Guard support available to suspected violators.

The VMS is a satellite-based tracking and communications system, used in cooperation with the fishing industry, to monitor movement, location, and catch data for fishing vessels. The system consists of transponders carried by vessels, personnel and computer equipment to monitor signals, and agents to follow up on information. In FY 2001, about 500 vessels used VMS. NMFS intended to use the $1.3 million appropriated in 2001 to purchase additional transponders for vessels and hardware and software, and to hire additional support technicians. Due to FY 2001 capital equipment spending and hiring constraints, officials said these funds were not spent until FY 2002. As of March 2002, about half of the funds had been spent, primarily for computers and software to expand the NMFS infrastructure nationwide. An additional 600 vessels are expected to use VMS by June 2002.

The government's cost for the VMS program can vary significantly, depending on whether industry pays for the shipboard equipment and communication costs. The $2.0 million appropriated for VMS in 2002 will, according to NMFS officials, support the program for the 1,100 vessels expected to be using VMS by June 2002. These funds do not cover shipboard equipment and communication.[75] Officials estimate that another 4,000 vessels will be using VMS within 2 to 5 years. The increased funding requested in FY 2003 will support about 1,000 additional vessels, assuming the government pays all costs, and about 2,500 if it pays only part.

The number of vessels that will be using VMS, and therefore the funding needed, is unclear, however. NMFS is reluctant to force the use of VMS and prefers that fishery management councils initiate the requirement to use VMS through fishery management plans.[76] NMFS is

[74] States are not expected to significantly increase activities far into the EEZ.
[75] The added VMS vessels will be in Alaska. Officials said that the NMFS region and the state are looking for other sources of funding to defray at least part of the cost to industry for the transponders and communication costs.
[76] It is possible that court orders or settlement agreements will mandate VMS use.

holding workshops for councils in each region to explain the benefits and capabilities of the system but the extent to which the councils will require its use is uncertain. Having the government pay vessels' expenses for the program would make it more likely that VMS would be included in fishery management plans. NMFS estimates the cost of adding 4,000 new vessels, with the government paying all costs, to be about $25 million.

It is unclear how extensive VMS will become, but continued efforts to encourage councils to use of it and to elicit industry cooperation seem warranted. Councils would be more likely to require its use if the government paid the full cost.

FINDINGS AND RECOMMENDATIONS

Hiring and Staffing Findings

- NMFS faces significant challenges in obtaining the increased personnel needed for the activities described in this chapter. To date, hiring has been slow and probably will remain so, at least in some key areas, because:

  - NMFS likely will continue to encounter significant hiring difficulties, due to a limited supply of needed specialists, FTE restrictions, and other hiring policies.
  - NOAA-wide hiring restrictions slowed the hiring process in FY 2001. However, most of the positions that NMFS intended to fill in FY 2001, with the exception of some of the economists and a few stock assessment scientists, were below the GS-13 level. NMFS received authority for these hires beginning in June 2001.
  - Most NMFS officials and many fisheries experts believe that a sufficient number of qualified scientists, especially stock assessment scientists and resource economists, are not available and that the supply will increase slowly. The National Academy of Sciences expects that current graduate programs will produce only a few fisheries scientists a year. Experience to date supports those views. One center reported difficulty in finding qualified stock assessment scientists for announced positions, and two reported losing economists to other opportunities before they accepted the positions with NMFS. In addition, one center with limited economics expertise indicated that it is difficult to "develop a program from scratch," and believed it lacked sufficient expertise to define program needs to guide recruitment.
  - NMFS has not aggressively implemented efforts to comply with NEPA and specific court directives. A headquarters program director is essential to ensure EISs are on track and that regional and council staff obtain necessary training.

Recommendations

Therefore, the Panel recommends that:

- **The Director of the Office of Science and Technology take aggressive action to expand the number of stock assessment scientists and resource economists working in support of NMFS' missions**. As a first step, the Director should assess the quantity and quality of current field efforts to "grow" stock assessment scientists and resource economists.[77] This assessment should, at a minimum, determine the probability that ongoing efforts will provide the right number and mix of specialists, and assess the most effective potential approaches. Alternative approaches—such as increased pay, scholarships, and special hiring authorities—and increased contracting should be explored and implemented as necessary.
- **The Deputy Assistant Administrator for Operations establish hiring priorities for those personnel required to support the initiatives discussed in this chapter**. This will be especially important if hiring restrictions continue or new hiring restrictions are imposed.
- **The Deputy Assistant Administrator for Regulatory Programs expeditiously hire a headquarters NEPA Coordinator, clarify to regional and council staff what must be done to prepare a programmatic EIS, and establish a mechanism to assess the status of field efforts with regard to EISs.**

Contracting Out Findings

- NMFS has been reluctant to contract for needed support.
  - The 1999 social science plan expresses concern that contracting for analysis could result in loss of control and limit beneficial interaction among analysts. About $1 million were unobligated at the end of the fiscal year, and field offices operated with what they considered to be inadequate staffing.
  - NMFS intended that the regions contract for NEPA expertise in FY 2001 and hire permanent staff once continued funding was secure. One region accomplished that goal. On the other hand, councils did significantly better in increasing NEPA capabilities through contracts and term hires.
  - NMFS plans no increase in contracting for stock assessment work through FY 2003.

- Contracting for more research and analysis would help meet immediate needs, and provide flexibility to meet changing needs in the agency's specialty mix. Moving hired staff from one area to another, as funding levels change, may be difficult because

[77] In commenting on a draft of this report, NMFS said the agency should also hire ecologists and conservation biologists with perspectives that are based on ecosystem-scale research rather than single species population dynamics. In this regard, it believed it should "grow" its future staff with state-of-the-art expertise capable of integrating multiple science disciplines to promote not only sustainable fisheries, but also to sustain healthy coasts and to promote recovery of protected species in keeping with the agency's three strategic goals.

different skills may be needed for different areas. NMFS is reluctant to hire staff if it is not sure funding will continue in the future.[78]

- Contracting allows NMFS to use well-qualified foreign graduate students and foreign graduates in its activities.

Recommendations

Therefore, the Panel recommends that:

- **The Assistant Administrator direct line office, regional, and center directors to actively seek opportunities to contract for services**.
- **The Deputy Assistant Administrator for Operations review program officials' contracting efforts to determine if additional opportunities exist**.

Plan Implementation and Interconnection Findings

- NMFS is implementing numerous improvement plans focused on science activities. However, many of these plans are not well connected. Economic data requirements are set forth in the 1999 social sciences and 1998 Fishery Information System plans. Requirements for observers are included in the SAIP, national observer program, and the Fishery Information System, and ones for collecting and analyzing biological samples are included in the SAIP and Fishery Information System. Further, obtaining some of the data necessary to effectively use staff resources outlined in the SAIP depends on obtaining the increased vessel survey time outlined in a separate Data Acquisition Plan.

- Some needs estimates appear to be outdated. For example, NMFS is reassessing its observer needs and those for increased fishery research and charter vessel survey time.

- The SAIP task force concluded that:

> "…in order to develop more comprehensive and integrated future budget initiatives geared towards modernizing fisheries assessments and management, NMFS should prepare an umbrella plan…" connecting all the relevant assessments such as the data acquisition plan, the social sciences plan and the observer plan.

- NMFS has yet to develop a clear picture of the inter-relationships of fisheries improvement plans, either in terms of overlapping requirements or implementation. Headquarters and regional officials recognize these inter-relationships and the need to rationalize implementation as funding is received. In other words, NMFS needs a consolidated view of how the plans could be implemented.

[78] In commenting on a draft of this report, NMFS officials explained that they do not like hiring on one-year funding for several reasons. The agency may not continue to receive the funds; it may not be able to carry the funds over the next year; funds often arrive too late in the year for the field unit to hire; and it is not always cost-effective to hire for the short-term because hiring and training new personnel takes a considerable amount of time.

- More resources may be needed for protected resources. However, it will be difficult to support future funding increases without a systematic assessment and prioritization of needs for protected resources.

- Stock assessment, socio-economic, and NEPA analyses – as well as observers and cooperative statistics activities - seem to warrant continued priority for augmented resources, given their importance and the current shortfall against estimated needs. However, the level of increase for these areas is not totally clear. Reviewing the existing resource estimates, and making budgeting and programming changes are needed to better determine funding needs and to guide resource allocation.[79]

Recommendations

Therefore, the Panel recommends that:

- **The Director of the Office of Science and Technology develop an integrated program that links the various existing improvement plans**. This program should reassess personnel and resource needs to ensure they are not duplicative and reflect current estimates, and identify critical links in timing various activities.
- **The Director of the Office of Protected Resources conduct a needs assessment for protected species stock assessment and other needed research, similar to that done for fisheries stocks.**

Monitoring Plan Performance Findings

- NMFS places significant emphasis on spending plans to guide what is done with new or increased funding. Plans were developed for all but one of the FY 2001 increases for the areas studied. Officials frequently referred to the plans when asked what had been done with the funds.

- The spending plan process could be improved in several ways.

  - The plans account only for the increase, rather than all activity, in an area.
  - The plans must be linked to expected outcomes or accomplishments, such as the number of stock assessments that will be improved.
  - Field offices do not always implement plans as approved. Work on EIS contracts did not track the headquarters-approved spending plan. Likewise, socio-economic funds were not always spent on these activities. Other examples include using plan funding to support staff already working in an area.[80]

[79] As recommended previously, an assessment of funding associated with the regulatory streamlining project is needed.

[80] The project staff did not do an in-depth review of the specific activities carried out. For example, if the plan called for conducting research with socio-economic funds, staff did not determine if the research was in line with the plan expectations.

- There should be a process by which headquarters can routinely monitor the implementation of spending plans. Officials said that program officers in headquarters sometimes have only a general knowledge of what the field is doing, and there is no formal process to monitor field implementation. Field reports sometimes provide little detailed information, even when requested.

- With the exception of the observer and JEA programs, NMFS does not formally monitor progress toward achieving the resource and outcome objectives of improvement plans, such as SAIP. Areas that would benefit from such monitoring include:

  - the number of stock assessments improved by specific funding. There is a performance measure concerning the number of stocks that will move from unknown to known status in future years. Yet there should be interim objectives, for example, those on raising assessment quality levels.
  - the extent to which hiring and contracting efforts supported by discretionary and targeted stock assessment funds are applied to SAIP
  - contracts that have been let and the extent of progress toward completing EISs

- Assessing specific funding accomplishments is very difficult because there is a variety of funding sources that can be used for basic activities discussed in this chapter. Funding is fungible. There are numerous examples, such as:

  - economic funds were used to obtain cost-earnings data obtained in prior years, though on a less extensive basis, using a variety of other funding sources
  - red snapper funding was used to fund ongoing, as well as new and expanded, activities related to that fishery
  - funds appropriated for highly migratory species were used for observers for tuna fishers
  - MSA implementation funds were used to support a supplemental EIS
  - in many cases, new funding was used to fund at least part of existing staff salaries[81]

- Expanding enforcement activity is warranted given the increased complexity of investigations and decreased Coast Guard Support. JEAs and VMS are potentially effective methods to leverage NMFS' law enforcement capacity. Assessing JEA accomplishments and cost-benefit analysis to determine areas where VMS can be most productive would help guide future funding increases.

[81] As NMFS was faced with a declining base during the years in which appropriations did not cover adjustments to base, field offices visited did "whatever was necessary to protect staff." In some cases, this caused regions and centers to transfer staff salaries from the "base" to earmarked programs, projects, and activities. Thus, specific earmarks were, in effect, reduced in spending or activity for that area, as staff already working in the area were now paid out of earmarked funds. Some staff had to be reassigned to earmarked project, with the effect of reducing some activities to match funding availabilities, rather than NMFS program priorities.

Recommendations

Therefore, the Panel recommends that:

- **The Deputy Assistant Administrator for Operations designate a responsible program official to monitor how field and headquarters units spend funds**. These offices should regularly report activities. Where activities do not support spending plan objectives, the responsible program official should take steps to correct the situation or reassign the funds.
- **The Assistant Administrator designate a responsible official for each of the current, and any future, improvement plans and direct this official to assess progress, at least annually, toward the resource and outcome objectives set in the various plans.** This assessment should include the extent to which contracting can and is meeting those objectives.
- **The Office of Law Enforcement complete an assessment of the JEA program, compared with others such as VMS, to better determine future funding needs and how they can be most effective.**

PROGRAM PLANNING AND BUDGETING

Effective planning, programming, and budgeting processes establish an agency's goals, objectives, and priorities, assign resources to activities to support them, and measure progress. NMFS operations are guided by the NOAA strategic plan, which outlines the agency's broad mission, goals, objectives, and strategies. During the budget execution phase, the NMFS Financial Reporting System (FRS) tracks obligations and expenditures. The difficulties lie in between.

There is no NMFS-wide system that prioritizes competing goals and objectives and reconciles resources available to meet them. This limits the ability to effectively set expectations for key goals and ensure that funds are directed to priorities. It also makes it difficult for NMFS to communicate what it is doing and accomplishing.

Comprehensive Planning

The resource requirements report recommended that NMFS develop a comprehensive plan encompassing all of its stewardship responsibilities. The plan would provide a nationally coordinated approach to guide activities related to fisheries, protected species, habitat preservation, and enforcement. It would help to define requirements, identify deficiencies, and evaluate benefits. Such a plan seems especially important, given the gap between NMFS' estimate of needs and the resources that can be reasonably expected:

- The current estimate to initiate and sustain an eco-system based management system for NMFS is about $340 million over FY 2000 funding.[82] Not all of the elements of this

[82] This estimate comes from a table containing information on ecosystem-based fisheries management. NMFS provided it to the Subcommittee on Fisheries Conservation, Wildlife, and Oceans of the House Resources

management are discussed in this report. Limiting the estimated cost only to those programs related to science and management discussed in this chapter, the estimated annual increase over FY 2000 totals $200 million.

- The $340 million estimate does not include the cost of stock assessment for protected resources. As discussed earlier, NMFS has yet to estimate the resources necessary for stock assessment and other necessary scientific activities related to its protected resources goals.

- No formal estimate has been made of the staff and funding needed to develop and implement the management actions, as opposed to scientific activities needed to conserve and restore marine resources. NMFS' management responsibilities likely will increase as stock assessments are expanded. As more information is available and more stocks are assessed, additional fishery and protected species management actions under MSA or ESA may be required.

NMFS must develop a method for confidently charting a course among competing agency-wide demands and for deciding about relative resource priorities among objectives and offices. Currently, each region and center makes compelling arguments for increased resources to carry out tasks important to NMFS' mission. Yet there is no national context for deciding among those competing demands.

In practice NMFS is a highly decentralized agency. Field staff have "on the ground" knowledge of what is being accomplished, and what needs to be done. The regions and science centers have considerable leeway in allocating resources. There is reluctance by the field to undertake a comprehensive planning approach.

The regions and centers expend considerable effort, especially in the science area, for long-term planning. Numerous long-term plans were found in the offices and centers visited. Plans, such as those for West Coast groundfish, red snapper, Steller sea lions, Atlantic right whales, and coral reefs, focused on specific needs or the use of substantial infusions of new funds. These plans do not provide a comprehensive view of regional priorities and needs. In each location visited, the regions and centers, annually or biennially, work with FMCs to identify and prioritize council needs and determine the extent to which they can be met. Yet these efforts are limited, focused primarily on anticipated changes in FMPs, which are not all of the regions' responsibilities.

Regional and center officials maintain that they understand the region's needs and priorities. However, they cited various factors as limiting the usefulness of a more formal, comprehensive approach:

- In recent years, they have been driven by "crisis," such as meeting emerging NEPA requirements, court-directed activities, and litigation.

Committee on June 14, 2001. The estimate did not include the cost of building and operating fisheries research vessels.

- A large percentage of their appropriation is directed to specific programs, projects, and activities (PPAs). The officials see little reason to set strategic or comprehensive goals; their effort is made toward the funding.
- Staff time is fully committed. There are no free resources to devote to broad scale planning.
- They are driven by the councils' agendas and time frames.
- Distributing staff among various centers and labs limits their ability to redirect resources.

The extent to which the agency's budget is earmarked, rather than providing discretionary funding, clearly is a concern among regional and center officials and headquarters officials. A large part of the discretionary funding is used to cover labor and benefit costs and other operational costs, such as rent. Officials argue that current congressional earmarking significantly "limits flexibility in re-prioritizing program emphases to address mid-year fishery management issues or other emergency situations."

By definition, earmarks reduce an agency's flexibility in personnel and other operational activities. Their level in the NMFS budget is substantial. However, the purpose and funding levels of many PPAs support activities important to achieving NMFS' mission. They likely would be undertaken without specific funding, though perhaps at lower levels of effort. The resource requirements report pointed out that earmarking NMFS funds results, at least in part, from the agency's inability to effectively communicate what it does. It also is apparent that the earmarking sometimes stems from disagreements between NMFS and Congress on priorities. In the near-term, Congress appears unlikely to significantly alter its current practice of earmarking substantial funds in the NMFS appropriation.

Based on the Academy's work, it appears that there is somewhat more flexibility in the NMFS budget than officials' comments would indicate. The regions and centers, as well as headquarters, can and do exercise some control over base funds, project-specific funding, and other resources. Although this is sometimes "on the margin" and implemented slowly, it can be significant. The regions visited had the capability to redirect resources.

- Base funding has been redirected over time. One region was moving staff, as attrition allowed, from fish statistics activities to support of fisheries management support. Another planned to hire an economist using funds formerly used to fund a now-vacant policy position. Perhaps the clearest example is the variation in the distribution of economists among the regions. Prior to specific funding, one center had an economics unit with 10 economists and social scientists; another had one such specialist.
- There is considerable leeway in the use of much of the earmarked funding. This may be especially true for the funds reviewed here because they address agency activities likely to have been funded from other sources. Several instances were noticed where these new funds were used to support existing activities, freeing the prior funding for other purposes.
- Field offices acquire some resources from outside NMFS, such as competitive grants, partnerships with universities, and reimbursable funds from other agencies.
- The personnel supported by unearmarked funds can be redistributed if staff have the necessary skills for the newly prioritized activity.

NMFS agrees that an overarching, comprehensive management plan is needed. There are a variety of forms that such a plan could take, but it should outline the agency's vision and identify objectives and strategies attainable within resource levels that can be realistically expected. The guiding principles should be:

- encompass all strategic goals, set broad priorities, and establish criteria for making tradeoffs among goals and priorities when necessary
- set objectives achievable within a specified time period
- identify the resources needed and the outcomes expected
- delineate organizational relationships and responsibilities among those involved
- track progress toward objectives and adjust resources and objectives when necessary.

Programming and Budgeting

Historically, the NMFS and NOAA budget process has focused on funding incremental changes and new programs. A 1999 Academy study of NOAA's financial planning and management processes recommended a "comprehensive base analysis of all programs." It noted that this analysis would be a necessary step for the agency to understand internal financial issues and build credibility with Congress and other stakeholders. The Panel recommended that NOAA's budget office provide guidelines to the line offices for preparing a full base budget analysis for the 2003 budget formulation process. The resource requirements report endorsed this recommendation for NMFS. It concluded that NMFS' inability to articulate what is done and what is accomplished with base funding limits the agency's ability to ensure its funds are used most effectively. It is a key factor in constituent and congressional dissatisfaction with NMFS.

NMFS has not yet revised its budgeting process. The existing process does not review activities carried out with continuing or base funding; this inhibits NMFS' ability to set priorities and integrate programs and funding on a comprehensive basis, either in Washington or the field.

In the past two years, NMFS has supplied congressional staff upon request with a description of base programs. These descriptions provided general information about the overall objectives of NMFS programs, the types of activities that are funded from base funds, and a list of funds for general tasks. Task descriptions tend to be general, for example, "stock assessment," "IT services," and "fishery information." They do not provide such information as stock assessments completed, IT services supplied, or fishery data collected. A more meaningful description of programs and accomplishments is needed for effective budgeting and programming.

The budget process includes development of spending plans for new funding. These plans delineate which field and headquarters offices will receive the funds and, in varying degrees of detail, what is to be done. However, they only cover new funding. In FY 2002, spending plans covered only $78 million of the approximately $600 million available in the NMFS OR&F budget. Further, these plans address what knowledgeable regional and headquarters program officials see as priorities, but do not link spending plans to specific goals, such as those set forth in the SAIP, and national priorities.

NOAA recently has taken steps to initiate a review of base funding. As part of the FY 2004 budget formulation process, NOAA directed its line offices in March 2002 to develop

information for use in a NOAA-wide base budget review. Line offices were given 3 to 4 weeks to develop information concerning overall base funding, as well as some specific categories within it. The line offices met this challenge with varying degrees of success and developed some useful data. NOAA officials intend that this first effort will evolve into a more comprehensive and effective approach.

Recent NMFS Management Initiatives

NMFS has initiated several actions to address some of its planning and programming weaknesses. It restructured its budget, initiated a planning, budgeting and evaluation (PB&E) project, and developed a process to obtain data on the full range of agency programs and funding.

NMFS has restructured the OR&F budget to more directly reflect its program and organizational structure and strategic goals. Prior budgets were organized along broad functional categories, essentially information collection and analysis, conservation and management, state assistance, and enforcement. The new structure better delineates among program areas, especially fisheries and protected resources activities. Categories include fisheries, with sub-categories for science and for management; protected resources, with sub-categories for science and management; habitat conservation; and enforcement and surveillance.

In FY 2000, NMFS established a PB&E Team. The team developed a framework that links broad, long-term strategic plans, multi-year action plans, and evaluation and accountability to an annual performance plan, budget request, operating plan, performance reports, and performance evaluations.[83] As drafted, the PB&E framework had long-term, strategic, and comprehensive goals. However, initial efforts have focused on developing an annual operating plan (AOP).

The Annual Operating Plan

The AOP is a cornerstone for meeting one of NMFS' overall goals in developing the new PB&E process: to de-emphasize incremental changes and emphasize the entire budget during the budget formulation and execution phases. The AOP is being designed to provide managers, for the first time, comprehensive information on all activities, with funding identified, including base and other resources.[84]

The AOP should have the information necessary for NMFS to determine which programs, e.g. stock assessment in a given region/center, need more resources and to identify funding being used for lower priority functions that could be redirected. NMFS has chosen to obtain this information on a sub-organization basis as a way for managers to know how organizations are using funds. They believe this structure will be useful to them in assessing programs and resources. Among other things, it will highlight different emphases among field office programs.

[83] The team has chosen as a model the process used by the EPA. The framework for that process was advocated by an Academy Panel in a 1995 report, "A New Direction for EPA."

[84] There are a number of special features of the AOP not specifically discussed here. For example the AOPs are linked to the FRS system to allow managers to track actual spending. Also, they will be linked electronically to other NMFS systems, to allow users to access project description documents and issue papers related to activities.

Using this structure also should facilitate field cooperation, as it collects information in a way the field currently has available and can use.

The AOP reports will not tie NMFS efforts to many items of specific interest. For example, in most cases, the AOP process would not identify all funding for a specific species, strategic goal, or legislative mandate. To meet this need, NMFS is designing a series of special reports to acquire information on cross cutting activities and areas of special interest. Managers will estimate the portion of funding that addresses these specific interests. An example is the extent to which activities support specific FMPs or contribute to the strategic goal of recovering protected species.

NMFS has tested field and headquarters offices' ability to provide the necessary data and hopes to have a full set of data by the end of FY 2002. Officials who participated in the test concluded that the information is available and can be entered without significant burden. They also saw the system as potentially useful for managing field-level resources. One center director said it gave him comprehensive information he never had before.

There are some limitations to AOP as now designed. NMFS recognizes that this is a first effort at obtaining complete program and budget information, and it may need to be modified. A major concern is whether the organizational nature of the data, even with the cross-cut estimates, will allow NMFS to develop sufficient detail on specific programs or activities to meet the needs of NMFS managers, NOAA, Congress and other constituents. Organizational structures are not consistent among the field offices; therefore, information will not be provided in directly comparable categories. For example, overhead costs are allocated to various sub-units in some field offices but identified separately in others. Likewise, some organizational sub-structures mirror specific activities, such as fish statistics or socio-economic analysis, but others do not.

To make the data in the AOP fully useful, some broader program context will be needed. Through the AOP, NMFS officials should be able to identify whether funding is being used as intended. However, identifying potentially less effective uses of funds does not provide the framework for determining how to redirect them. A broader program planning or review process is needed to decide program priorities and identify where resources should be increased or decreased. Ideally, this program review would be guided by the comprehensive management plan and feed into that plan as progress is assessed and objectives redefined.

The AOP organizational structure should facilitate a program review within and among field and headquarters offices. These reviews could take a variety of forms, but should follow some key principles. All programs should be assessed and management should provide and receive feedback on responsive actions. NMFS may want to identify specific activities, such as stock assessment, observers, and NEPA actions that program managers would specifically discuss in the reviews. Most critically, management should set standard criteria by which all programs can be assessed. They should reflect management's core values and priorities. Some examples of criteria include:

- fit to mission: impact on goals and objectives and measures of progress
- relative importance: consequences in the absence of program or activity in terms of effect on the managed or protected species and constituent interests

- quality of work: how well the program is meeting its objectives and what actions are underway to improve performance
- outreach: how the program reaches out to constituents
- Staff development: actions to assure continued leadership for the program or activity
- Financial management: accuracy and timeliness of data available on the program
- Program management: what has been done to redirect resources within the program to highest priority needs

To be successful, these ongoing NMFS efforts to improve planning and budgeting will require a strong commitment by NMFS management. However, as of April 2002:

- Although management has expressed its intent to implement the AOP process, no written directive has gone to the field or headquarters offices to prepare or enter the necessary data. Further, management has yet to decide whether and how the AOP system will be used in programming and budgeting processes.
- The PB&E team has not met in almost a year, and only actively involved on the AOP portion of the framework. Its head is retiring in a few months, and a successor must be found.
- Turnover has been substantial in NMFS' Office of Management and Budget. That office, responsible for the agency's planning and budgeting activities, has had 5 directors or acting directors serving in the past 6 years. There has been an acting director for 4 of the last 6 years.

FINDINGS AND RECOMMENDATIONS

Findings:

- NMFS conducts significant planning in response to specific problems or significant infusions of funds. It also has put considerable effort into assessing resources needed to meet some of its most important tasks.
- The AOP process is an important step forward in NMFS' efforts to better define what it does and accomplishes. It will make key information available for NMFS to carry out program reviews. The AOP process may need to be modified to better meet NMFS and constituent needs for specific types of information.
- NMFS has not developed a comprehensive management plan encompassing the agency's competing objectives and setting a vision of agency direction and necessary resources.
- NMFS needs a process allowing it to review headquarters and regional programs, set priorities and assess performance, and direct existing resources to ensure their most effective and efficient use.
- NMFS management must demonstrate a strong commitment to comprehensive planning and programming efforts that include all funding sources.
- Turnover in NMFS' Office of Management and Budget may hinder NMFS' ability to carry out an effective PB&E effort.

Recommendations

Therefore, the Panel recommends that:

- **The Assistant Administrator develop a comprehensive management plan integrating NMFS' competing objectives. The plan should prioritize the many competing goals and objectives contained in the strategic and other plans within reasonably attainable resources. The process should be guided by the principles discussed in this chapter.** To fully implement this recommendation, NMFS must carry out other recommendations to assess needs for protected resources, develop a consolidated program for existing science improvement programs, and assess funding needs associated with the regulatory streamlining project.
- **The Deputy Assistant Administrator for Operations expedite implementation of the AOP process**. Essential steps to accomplishing this include directing field and headquarters offices to immediately begin entering data into the AOP system; meeting with congressional staff to obtain input to better assure the AOP system will meet their information needs; and working with NOAA officials to forge an agreement about the information needed for base budget reviews.
- **The Assistant Administrator undertake an initial agency-wide program review using the initial AOP data as soon as possible**. This review should be directed toward those programs and activities by priority, redirecting current resources to the extent possible, and making decisions about priorities for FY 2003 funding. It also should assess whether the AOP process will meet the agency's needs for conducting program reviews and what, if any, changes or expansions must be made.
- **By FY 2004, the Assistant Administrator allocate resources based on a full program review process guided by the principles discussed in this report and the content of the comprehensive management plan.**

CHAPTER FIVE
NMFS SCIENCE[85]

Since 1996, NMFS Operations, Research and Facilities (OR&F) funding (the main source of NMFS operational funds) has increased by 125 percent (See Chapter 4). At the same time, the percentage of funding directed to pass-through or earmarked funds for specific purposes has also increased. Kammer report of June 2000 found that there was a plateau in NMFS's base funding for stock assessments and other science operations, particularly those with a long-term focus. The plateau in base science funding has had serious effects on NMFS's ability to pursue research needed to enable effective management and minimize lawsuits against the agency.

In general, litigation results when stakeholders are dissatisfied with the outcome of the fishery management process. Two major groups are typically interested in fisheries: fishers are interested in the amount of the catch, and others are concerned with the magnitude of the standing stock of fish and the preservation of marine biological diversity and habitat. A fundamental conflict exists between those groups over the allocated catch and the effects of fishing on marine ecosystems. Great pressure is often brought on NMFS and the regional FMCs by harvesters because of excess capacity and other incentives that drive a "race for fish." When scientific knowledge is available in support of restrictions and is properly documented, NMFS usually wins lawsuits. However, a substantial fraction of the litigation that NMFS faces is a consequence of real or perceived deficiencies in data or science. The committee developed recommendations related to:

- Adequacy of scientific information for fisheries management—for stock assessments, related to marine ecosystems and protected species, and for social and economic data and analyses.
- Use of available scientific information and advice to manage marine fish and protected species.
- Adequacy of scientific expertise available to NMFS.
- High-priority areas for augmentation of NMFS science activities.
- Funding.

ADEQUACY OF SCIENTIFIC INFORMATION FOR FISHERIES MANAGEMENT

Finding: Past National Research Council committees found that NMFS stock assessments generally have been done correctly given the data available and have used reasonable assumptions.

Data on fish population characteristics collected by NMFS generally are adequate to guide management of fished species, particularly those of major economic and social importance. NMFS wins most lawsuits brought on grounds of its stock assessments.

[85] This chapter reprints the Findings and Recommendations of a forthcoming companion NRC study, *Science and its Role in the National Marine Fisheries Service.*

Funding available for collection and analysis of fisheries data is small relative to the immensity of the task if all fish stocks need to be analyzed at the same high level. Given the current state of knowledge, conservative single-species management is the most important (and probably most cost-effective) approach for many fisheries. At the same time, NMFS has been urged to develop techniques to move beyond single-species management.

Assessments might be improved for some fisheries through increased expenditures for data collection and analysis, including observer programs, and though greater use of commercial data and data obtained through cooperative and collaborative surveys. For some fisheries, however, the incremental gain in assessment accuracy and precision per incremental expense for data collection and analysis may be a decreasing function because of the general phenomenon of diminishing returns on investments.

Recommendation: NMFS should maintain and advance its tradition of excellence in fisheries science.

Several NRC studies have concluded that NMFS's stock assessment techniques are second to none among government fishery management agencies worldwide. However, those studies also recommended some actions that NMFS should take to improve the use of stock assessment models. For example, NMFS's scientists should use several models (depending on the data available) to analyze the same data as a means of understanding the data better and uncovering peculiarities that arise from assumptions implicit in the models rather than from the data themselves. To accomplish that goal, it will be necessary for NMFS stock assessment scientists to be trained more broadly in the use of different models and to be less prone to use models as "black boxes." Other important recommendations from those NRC reports are that NMFS and the regional FMCs should find ways to use fishery-dependent data more effectively and collect and use more social and economic data in the stock-assessment process to evaluate the social and economic impacts of different management strategies.

NMFS cannot afford to assess all fisheries to the same degree. It is appropriate for NMFS to continue to focus its resources on assessing the most economically and ecologically important species. The National Research Council recommended a comprehensive cost-benefit analysis of fisheries data collection and stock assessments nationally to help to set funding priorities. Many stock assessments are conducted only once every few years, and every assessment is reviewed. For many Atlantic Coast fisheries, peer review is a slow process and is the rate-limiting step, forcing the councils to use out-of-date assessments. For some stocks, peer review may only be necessary if a major change in stock status is detected or a major change in the management approach is proposed.

Finding: Fisheries management depends on the availability of a variety of biological, environmental, economic, and social data on a timely basis, and NMFS is involved in a variety of activities to collect and manage such data.

The National Research Council described the current status of data collection for marine fisheries management in the United States and made recommendations for improving it. It

pointed out the importance for fisheries management of a reliable indicator of the abundance of fish populations over time. For most fisheries, the most reliable indicator is obtained from fishery-independent surveys conducted by NMFS. Surveys are conducted on relatively old, technically obsolete NMFS fishery research vessels. The National Research Council endorsed the efforts of Congress and NMFS to maintain a strong fleet of NOAA survey vessels—particularly for trawl and acoustic surveys—by replacing aging vessels with newer, more capable, and quieter ones. Congress should not only fund the construction of new vessels but also provide adequate funding for survey and research work performed by these vessels. NMFS has documented the need for six replacement, special-purpose research vessels. Only one of the approved vessels has received full funding, and a second has received partial funding.

Data from fishery-independent surveys and other sources are stored in a variety of locations and formats with relatively little coordination making access to the data difficult for managers and scientists. At the request of Congress, NMFS submitted a plan to Congress for a Fisheries Information System (FIS) to coordinate fisheries data regionally and nationally, but the FIS has not yet been funded. The National Research Council in 2000 stated:

> The committee agrees with the directive of Congress in requesting a plan for a nationwide Fisheries Information System (FIS). The FIS design (based on coordinated regional systems) is good and its reliance on national standards is a positive feature. The FIS is ambitious; however, for it to be successful (1) Congress must provide adequate funding and (2) cooperation and balance among the regions must be ensured.

Recommendation: Congress should fund continued acquisition and deployment of new vessels and the Fisheries Information System, as recommended in previous NRC reports.

NMFS cannot support either the continued acquisition of state-of-the-art fishery research vessels or implement the proposed FIS without new funding. Both items are essential to increase the likelihood of successful fisheries management.

ADEQUACY OF SCIENCE RELATED TO MARINE ECOSYSTEMS AND PROTECTED SPECIES

Finding: NMFS is responsible for administering a wide array of legislative mandates, requiring broader scientific knowledge than is available from scientific activities traditionally conducted by NMFS.

In the science that it conducts and the weight given to mandates of legislation, NMFS appears to place greater emphasis on the MSFCMA than ESA, MMPA, and NEPA. NMFS appears to conduct its science on the basis of traditional fisheries-oriented priorities and does not always have scientific knowledge available to meet important legal mandates that arise from the ESA, MMPA, and NEPA.

Many fisheries are in a rebuilding status and are managed to stay as close as possible to (or to exceed) fishing mortality designed to rebuild populations to levels that will produce optimum yield within 10 years. In the last decade, increasing pressure has arisen from the environmental community to improve data on protected species and essential habitats. Yet NMFS still appears to focus most of its activity on protecting fish harvests. NMFS is responsible for implementing several major laws that are perceived to conflict with objectives and provisions without clear guidance on how to maintain balance, such as among the MSFCMA, ESA, MMPA, and NEPA. Therefore, preservation of biodiversity, maintenance of marine food webs, and protection of habitat are important goals that must also be included in fisheries management. Moving toward an ecosystem orientation will place new demands on fishery managers. With improved understanding of how various fish stocks interact as parts of marine ecosystems, there is increasing recognition that landings are not adequate measures of the health of ocean resources.

NMFS has the capabilities and facilities through its science centers and its relationships with academic scientists to obtain observations and conduct the experiments necessary to improve our biological understanding of fish populations and marine ecosystems sufficiently to improve the management of fisheries and such protected resources as marine mammals, marine turtles, and seabirds. However, much of NMFS's scientific capacity in recent years has been devoted to collecting and analyzing data for stock assessments, conducting other work directly related to short-term needs to fulfill regulatory requirements of the MSFCMA, and responding to litigation. That leaves less in financial, facility, and human resources to conduct the fundamental research that is necessary for NMFS to fulfill its current and long-term resource management mission in relation to the MSFCMA and other laws. The situation has persisted and worsened as NMFS's core budget has plateaued and pressures to defend stock assessments against councils and courts have increased. Ecosystem and biological research will be increasingly important in the context of changing environmental conditions, including climate. Data and research necessary to fulfill mandates of the ESA, MMPA, and NEPA are particularly lacking in relation to EFH requirements and availability, predator-prey relationships, and health and reproductive status of the organisms sampled.

Recommendation: NMFS must balance its traditional emphasis on sustainable exploitation with its duty to protect vulnerable species and habitats harmed by fishing.

A new focus will require enhanced research on bycatch, fish habitats, marine ecosystems, and the biology and ecology of threatened and endangered species. NMFS should address the gaps in scientific understanding and legal vulnerabilities in setting priorities for future research.

New types of information will need to be collected by NMFS and obtained from other agencies to ensure management that accounts for a target species' place in marine food webs, the effects of fishing on marine ecosystems, and the effects of changing environmental conditions on fish populations. It is important that NMFS staff employed in protected resources, habitat, and sustainable resources communicate effectively to plan, coordinate, and conduct needed research. Ecosystem research will have substantial costs and should be considered in NMFS funding priorities without diminishing support for routine stock assessments and biological research. NMFS managers should consult with the NOAA General Counsel to identify the research whose

lack of funding and conduct would create the agency's greatest potential legal vulnerability. A strategy to address such vulnerability is needed.

ADEQUACY OF SOCIAL AND ECONOMIC DATA AND ANALYSES

Finding: Social and economic data collected by NMFS are inadequate for understanding the effects of past management on fisheries and fishing communities and for predicting outcomes of management alternatives. Fishery management plans often do not include adequate social and economic goals.

In addition to collection and analysis of biological data, fisheries management requires economic and sociological-anthropological analysis of how participants respond and adhere to management regulations and how the regulations affect their livelihoods and general well being. Lack of social and economic data hinders the development and implementation of acceptable and effective management measures. The lack of data results from a variety of factors (such as inadequate funding, restrictions imposed by the MSFCMA, and concerns of fishers about the confidentiality of social and economic data that they provide) that are largely beyond NMFS's control. The National Research Council listed a variety of social and economic data that should be collected and made recommendations to Congress for changes in the MSFCMA to make economic data more easily available to managers and social scientists.

Economic and social goals of FMPs are not expressed clearly and quantitatively. Consequently, important economic and social values are not documented or measured continually, and it is impossible to measure progress toward goals, anticipate the effects of alternative management measures on social and economic values, and calculate the total costs of alternative management measures. Without critical baseline data, such as would be obtained through standard and regular collection of data to track economic and social changes, it is difficult to examine the effects of fishery-management decisions on commercial fishers, recreational anglers, and their associated communities. Because critical social and economic data are not routinely collected and analyzed, it is difficult to determine whether population fluctuations measured by landings, for example, result from changes in the magnitude of the stock or from changes in associated economic or social factors.

Without adequate social and economic data and analysis, it is often impossible to determine the total cost of management alternatives. Therefore, it is difficult to discuss rationally how total costs might be minimized and the distributional effects alleviated as public preferences for the use of fishery resources change. Sufficient information must be available to design programs that will reduce fishing capacity and restore economic viability to the harvest sector and keep total harvests within the bounds required to rebuild stocks within a reasonable period. Usually, managers choose among alternatives on the basis of biological concerns without objectively considering economic and social implications. The MSFCMA requires calculations of stock sizes relative to their un-fished states and relative to measurable definitions of overfishing, but it does not include similar requirements for economic and social values.

It is clear that excess harvesting capacity is one of the major problems in U.S. fisheries, as well as fisheries worldwide, and that not enough attention is being devoted to collecting data and conducting analyses to quantify overcapacity in each fishery. Such information is fundamental for preparing plans to reduce overcapacity, which is an important step in reducing the tendency for risk-prone management decisions and for reducing bycatch and overfishing.

Recommendation:. The importance of social and economic data and analysis to marine fisheries management should be recognized in the reauthorization of the MSFCMA, resulting federal regulations, fishery management plans, NMFS funding requests, and Congressional appropriations.

Many NRC reports have recommended increased collection of social and economic data; it is well past time to give economic and social data equal consideration with biological data in the development of FMPs. With respect to adequacy of social and economic data, plans need to be made for the regular collection, storage, and retrieval of this type of data in a manner that is analogous to data for stock assessments. NMFS needs to develop a comprehensive plan to determine social-science data needs and to implement the data-collection process. The MSFCMA should be amended to require such data collection, given that fishers are exploiting a public-trust resource, while appropriate protection of data confidentiality is maintained. The availability of such data will help managers to choose from among different possible management scenarios, balancing biological, social, and economic factors.

As NMFS assimilates its new social scientists, their first tasks should be to quantify overcapacity, where it exists, in all fisheries managed under FMPs and to develop plans to reduce it that take into account social and economic factors in individual fisheries. Plans for reducing overcapacity should consider all the fish stocks in a fishery region, inasmuch as reductions in overcapacity in some fisheries will spill over into other fisheries (primarily in the same region) as fishers shift target species. Congress should encourage such analyses, because solving the overcapacity problem could make fisheries management easier and less expensive. Other tasks with very high priority are to develop regional and national consensus on the standards to be used in addressing the social impact assessment and National Standard 8 requirements and to establish regional or national systems for the standardization and collection of social, demographic, and other data on the socioeconomic, cultural, and community aspects of marine fisheries.

USE OF AVAILABLE SCIENTIFIC INFORMATION AND ADVICE FOR MANAGEMENT OF MARINE FISHERIES AND PROTECTED RESOURCES

Overfishing can result from a lack of sufficient scientific information or from a fisheries management process that ignores available scientific advice or has insufficient resources to enforce management regulations. In the former case, prevention of overfishing depends on better data collection and analysis (discussed previously). In the latter case, prevention of overfishing depends on changed procedures for using science in the management process and for allocating resources to enforcement.

Finding: The use of science in the marine fisheries management decision-making process is impeded by the governance system created by the MSFCMA and the resulting mismatch between institutional authorities and responsibilities.

The use of science in fisheries management is a multistage process. NMFS generates stock assessments and other information about managed fisheries, habitats, and protected species. The information is provided to the regional FMCs (usually to their science and statistical committees) to develop FMPs.

Regional FMCs sometimes disregard the scientific advice provided by NMFS and their science and statistical committees in setting total allowable catches (TACs) and in deciding other aspects of FMPs. NMFS has the legal right to approve, disapprove, or partially approve FMPs; but when councils have disregarded the scientific findings of NMFS and the advice of their science and statistical committees, NMFS has sometimes sought compromises with the councils rather than upholding their original findings. The entire process is subject to intense political pressure, directly from stakeholders and indirectly through their representatives in Congress.

Many issues arise in how science is used to manage marine fisheries in the United States. The committee discussed examples in which NMFS stock assessment scientists or the science and statistical committees made clear recommendations about target fishing mortality and harvest levels and the councils ignored the recommendations in developing their FMPs. NMFS does not always defend its own science after council decisions. NMFS and the Secretary of Commerce bear the legal responsibility for the content of FMPs, although in practice much of the responsibility for the content rests with the councils.

Recommendation: Congress should initiate a review of the fisheries governance system and the use of science in governance.

Crucial breakpoints in the production and use of science in the fishery management process are discussed below:

From NMFS to the Scientific and Statistical Committees (SSCs) and the Regional FMCs

NMFS scientists and the science and statistical committees (SSCs) of regional FMCs focus on data collection and analysis needed to meet the requirements of the MSFCMA and to some extent the ESA, MMPA, and NEPA. SSCs are usually composed of scientists in academe and in NMFS. They are responsible for recommending FMP options to the full councils. Some councils rely more on plan development teams (PDTs) than on their SSCs. PDTs are smaller but with similar compositions.

Council members need to understand the manageable uncertainties and that uncertainty can be quantified, accounted for in stock assessment predictions, and used to make better decisions. Councils should explore different techniques to present relative uncertainties and effects on decisions. It is not necessary for council members to understand the details of stock assessment methods to use the results, but they should be helped to assess the relative merits of criticisms of

stock assessments that may arise during the decision-making process, for example, by strong representation of the SSCs in FMC meetings.

From the FMCs to the Secretary of Commerce

It is important for science to be insulated from political influence at the level of the secretary of commerce and the NMFS staff to whom the Secretary defers in decisions on FMPs. A disconnect can occur between NMFS scientists (who advise the regional FMCs) and NMFS managers when the latter act on behalf of the Secretary of Commerce and compromise with council recommendations that are in violation of laws (for example, recommendation by NMFS and approval by the Secretary of Commerce of a quota with only an 18 percent chance of achieving target fishing mortality rates in the summer flounder fishery). The Secretary of Commerce should be more consistent in rejecting plans that clearly ignore current laws and regulations. NMFS should design and use objective decision-making processes with maximal defensibility, for example, the Organized Decision Process that has been proposed for making determinations with respect to purse-seining and its potential for adverse stress-related effects on dolphin populations of the Eastern Tropical Pacific Ocean. The court decision described in *Brower v. Evans* criticized the agency for not following the structured process in reaching its interim findings on that question. The agency should make further use of decision methods that insulate scientific determinations from political pressure or considerations.

Finding: A better structure to conduct science in NMFS would improve outsiders' perceptions of NMFS scientists and science. A structure that allowed scientists to operate objectively and independently of the management body (but was responsive to requests for scientific investigations) could improve both the image and the performance of NMFS.

Some of the challenges and dissatisfaction with the fishery management process are related to science results that are judged to be questionable, insufficient, or wrong. The committee agreed that a different structure in the agency—one that better insulates the science from the management process—could improve the ability of NMFS to conduct science and enhance the quality of science available for fisheries management. The committee also believes that NMFS science needs to be open and transparent to their constituents, but at the same time, NMFS scientists need to be able to provide their best scientific work in an environment insulated from political influence that can occur in the management decision process.

One way to depict the management process is with the fundamental input of science occurring at the first stage of the evaluation process, in a venue where NMFS scientists present their assessments to stock assessment review committees and the science and statistics committees. But by that point most of the work on the science advice is completed, and little opportunity remains to conduct new analysis during the decision-making process. Hence, the development of new ways to approach analysis must happen at or before the initial stages of the evaluation process.

The problem can be partly solved by improving conditions for undertaking scientific research in the agency. NMFS scientists can benefit from a workplace in which they can conduct

- *Responsive science*. Scientists must be responsive to the issues and problems of resource management. To do so, they need the financial and staffing resources to respond. Ideally, scientists should be free of the political pressures of management-related issues, recognizing that they must produce timely results that respond to management needs.
- *Innovative science*. There is a need for innovative science to improve stock assessments and to reduce the personnel needs, costs, and uncertainties associated with stock assessments and modeling but also a need to address the new and complex concerns of ecosystem science.
- *Integrative science.* New demands for ecosystem science require broadly interdisciplinary approaches to solve problems that span climate, oceanography, individual species' biology, systems ecology, and fish-stock dynamics. Effective teams will be required to conduct such research in support of management. Furthermore, NMFS, other NOAA line offices, and other agencies will need to work collaboratively to solve the broad ecosystem problems faced by marine fisheries management.
- *Visionary science*. Science that anticipates management issues is needed. Being more than responsive to current issues will require an infusion of staff and funds into NMFS to conduct research at the cutting edge of theory, modeling, and anticipation of problems that either fishing or environmental variability will contribute to fisheries and fisheries management. Some would argue that other institutions—possibly academic institutions—should accept the responsibility for those aspects of research and science; however, the health of NMFS science, the morale of the agency's scientists, and the quality of advice to managers could improve if this element were instituted in NMFS.

Recommendation: NMFS should create an atmosphere that encourages innovation and rewards excellence, as recommended in previous National Research Council reports.

NMFS has already developed institutions, such as the NOAA-university cooperative institutes and the Northeast Fisheries Science Center's Cooperative Marine Education and Research Program that foster partnerships with universities. The partnerships provide environments to develop innovative science by combining efforts of agency and academic scientists. However, only a small number of scientists are participating in these groups, and the committee recognized the importance of exposing more NMFS scientists to such an environment. However, with the increasing demands on scientists to produce analyses based on the requirements of the 1996 MSFCMA amendments, a business-as-usual approach to conducting scientific analyses is increasingly problematic, as demonstrated by increased litigation. Development of cross-disciplinary teams of scientists within and across regions would seem to be one cost-effective way to follow the recommendation, but other approaches, such as the development of an NMFS national think tank, might also be appropriate.

Finding: NMFS is required by the MMPA and ESA to develop conservation or recovery plans for protected, threatened, or endangered species, such as marine mammals and sea turtles, listed under the ESA. Those plans often identify research needs related to understanding the biology and population dynamics of the target species and the causes of their decline that might be mitigated through regulation of human activities that affect them or their habitats.

Some recent lawsuits under the ESA and NEPA have resulted in injunctions against fishing activities and caused considerable economic disruption in relation to potential impacts of the Bering Sea and Aleutian Islands fisheries on Steller sea lions; the Hawaii-based, pelagic longline fleet effects on sea turtles; and the effects of the lobster fishery around the Northwest Hawaiian Islands on Hawaiian monk seals (*Greenpeace v. NMFS, Leatherback Sea Turtle v. NMFS, and Greenpeace Foundation v. Mineta*, respectively). In each of these cases, the species of concern were the subject of recovery plans prepared by teams of scientists familiar with the species and their habitat requirements. Each team recommended a suite of investigations that could help to determine the causes of the species' decline and the interaction with the fishery, but the research was not ranked high in budget requests and therefore was not conducted in a timeframe that made information available to the agency for use in EISs and biological opinions. Consequently, the agency was often left with limited information on which to make jeopardy determinations. A similar problem is occurring with respect to stock identity questions about the marine mammals that are the subject of take reduction planning efforts under the MMPA.

Recommendation: NMFS should develop and implement a plan for rapid response to research needs identified in recovery and conservation plans.

The NMFS research system should be able to initiate research outside the normal multi-year budget planning and appropriation cycle because delays of several years in research and application of results to management can severely reduce the chance of averting a species' extinction. Consideration should be given to expanding recovery and conservation plans to include recovery of other threatened or endangered marine species.

Finding: NMFS receives independent scientific input from a variety of sources, including the National Research Council (see references for list of reports with advice to NMFS), academic scientists, the Marine Mammal Commission, independent groups commissioned by NMFS, and recovery teams set up pursuant to the ESA and MMPA.

National Research Council Reports

The committee reviewed the findings and recommendations of past National Research Council fisheries reports and received written updates from NMFS related to how it has responded to the reports' recommendations. It is obvious that NMFS has adopted many recommendations of previous National Research Council committees when it has been able to do so without extra funding or changes in the MSFCMA. However, NRC recommendations to NMFS require cooperation with Congress, FMCs, and others in making policy and securing funding, and NMFS has been less successful in implementing such recommendations. NMFS has attempted to create

special initiatives in response to NRC recommendations (for example, the *Stock Assessment Improvement Plan*), but such initiatives have generally not been funded.

Center for Independent Experts

Traditionally, most stock assessments and much of the science on which NMFS bases its regulations and recommendations to the councils were reviewed almost entirely in NMFS. That practice led to a distrust of NMFS science on the part of some constituents and increasing use of the courts to challenge NMFS scientific findings. It also led to requests for external peer review by such organizations as the NRC. NMFS responded to the trend by creating the Center of Independent Experts (CIE) in the late 1990s to provide relatively quick and inexpensive peer review of potentially controversial stock assessment results. That mechanism seems like a promising approach, although it is still fairly new. To date, the CIE has sometimes concluded that NMFS analyses are correct and sometimes that they are incorrect.

Other Scientific Input from Academic Scientists

Academic scientists participate in advising NMFS in various ways. Traditionally, they participate in formal review of stock assessments by serving on stock assessment review committees, taking part in stock assessment workshops, and reviewing papers written by NMFS scientists for publication. Other venues have also been used, such as the NMFS Ecosystem Panel, which was composed primarily of scientists from outside NMFS and provided many recommendations in relation to the principles and procedures for incorporating a greater consideration of ecosystems into fisheries management under the MSFCMA.

Marine Mammal Commission and Recovery Teams

Both the Marine Mammal Commission and the recovery teams formed pursuant to the ESA and MMPA identify scientific uncertainties and subjects of research that should be pursued to reduce the uncertainties. Recommendations from those groups could provide useful input for NMFS science planning.

Recommendation: NMFS should continue to seek advice and review from independent sources.

Independent scientific advice and peer review has strengthened NMFS science and the committee endorses the continued use of such review and advice in fisheries management. The use of advice could be improved through more systematic processes for requesting advice and review and for implementing recommendations.

Finding: Fishery management plans do not always include enough measurable quantitative goals and specific data collection and analysis to monitor the achievement of goals.

Most FMPs include some quantitative goals, particularly in relation to fishing mortality and harvest levels, but fisheries management would be more effective if additional quantitative goals

were included in FMPs and data were collected to monitor and evaluate the goals with a formal analysis that focused on specific plans. There has been little analysis of which fishery management measures are effective or ineffective, either for specific fisheries or nationwide. Until management measures are evaluated and compared continually, there is no way to identify which fishery management measures are most effective.

Recommendation: NMFS and the councils should develop quantifiable management goals and collect data to measure progress toward these goals.

NMFS should conduct continuing analysis of the effectiveness of fishery management measures used in the United States and elsewhere. For example, *Sharing the Fish* recommended that "existing and future IFQ [individualized fishing quota] programs should provide an annual report describing trends in the fishery and the effects of the IFQ program on important management variables." The results of such analyses should be provided to regional FMCs on a regular basis and should be used to create new criteria to determine the acceptability of FMPs. An important aspect of setting quantitative goals in FMPs is that they be flexible enough to accommodate new scientific information as it is developed.

ADEQUACY OF SCIENTIFIC EXPERTISE AVAILABLE TO NMFS

Finding: The scientific expertise available to NMFS is focused largely on stock assessment science and fish biology, with increasing demands in ecosystem science, biology of protected species, and social sciences.

Most NMFS science activities are conducted internally. The academic community of marine fishery scientists is relatively small, and NMFS has substantial capabilities in its regional fishery-science centers with respect to fisheries biology and population dynamics, the present expertise of NMFS staff is adequate for the agency to continue its previous emphasis on stock assessment of single species. However, it is less well suited for the data and research needs of more ecosystem-oriented management to meet relatively new requirements imposed in the 1996 MSFCMA amendments and through new understanding of the requirements of the ESA and MMPA gained through litigation. NMFS is not well prepared to respond to new expectations and mandates regarding habitats, non-targeted species, endangered species, or the new demands of non-exploitative users of marine resources because budgets have not been favorable to expand expertise adequately in these areas. Plans have been developed to hire and deploy social scientists among NMFS headquarters, regions, science centers, and regional FMCs, but they have not yet been fully funded and implemented. NMFS also faces substantial loss of skilled staff through retirements in the coming decade and is experiencing difficulties in attracting staff with quantitative skills.

Recommendation: NMFS must build a scientific workforce to meet the future needs of the agency.

Because NMFS scientists often do not have the time to conduct fundamental research related to NMFS's mission, it is important in the short term for the agency to maintain strong linkages with

academic scientists through joint projects and extramural funding. Many innovative ideas and techniques are developed in the academic community that can support the NMFS science mission. NMFS has developed joint and cooperative institutes and has located its regional fishery science centers near major ocean-science institutions. Such strategies have resulted in good cooperation between NMFS scientists and academic scientists.

NMFS has also begun to address the looming shortfall of stock assessment scientists and resource economists through implementation of a fellowship program for graduate students in the United States. But the program is too small to recruit a sufficient number of new quantitative scientists to replace the projected retirement of 500 fisheries scientists in the next 10 years .

NMFS needs to increase efforts to attract new staff, particularly people with quantitative, economic, and social-science skills, while retaining its current staff. Those goals will require building on the historical excellence of NMFS science and improving morale in the agency through increases in both monetary and non-monetary incentives.

PRIORITIES FOR AUGMENTATION OF NMFS SCIENCE ACTIVITIES

Finding: NMFS science tends to be strongest in basic fish biology and population dynamics. NMFS has important but relatively small research efforts related to integrated bioeconomic analysis, climate effects on fish populations, how fish live in the context of ecosystems, and habitat-fisheries interactions.

In a 2000 report, Kammer noted that a high percentage of the NMFS science budget is earmarked for specific tasks. Although some of the tasks may have been conducted anyway in the absence of earmarks, they may have been funded at lower levels; and the overall effect has been to reduce the base funding available for adjusting to new scientific priorities. Science priorities set by Congress through earmarking are unlikely to balance evenly among actual NMFS science needs that are based on its legal mandates and research planning.

Recommendation: Five areas of science, identified in previous NRC reports, should receive increased emphasis.

Listed below are the five areas of science identified as inadequate which may have been responsible for some of the increased litigation in the past few years. It may be necessary to redirect budgets or augment them to bolster these activities.

- Development of research plans and analysis techniques relevant to MMPA and ESA issues to yield information necessary for FMPs that protect endangered and protected species and to decrease the number of lawsuits filed against NMFS.
- Collection and analysis of spatial data and development of spatial stock assessment models so that required information will be available for spatial management techniques, such as the designation of marine protected areas, and incorporation of knowledge of EFH in spatial stock assessment models. With the advent EFH definitions and the desire by most councils to use various forms of spatial

management, new emphasis must be placed on collecting and analyzing fisheries data in a spatial context. Much remains to be done to obtain good spatial data. One promising approach that is being adopted widely in the United States is the vessel monitoring system (VMS), which can help to link catch locations to catch amounts in vessel logbooks. Traditionally, fisheries scientists have largely developed models that include temporal but not spatial features, although spatial stock assessment models are being developed.

- As more emphasis is placed on multispecies interactions and ecosystem effects, there should be continued development of new models that include multispecies interactions and trophic structure, as well as the effects of environmental variability on fish populations.
- Development of ways to link social and economic data with biological data in modeling and other analyses. Such models should help to make fishery-dependent data more useful in stock assessments by revealing how non-biological factors affect catch per unit effort and other variables important in stock assessments. Such models are necessary for predicting economic and social effects of potential management scenarios and how different stakeholders may be affected.
- Development of an understanding of how the size, distribution, and time patterns of market and non-market values vary with different management scenarios.

FUNDING

Finding: NMFS faces the daunting task of maintaining its traditional stock assessment activities in the face of pressures to harvest the maximal sustainable yield for most fisheries, meeting the new requirements added by the 1996 MSFCMA amendments, and meeting the requirements of the ESA and MMPA for which NMFS does not have a strong workforce or focused data collection activities.

Kammer found that NMFS's base budget has been relatively stagnant because the budget increases have been largely offset by earmarks that may not match NMFS science priorities. The effect of earmarking on NMFS science priorities should be investigated. For example, it is important to determine the percentages of science funding that NMFS would devote to specific scientific issues compared with the percentages that result from earmarks. That could be done by comparing presidential budget requests with congressional appropriations.

Recommendation: Congress should examine the cost of collection, analysis, and management of data required by NMFS to fulfill its current mandates.

NMFS faces a dilemma. Regional FMCs tend to develop FMPs that require accurate and precise estimates of fish stock sizes and of the effects of alternative management options to prevent management failure. Many FMPs do not provide for a buffer to allow for uncertainties. As far as the committee is aware, there has been no analysis of the costs of such data collection and management. For example, the cost of full observer coverage in fisheries in which bycatch rates are unknown should be determined. Likewise, the cost of full VMS coverage should be determined.

The committee was unable to evaluate the question of whether NMFS has enough funding to fulfill its legal mandates but has identified some activities that merit increased funding, either through increased appropriations from Congress or through reprogramming of existing funds.

CHAPTER SIX
PARTNERS AND CONSTITUENCIES IN U.S. FISHERIES MANAGEMENT

Increased litigation against NMFS has heightened concerns about the agency's relationship with its constituents and partners. Congress directed NMFS to contract with the Academy to review the agency's and councils' effectiveness in the processes and practices used in consulting with their constituent groups and partners, and to identify specific actions that they can take to improve the effectiveness of these interactions and their outcomes.

This chapter summarizes the current state of NMFS' constituent and partner relations. It also explores opportunities for improvement and recommends ways for NMFS' headquarters and regions to expand external relations.

OVERVIEW OF CONSTITUENT RELATIONS

When viewed from the long-standing history of American fisheries, the federal fisheries management system came onto the scene relatively recently. From their outset in the mid-1970s through the early 1980s, NMFS and the councils enjoyed reasonably good relations with their constituents as they jointly promoted the development of the U.S. fleet to exploit marine fisheries, primarily in the EEZ.

However, those relationships became increasingly tense as restrictions were imposed to respond to decreased abundance of resources and heightened environmental concerns. Increased confrontations between conservationists and fishers have exacerbated the situation, and NMFS has been caught in the middle. NMFS' constituencies and partners often hold dramatically different points of view, and it is virtually impossible for the agency to satisfy all of their competing interests.

There are many indicators of the increasingly strained relationship between NMFS and its constituents and partners. One is the growing number of lawsuits filed against the agency. Another is the degree to which constituents are turning to Congress for action when NMFS' response is lacking or slow. Congress has earmarked funds for specific problems or constituents. Yet another sign is the frustration and criticism voiced openly by constituents. Environmental groups regularly express their dissatisfaction with NMFS performance in their media and web-based outreach.

NMFS' relations with its constituents also have received increased scrutiny from several recent government reports:

- The 1997 NOAA Fisheries Strategic Plan pointed to the need to improve communication and collaboration and increase constituent partnerships. It called for detailed and trackable actions to accomplish these goals, such as constituent round table discussions in each region every six months.

- The *Resource Requirements* report, prepared for NMFS in FY 2000, recommended increased funding for observer and cooperative statistics programs as a way to strengthen relationships with fishers and states.

- The December 2000 MAFAC report included specific recommendations for NMFS to improve outreach and constituent relations, including improved communications and responses to constituents and greater direct contact with the fishing communities.

- The December 2001 *NMFS Strategic Plan for Fisheries Research* lays out specific objectives that NMFS' scientists should achieve under the overall goal of improving effective partnerships with constituents.

VIEWS OF MAJOR PARTNERS AND CONSTITUENCIES

The Panel's review of NMFS' external relations involved detailed discussions with agency representatives and major constituent and partner groups. These included the commercial and recreational fishing industries, environmentalist/conservationist groups, and states. They were chosen because they are broadly represented across the country, well organized, and highly vocal. They shared their expectations of NMFS' performance and the problems the agency has faced in meeting those expectations. Moreover, they suggested ways for NMFS to better address those problems.

There are other constituent groups and partners, including Native American Tribes, seafood consumers, fishery scientists and managers, and power and timber companies. They are important for carrying out the agency's mission, but are more specialized and regionally focused. For example, the Tribes and power and timber companies are heavily concentrated in the Northwest region, focused on endangered species and habitat protection associated with Pacific salmon. In its role as seafood inspector, NMFS has a large constituency of seafood consumers, but they are widely dispersed across the United States, less organized, and focused narrowly on fishery issues. Fishery scientists and managers from the U.S. Fish and Wildlife Service, states, academia, and scientific institutions are other constituents. They often conduct science that is complementary to NMFS' research and make management decisions primarily affecting fisheries in state waters; yet these groups tend to be more dispersed and specialized, as well.

Commercial Fishing Industry

Southeast, Gulf of Mexico, Northwest commercial fishers, as well as other industry representatives, said they feel distanced from NMFS. They specifically noted the lack of day-to-day communications among the regions, science centers, and industry. The fishers have difficulty accepting some of NMFS' information and analysis because they believe that the agency is ideologically biased toward environmental and conservationist perspectives. They also believe that much of NMFS' science—specifically stock assessments—is subjective, dated, and often unrealistic.

When commercial fishers have a concern, they generally are unsure whom to contact at NMFS. Most of the time, they are more comfortable going to the councils with questions and proposals because these structures seem more receptive. In one region, commercial fishers are hesitant to raise issues with NMFS or a council viewed as dominated by recreational fishing representatives. One fisher suggested creating an ombudsman position within each NMFS region to serve as the point of contact for constituents and partners. Because the fishers feel that NMFS is unresponsive, they sometimes opt to go to Congress to seek redress, either through legislation or funding.

Despite their frustrations with NMFS, commercial fishers believe that both sides could learn from each other and work on joint projects. However, these fishers were unable to cite many examples that they would consider mutually beneficial. They pointed out that they would have a sense of ownership if they had a role in the design, implementation and follow-through of research projects. They felt that collaboration should start during the project design phase.

Recreational Fishing Industry

National and regional representatives of the recreational fishing industry said they feel NMFS largely ignores them, especially compared to commercial fishers and environmentalists. They cited the regions' lack of attention as an indication that NMFS views them as adversaries, not a group working toward similar goals. This is different in some areas of the Southeast where recreational interests currently dominate the council's membership; there, they believe it receives as much attention as the commercial industry. The recreational industry also regards NMFS headquarters as more receptive than the regional components and councils, and view their working relationship as reasonably good.

Like their commercial counterparts, recreational fishers want to be involved in the problem-solving process from the outset. The *RecFish 2000* symposium, co-sponsored by NMFS, was widely regarded as a success in bringing together representatives of a NMFS constituency to address concerns. In addition, the NMFS Southeast region and industry began a mutually beneficial initiative to improve recreational fishing data collection by engaging the recreational fishers in surveying the charter boat industry. This effort now is being expanded to other parts of the country, and NMFS is reported to be doing a good job of keeping recreational fishers abreast of updates and changes in the program.

Recreational fishers interviewed encourage NMFS to expand its outreach to their industry. One representative questioned the value of the new headquarters Office of Constituent Services; he believed that outreach efforts are best fostered and maintained at the regional level. Other representatives said NMFS regional officials need better "people skills" to effectively communicate with and understand those whom they are researching and regulating.

Environmentalist/Conservationist Groups

Several environmental groups with frequent and long-standing marine fisheries involvement were interviewed. Overall, they believe that NMFS' focus is on the commercial fishing industry. One group asserted that the agency is captured by, or is ineffective in dealing with, commercial

fishers. However, most environmentalists agreed that NMFS headquarters' representatives are accessible, and praised the current NMFS administration for initiating regular meetings with a specific fishery conservation group with wide representation.

Environmental groups strongly support cooperative programs between NMFS and its constituents and partners given their expertise and experience. Despite what they view as disproportionate consideration given to the commercial industry, the groups see cooperative efforts as a way for the agency to better understand the industry's perspective and obtain more buy-in from commercial and recreational fishers. One group envisioned NMFS working cooperatively with the commercial industry to develop fishing gear that is less destructive to fish habitat, and provide appropriate incentives for its use. Most groups seemed open to joint initiatives, but did not believe they could contribute funding to such efforts.

One of the environmentalists' biggest complaints was the lack of response and feedback at the national and regional levels. They feel they often notify NMFS of problems, but eventually are compelled to use litigation as a last resort to solve them. Some groups said they would like to work with NMFS to build consensus on how best to comply with the law and avoid litigation. Most believe, however, that NMFS has inadequately addressed issues such as overfishing, protected species, bycatch and habitat, especially since SFA.

States

Representatives of multi-state fisheries commissions also expressed frustration with NMFS. State managers said they are required to implement many aspects of federal regulations, but are not adequately consulted or advised about their impacts in advance. When NMFS makes in-season changes to management measures, for example, states often learn of them from affected fishers, not the agency. The states believe that NMFS should view them as partners, not merely constituents. Their primary contact with the agency is in council meetings, but these can be a contentious planning forum, one not suited for coordination and cooperation. They believe there is inadequate consultation during implementation and limited opportunities to become personally involved.

The states believe they have a wealth of experience and expertise upon which NMFS can draw and view themselves as being on the frontline with constituents. For example, they often are the first to be asked about new regulations because fishers are more likely to see state officials at the docks. Furthermore, states suggest that their capabilities can be used in cooperative programs with NMFS. They have participated in such endeavors as the fisheries information network, Atlantic states cooperative statistics program, and joint law enforcement program.

OPPORTUNITIES FOR IMPROVEMENT

Providing their views on NMFS' relationships with its constituents and partners, most region and science center officials interviewed noted that there are few individuals in their field offices that deal mainly with outreach and constituent relations. Consequently, most outreach efforts are done on an ad-hoc basis. Most regions have an open-door policy, but they do not regularly meet

with constituent groups; NMFS' most frequent interaction occurs at the council meetings. Further, these officials reported that increased litigation has strained relations. Constituent contacts have been reduced due to legally imposed constraints on communication while cases are pending. Relationships also are frustrated, officials believe, because they have little control over cooperative programs dictated from above.

In response to these concerns, NMFS has taken the initiative to implement improvements. The agency is developing a new headquarters Office of Constituent Services (OCS), which has begun a survey to identify constituent relations activities that are underway throughout the agency. The survey results are being processed. This office also has launched a "Fishnews" listserve to improve the dissemination of information on agency activities to the public as well as its constituents and partners.

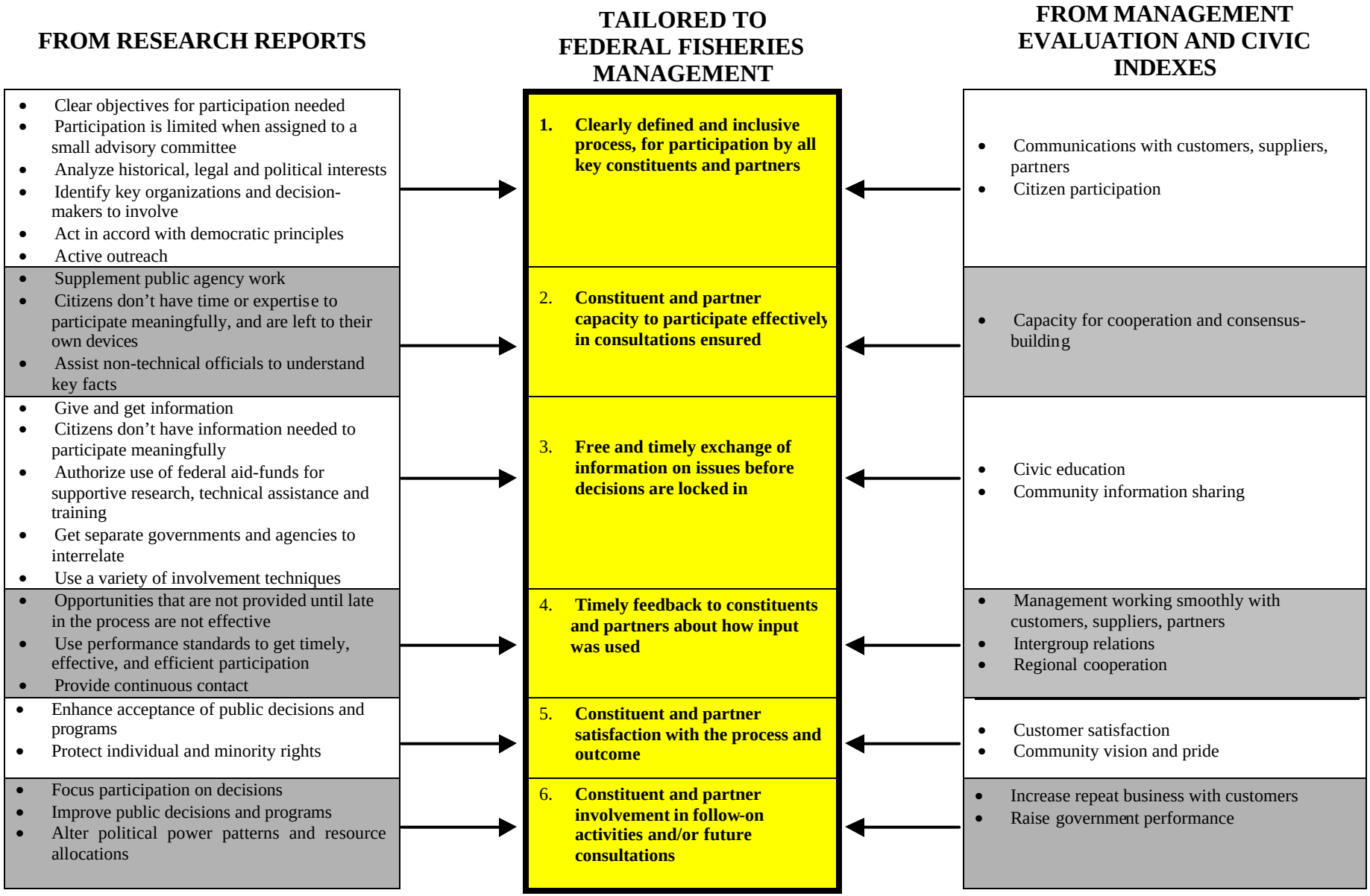
NMFS previously relied primarily on the NOAA Public Affairs office for outreach, but the new office is seeking a larger role in informing the public and constituents about NMFS activities. It is building its organization upon four existing NMFS offices with extensive public and constituent contacts: Recreational Fisheries, Public Outreach and Education, Trade Services and Financial Services. It also proposes to work to develop a unified NMFS image, portray that image to the public and constituents, and improve external relations. For example, it is planning to compile a more complete constituent database and train employees in its use, continue to update information on and image of NMFS' websites, and develop a "Know Your Fisheries" web page to clearly explain the status of the nation's fisheries and the fishery management process.

Although the office still is forming and developing its program plans, it seems to be moving aggressively to address many of the agency's constituent relations problems.

In contrast to headquarters' recent efforts to improve its contacts with constituents and partners, NMFS' regional components have very few resources committed to constituent relations. The regions have not developed constituent relations plans, and most officials indicated that they wanted to see the results of headquarters efforts and receive guidance for next steps. Most NMFS constituents and partners believe more regional outreach is essential to improving NMFS' external relations.

NMFS' relationships with many constituents and partners clearly are strained, but the agency's recognition of needed enhancements is promising. In previous studies, Academy Panels have recommended practices for public and private fields that relate to communication with external groups. The Panels have compiled a series of principles of effective consultation, which were adapted for addressing consultation on transportation and housing issues. They also can be adapted to other programs in the federal system, including NMFS constituent and partner relations. The principles represent a rational manner of consultation by involving constituents and partners in a clearly defined process, affording those groups the capacity to participate effectively, providing feedback and gaining constituent and partner satisfaction with the process and outcome, and keeping them involved in the future. Figure 6-1 summarizes these principles relative to fishery management and other NMFS responsibilities. Appendix H discusses some of the material upon which the principles are based.

Figure 6-1: Principles of Effective Consultation With External Groups



FINDINGS AND RECOMMENDATIONS

Expanded and enhanced constituent relations and outreach activities should not be expected to mute all criticism. Some dissatisfaction with agency performance is to be expected, yet the current level of constituent frustration is a concern. NMFS can take measures to reduce the amount of displeasure that constituents and partners have with current constituent relations practices.

The findings below support the following recommendations that NMFS improve its relations with its constituents and partners. The recommendations call for creating a framework for outreach and constituent relations, and for linking the principles of effective consultation to NMFS' external interactions. Other recommendations relate to specific opportunities where the principles should be employed, including ones regarding the use of cooperative programs.

Framework Findings

- Most constituents and partners feel distanced from NMFS regions and science centers. NMFS' regional components do not regularly engage their constituents in active dialogues regarding fishery science, management, and economic issues.

- MAFAC, internal NMFS' teams, and others have recommended greater NMFS outreach and improved constituent relations. NMFS has issued a progress report outlining actions that the agency is taking to address some of those concerns.

- NMFS is forming an Office of Constituent Services and designing specific programs to respond to prior recommendations.

The Panel recommends that:

- **The NMFS Assistant Administrator pursue the development of explicit public affairs and constituent/partner relations programs, involving coordination between OCS and regional components.** Developing these programs should be expedited so that resource requirements can be included in the FY 2004 budget. Measurable benchmarks should be established within the programs to assess progress and impact.

- **The public affairs program be designed to portray NMFS as the authority on fishery management issues.** This program should continue to use the Internet to develop a public education web page, update the NOAA Fisheries image, and disseminate "Fishnews."

- **The design of the constituent and partner relations program include the Academy's principles of effective consultation as a basis for external interactions.**

Consultation with Constituents and Partners Findings

- Although directly involved in the Council process, states often are left out of NMFS' decision-making and notification. States believe they should be treated as equals in fisheries management decisions, as they often implement and enforce NMFS' regulations.

- Recreational fishers believe that NMFS views them as adversaries because they generally are kept "out of the loop." In the Southeast, however, NMFS invited recreational fishers to meetings in which they traded information for developing a charter survey program.

- The commercial fishers believe they will gain a sense of ownership in fishery management if they are included at the beginning of program or project development.

- NMFS often is criticized for its lack of openness and transparency in its science and management decisions. The perceived exclusivity leads to a lack of trust.

- Council meetings are the primary venues for NMFS to interact with constituents and partners, yet most meetings are focused on contentious issues and do not encourage constructive discussion or feedback among different interest groups.

- NMFS generally has an open-door policy. NMFS headquarters and regional personnel willingly meet with and listen to constituent and partner groups upon request. However, constituents and partners complain that the agency often does not respond to issues raised and concerns voiced.

The Panel recommends that:

- **The NMFS Assistant Administrator design and implement processes for developing and evaluating programs and updating policies that involve constituents and partners when they have expertise or will be affected.** This relates to Principle 1 of the Academy Panels' principles of effective consultation.

- **Regional Administrators create an electronic clearinghouse mechanism to provide constituents and partners with access to clear and concise information about programs and policies, current science and management issues, and FMP and regional regulatory actions.** This relates to Principle 2 of the Academy Panels' principles of effective consultation.

- **Regional Administrators designate individuals to respond in a timely manner to information requests by constituents and partners.** These individuals should be identified early in the program or policy development process as the point of contact for external participants. This relates to Principle 3 of the Academy Panels' principles of effective consultation.

- **The NMFS Assistant Administrator issue a policy requiring responses to constituents' and partners' concerns and recommendations as part of the decision process.** Those designated primary points of contact should respond promptly, address these concerns, and provide the rationale for the agency's decisions. This relates to Principle 4 of the Academy Panels' principles of effective consultation.

Outreach Opportunities Findings

- Although NMFS' directors and managers meet with constituents and partners upon request, regional components are rarely seen as reaching out for input and advice on issues.

- NMFS-sponsored symposia or conferences, such as *RecFish 2000*, that could be used to elicit inputs and exchange views but are relatively infrequent.

- Constituents and partners sometimes do not understand, and mistrust, the basis of the NMFS and the councils' science and management decisions.

- Constituents and partners question whether NMFS and the councils understand their objectives and practices.

The Panel recommends that:

- **The NMFS Assistant Administrator adopt policies that promote direct contact and knowledge exchange between NMFS and council officials and their constituents and partners.** For example, NMFS and council staff could be required to participate in the fishery with which they are most involved to exchange information with the fishers.

- **Regional Administrators take the lead to initiate dialogue with groups of constituents and partners on new or updated programs and policies.** Making these contacts should become an explicit part of an individual's performance evaluation.

- **Regional Administrators lead the regions and science centers in collaborating with the councils to provide forums—including open houses and conferences at least annually to promote discussion and exchange visions with their constituents and partners.**

Cooperative Programs Findings

- With proper design and development, cooperative programs between fishers and NMFS have achieved mutually agreed objectives. However, fishers sometimes worry that the data collected through these programs will be used against them.

- Cooperative programs between NMFS and states have gained support and been seen as mutually beneficial to both participants. Coastal states have partnered with NMFS on

joint enforcement programs, and states and the agency are jointly developing cooperative statistics programs on both coasts and in the Gulf of Mexico.

- NMFS field extension officers, or dockside presence, have been seriously eroded. They are unlikely to increase given current resource constraints. Most of the fishers' direct contact with NMFS at the docks is with enforcement agents.

- Jointly developed and administered programs are likely to have multiple benefits, including constituent goodwill and greater congressional support.

The Panel recommends that:

- **The NMFS Assistant Administrator, in collaboration with regional administrators, substantially expand cooperative programs in the areas of research, statistics, and dockside extension services to improve external relations.** Additional cooperative enforcement activities also may be warranted in the future. These programs should foster the exchange of information and views with NMFS' constituents and partners, in line with the principles of effective consultation. Actively involving environmental groups in cooperative programs should be encouraged whenever possible.

PANEL AND STAFF MEMBERS

PANEL

Mary Gade, *Panel Chair*—Partner, Sonnenschein, Nath & Rosenthal. Director, Illinois Environmental Protection Agency. Former positions with the U.S. Environmental Protection Agency, including Assistant Regional Counsel, Associate Regional Counsel, Deputy Director, Waste Management Division, and Associate Division Director for Superfund, Chicago, Illinois; Deputy Assistant Administrator, Office of Solid Waste and Emergency Response, Washington, D.C.

Terry Garcia[*]**—**Executive Vice President, Mission Programs, National Geographic Society. Former Assistant Secretary for Oceans and Atmosphere, Department of Commerce, Deputy Administrator, National Oceanic and Atmospheric Administration, General Counsel, NOAA, and Partner, Manatt, Phelps, & Phillips, Los Angeles.

Jonathan B. Howes—Special Assistant to the Chancellor and Professor of Planning and Policy, University of North Carolina at Chapel Hill. Former Secretary, Department of Environment, Health and Natural Resources (DEHNR), State of North Carolina; Research Professor and Director, Center for Urban and Regional Planning, University of North Carolina; Mayor, Town of Chapel Hill; Director, Urban Policy Center, Urban America, Inc.; Director, State and Local Planning Assistance, U.S. Department of Housing and Urban Development.

Theodore M. Schad—Consultant on Water Resources Management. Former Chief Water Resources Specialist and Deputy Director, Legislative Reference Service, Library of Congress; Staff Director, Senate Select Committee on Water Resources; Executive Director, National Water Commission; Deputy Executive Director, Commission on Natural Resources, National Academy of Sciences.

Susan Shipman[*]—Director of Marine Fisheries Section, Coastal Fisheries Division, Georgia Department of Natural Resources (GDNR); Chair, Atlantic States Marine Fisheries Commission, Member and former Chair, South Atlantic Regional Fishery Management Council. Former Chief, Marine Fisheries Branch, and Program Leader, Commercial Fisheries Program, GDNR.

PROJECT STAFF

J. William Gadsby—*Director, Management Studies*.
National Academy of Public Administration; Former Senior Executive Service; Director, Government Business Operations Issues, Federal Management Issues and Intergovernmental Issues, U.S. General Accounting Office; Assistant Director, Financial Management Branch, Office of Management and Budget.

[*] *Not an Academy Fellow*

Ray Kammer—*Senior Panel and Staff Advisor*.
Former Director, National Institute of Standards and Technology (NIST); Chief Financial Officer (Acting) of the Department of Commerce; Deputy Director, National Institute of Standards and Technology; Deputy Under Secretary of Commerce for Oceanic and Atmospheric Administration in the National Oceanic and Atmospheric Administration (NOAA).

Arnold E. Donahue—*Project Director*.
Consultant on defense, intelligence and information technology; project director on recent Academy studies on military sex crime investigations, geographic information, and the Global Positioning System. Former Senior Executive Service; Chief, Intelligence and Command, Control, and Communications, U.S. Office of Management and Budget; Intelligence Officer, Central Intelligence Agency.

Ruth Ann Heck—*Senior Consultant*.
Consultant, National Academy of Public Administration. Former Assistant Director, Health, Education and Human Services Division, United States General Accounting Office.

W. Peter Jensen—*Senior Consultant*.
Former Director and Deputy Director, Fisheries Service, Maryland Department of Natural Resources; Chief, Fisheries Management Operations, National Marine Fisheries Service; Program Leader, Marine Mammal and Endangered Species, NMFS; Chairman, Maryland Sea Grant Advisory Board; Member, National Advisory Committee on Highly Migratory Species; and a former member of the Marine Mammal Fisheries Interaction Advisory Committee.

Dr. Joseph P. Mitchell III—*Research Associate.*
Program Associate, Management Studies Program, National Academy of Public Administration. Adjunct Professor, Center for Public Administration and Public Policy, Virginia Polytechnic Institute and State University.

Braddock J. Spear—*Research Assistant*.
Staff, Management Studies Program, National Academy of Public Administration. Former Coastal Planning Assistant, Coastal Resources Center, University of Rhode Island. Master of Arts in Marine Affairs with emphasis on Fisheries Policy, University of Rhode Island.

William P. Shields—*Editor*.
Director of Communications, National Academy of Public Administration; Adjunct Professor of Government, American University. Former Program Associate, Management Studies Program, National Academy of Public Administration; Program Coordinator and Research Assistant, American University; Mayoral Writer, Executive Office of the Mayor of Providence, Rhode Island.

Martha S. Ditmeyer—*Project Associate.*
Former staff of the Massachusetts Institute of Technology, and the Communications Satellite Corporation, Washington, D.C. and Geneva, Switzerland.

APPENDIX B

METHODOLOGY

The project staff reviewed a large volume of reports on the study topics. These included:

- Numerous internal NMFS documents addressing program and spending plans, management operations, and budget and resource management issues.
- Reports by external review and advisory groups, such as MAFAC, the General Accounting Office (GAO), NOAA, and the Department of Commerce; and the FY 2000 report prepared by the Director on the National Institutes of Science and Technology, entitled *An Independent Assessment of the Resource Requirements for the National Marine Fisheries Service*.
- A large number of studies conducted by NAS, mainly its Oceans Studies Board, which not only served as a major basis for its own review for the science portion of this study, but are extremely insightful on a wide range of scientific, technical, personnel, and economic issues.

A selected bibliography attached as Appendix E contains a list of major documentary sources used in the study. Of particular note is the large volume of legal cases and court decisions reviewed for the litigation analysis (See Appendix G). Lexis-Nexis and Westlaw were primary sources for this documentary material.

The Panel and staff received briefings directly from the NMFS Assistant Administrator, the NOAA General Counsel, the staff of congressional authorization and appropriation committees, and representatives of major fishing and environmental interest groups. The staff engaged in extensive interviews at NOAA general counsel and management offices, NMFS headquarters, its regions, their science centers, and several labs, and council chairs and staff. These include detailed discussion with regional administrators and science center directors or their deputies, as well as the heads of most of the major division and subordinate offices of NMFS headquarters, regions, and science centers. Separate interviews were held with field representatives of both NOAA general counsel and NMFS Office of Law Enforcement. NMFS' central Office of Management and Budget and the finance centers of the regions and science centers were particularly helpful in supplementing the budget data with information on specific activities and the resource and personnel information associated with them. Two interstate commissions, those for Atlantic and Pacific states, and several state representatives who were members of both these commissions and regional councils were also interviewed. In all, the staff visited and interviewed personnel from all major headquarters components, four of five regions and science centers, four out of eight councils, and two out of the three interstate commissions. A listing of individuals interviewed is shown in Appendix F.

Interviews of individuals actively engaged in fisheries management were supplemented with a wide range of contacts with personnel not directly or currently engaged in fisheries management. They were, however, familiar with fisheries management issues and NMFS and either from within government or actively involved in fishery management concerns. These included numerous representatives of the commercial and recreational fishing industry, conservation and environmental groups, and state representatives. Former NOAA general counsel representatives

and congressional staff shared their perspectives, and current representatives from the Office of Management and Budget, the Congressional Research Service, the Coast Guard, and the Department of Commerce were interviewed.

In addition, the staff participated in the open meetings of the NAS committee that reviewed the scientific issues addressed in this study. In addition to the Committee members, these meetings included NMFS scientific representatives, participants in past science studies of marine fisheries, general counsel personnel, and interest group representatives. The full NAS report is published separately. The Findings and Recommendations from the NAS report are reprinted as Chapter 5 of this report.

The staff also benefited from the work of two on-going studies, one by the PEW Oceans Commission, chaired by Leon Pannetta, and another by a presidential Commission on Ocean Policy, chaired by Admiral James Watkins. Staff participated in several of the commission's public meetings, and exchanged information and perspectives with the staffs of these commissions.

The study methodology included in-depth exploration of several fisheries to gain a deeper understanding of the fisheries management process, regulatory problems, litigation issues, and possible solutions. These studies focused on the New England groundfish, Gulf of Mexico shrimp, and Alaska groundfish fisheries.

The study methodology, project staff analyses, findings and recommendations, and report drafts were provided to the Academy Panel during four meetings between October 2001 and May 2002. In addition to hearing from numerous key witnesses at these meetings, the Panel provided direction on the study's approach, the scope of research, and suggested contacts.

The sponsoring organizations, NMFS and staff from appropriate congressional committee, were involved in formulating the study scope, were provided progress reports as the study progressed, and were provided a draft of the report for review and comment. Comments received were incorporated into the report as appropriate.

GLOSSARY

Acceptable Biological Catch (ABC): A scientific calculation of the sustainable harvest level of a fishery as determined by federal fisheries biologists

Biological Opinion (BiOp or BO): A document prepared by NMFS scientists to determine whether an agency action threatens the continued existence of a listed species or adversely modifies its critical habitat

Biomass: The total weight of organisms in a defined group, such as a fish stock or year-class

Bycatch*: Fish which are harvested in a fishery and which are not sold or kept for personal use, and includes economic and regulatory discards. Such term does not include fish released alive under a recreational catch and release fishery management program

Catch: Fish caught but not landed, including discards and releases

Charter fishing*: Fishing from a vessel carrying a passenger(s) for hire, who is engaged in recreational fishing

Commercial fishing*: Fishing in which the fish harvested, either in whole or in part, are intended to enter commerce or enter commerce through sale, barter or trade

Economic discard*: Fish which are the target of a fishery, but which are not retained because they are of an undesirable size, sex, or quality, or for other economic reasons

Endangered species: A species is considered "endangered" if it is in danger of extinction throughout a significant portion of its range; it is considered "threatened" if it is likely to become an endangered species

Environmental Assessment (EA): Analysis to determine whether a proposed action will have a significant impact on the human environment; it typically concludes with a Finding of No Significant Impact (FONSI)

Environmental Impact Statement (EIS): Analysis that must be done for every major federal action significantly affecting the quality of the human environment; it provides the scientific and analytic basis for comparing and assessing alternatives to the proposed action, discloses both the direct and indirect environmental effects as well as any cumulative impacts that alternatives would have on the environment

Essential Fish Habitat*: Those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity

* Term or phrase as defined in the Magnuson-Stevens Fishery Conservation and Management Act, Section 3 Definitions (16 U.S.C. 1802).

Exclusive Economic Zone (EEZ): The zone contiguous to the territorial sea of the United States, the inner boundary of which is a line coterminous with the seaward boundary of each of the coastal states and the outer boundary is a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured

Fishery*: (a) One or more stocks of fish which can be treated as a unit for purposes of conservation and management and which are identified on the basis of geographical, scientific, technical, recreational, and economic characteristics; and (b) any fishing for such stocks

Fishery dependent data: Data collected on a fish or a fishery from sport fishers, commercial fishers and seafood dealers

Fishery independent data: Data collected on a fish by a scientist who catches the fish himself, rather than depending on fishermen or seafood dealers

Fishery Management Council (FMC): One of eight regional groups established under Section 302 of the Magnuson-Stevens Fishery Conservation and Management Act to prepare and oversee fishery management plans for fisheries conducted primarily within the Exclusive Economic Zone

Fishery Management Plan (FMP): A plan developed by a regional fishery management council, or the Secretary of Commerce under certain circumstances, to manage a fishery resource in the Exclusive Economic Zone pursuant to the Magnuson-Stevens Fishery Conservation and Management Act. It includes data, analyses and management measures for a fishery

Groundfish: A species of fish, usually finfish, that lives on or near the sea bottom part of the time

Highly Migratory Species (HMS) *: Tuna species, marlin, ocean sharks, sailfishes, and swordfish.

Individual fishing quota*: A Federal permit under a limited access system to harvest a quantity of fish, expressed as a unit or units representing a percentage of the total allowable catch of a fishery that may be received or held for exclusive use by a person

Landings: The number or poundage of fish unloaded at a dock by commercial fishers or brought to shore by recreational fishers for personal use. Landings are reported at the points at which the fish are brought to shore

Marine Interstate Fisheries Commission (MFC): One of three compacts of States (Atlantic, Gulf and Pacific) that cooperatively addresses fishery management issues in state jurisdictions

Maximum Sustainable Yield (MSY): A management goal specifying the largest long-term average catch or yield (in terms of weight of fish) that can be taken, continuously from a stock or

* Term or phrase as defined in the Magnuson-Stevens Fishery Conservation and Management Act, Section 3 Definitions (16 U.S.C. 1802).

stock complex under prevailing ecological and environmental conditions, without reducing the size of the population

Optimum Yield (OY) *: (a) The amount of fish that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems; (b) is prescribed as such on the basis of the from the fishery, as reduced by any relevant economic, social or ecological factor; and (c) in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the maximum sustainable yield in such fishery

Overfishing/overfished*: A rate or level of fishing mortality that jeopardizes the capacity of a stock or stock complex to produce the maximum sustainable yield on a continuing basis

Programmatic Environmental Impact Statement: Comprehensive document in which the agency considers a number of related actions or projects being decided within one program; looks to the environmental consequences of a program as a whole

Rebuilding plan: Plan required for all overfished species; must rebuild species within ten years or, for longer-lived species, within a generation

Recovery plan: Plan for the conservation and survival of threatened and endangered species; plan describes necessary site-specific management actions, measurable criteria to determine when the species should be removed from the list, and estimates of the time required to carry out those measures as well as their cost

Recreational fishing*: Fishing for sport or pleasure

Stock: A relatively discrete and identifiable unit of fish or other exploited species, often referring to a management unit

Stock assessment: The biological assessment of the status of a particular fish species. It provides the official estimates of stock size, spawning stock size, fishing mortalities, recruitment and other parameters

* Term or phrase as defined in the Magnuson-Stevens Fishery Conservation and Management Act, Section 3 Definitions (16 U.S.C. 1802).

ACRONYMS

ABC	Acceptable Biological Catch
ACCSP	Atlantic Coast Cooperative Statistics Program
AOP	Annual Operating Plan
BCF	Bureau of Commercial Fisheries (DOI)
CCF	Capital Construction Funds
CEA	Cooperative Enforcement Agreement
DOJ	Department of Justice
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESU	Evolutionary Significant Unit
EEZ	Exclusive Economic Zone
FMC	Fishery Management Council
FMP	Fishery Management Plans
FOG	Fisheries Obligation Guarantee
FONSI	Finding of No Significant Impact
FTE	Full Time Equivalent
GCF	General Counsel for Fisheries
HMS	Highly Migratory Species
JEA	Joint Enforcement Agreements
MAFAC	Marine Fisheries Advisory Committee
MFCMA	Magnuson Fishery Conservation and Management Act
MMPA	Marine Mammal Protection Act
MSA	Maguson-Stevens Act
MSMC	Multi-Species Monitoring Committee
NAS	National Academy of Sciences
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRC	National Research Council
NRDC	Natural Resource Defense Council
OCS	Office of Constituent Services
OR&F	Operations, Research and Facilities
PAA	Programs, Projects, and Activities
PAC	Procurement, Acquisition and Construction
PCSR	Pacific Coast Salmon Recovery
PEIS	Programmatic Environmental Impact Statement
RFA	Regulatory Flexibility Act
SAIP	Stock Assessment Improvement Plan
SEFSC	Southeast Fisheries Science Center

SEIS	Supplemental Environmental Impact Statement
SERO	Southeast Regional Office
SFA	Sustainable Fisheries Act of 1996
VMS	Vessel Monitoring System

SELECTED BIBLIOGRAPHY

Boreman, John, et al (eds.). *Northwest Atlantic Groundfish: Perspectives on a Fishery Collapse.* Bethesda, MD: American Fisheries Society, 1997.

Executive Office of the President, Office of Management and Budget. *The President's Management Agenda.* Washington, D.C.: Fiscal Year 2002.

Marine Fisheries Advisory Committee. *A Perspective on the National Marine Fisheries Service: Issues and Recommendations*. Washington, D.C.: December 2000.

National Academy of Public Administration. *Evaluating Methods for Monitoring and Improving HUD-Assisted Housing Programs.* Washington, D.C.: National Academy of Public Administration 2000.

National Academy of Public Administration. *Improving the NOAA Budget and Financial Management Processes.* Washington, D.C.: National Academy of Public Administration, 2000.

National Oceanic and Atmospheric Administration. *Budget Estimates Fiscal Year 2001* and *Fiscal Year 2003*. Washington D.C.

National Oceanic and Atmospheric Administration. *Northwest Fisheries Science Center: West Coast Groundfish Research Plan.* Washington, D.C.: circa 2000.

National Oceanic and Atmospheric Administration. *National Marine Fisheries Service: Proposed Implementation of a Fishing Vessel Registration and Fisheries Information System.* Silver Spring, MD: December 1998.

National Oceanic and Atmospheric Administration. *National Marine Fisheries Service: Status of Fisheries of the United States.* Silver Spring, MD: January 2001.

National Oceanic and Atmospheric Administration. *National Marine Fisheries Service: Strategic Plan For Fisheries Research.* Silver Spring, MD: December 2001.

National Oceanic and Atmospheric Administration. *National Marine Fisheries Service: The Saltonstall-Kennedy Grant Program: Fisheries Research and Development.* Silver Spring, MD: August 2000.

National Oceanic and Atmospheric Administration. *National Marine Fisheries Service: Stock Assessment Improvement Plan*. Washington D.C.: September 2001.

National Research Council. *An Assessment of Atlantic Bluefin Tuna.* Washington, D.C.: National Academy Press, 1994.

National Research Council. *Improving the Collection, Management, and Use of Marine Fisheries Data.* Washington, D.C.: National Academy Press, 2000.

National Research Council. *Improving Fish Stock Assessments.* Washington, D.C.: National Academy Press, 1998.

National Research Council. *Improving the management of U.S. Marine Fisheries.* Washington, D.C.: National Academy Press, 1994.

National Research Council. *Marine Protected Areas: Tools For Sustaining Ocean Ecosystems.* Washington, D.C.: National Academy Press, 2001.

National Research Council. *Recruiting Fishery Scientists: Workshop on Stock Assessment and Social Science Careers.* Washington, D.C.: National Academy Press, 2000.

National Research Council. *Review of Northeast Fishery Stock Assessments.* Washington, D.C.: National Academy Press, 1998.

National Research Council. *Sharing the Fish: Toward A National Policy On Individual Fishing Quotas.* Washington, D.C.: National Academy Press, 1999.

National Research Council. *Sustaining Marine Fisheries.* Washington, D.C.: National Academy Press, 1999.

National Research Council. *The Community Development Quota Program in Alaska.* Washington, D.C.: National Academy Press, 1999.

U.S. Department of Commerce. *National Institute of Standards and Technology: An Independent Assessment of the Resource Requirements for the National Marine Fisheries Service.* Gaithersburg, MD: June 2000.

U.S. Department of Commerce. *National Oceanic and Atmospheric Administration: FY 2001 Annual Operation Plan.* Version 2. Silver Spring, MD: February 2001.

U.S. Department of Commerce. *National Oceanic and Atmospheric Administration: FY 2003 Budget Summary.* Silver Spring, MD: February 2002.

U.S. Department of Commerce. *National Oceanic and Atmospheric Administration: Fisheries Data Acquisition Plan.* Silver Spring, MD: September 1998.

U.S. Department of Commerce. *National Oceanic and Atmospheric Administration: Fisheries of the United States, 1999.* Washington, D.C.: October 2000.

U.S. Department of Commerce. *National Oceanic and Atmospheric Administration: Fisheries of the United States, 2000.* Washington, D.C.: August 2001.

U.S. Department of Commerce. *National Oceanic and Atmospheric Administration: Our Living Oceans—Report on the Status of U.S. Living Marine Resources.* Washington, D.C.: June 1999.

U.S. Department of Commerce. *National Oceanic and Atmospheric Administration: Strategic Plan.* Silver Spring, MD: May 1997.

INDIVIDUALS INTERVIEWED OR CONTACTED

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Office of Finance and Administration
Wyevetra Jordan, Budget Analyst, Team Lead, NMFS
Peter Maxey, Chief, Budget, Policy and Products Integration Division
Jill R. Meldon, Chief, Formulation and Analysis Division

Office of the General Counsel
Kevin Collins, Assistant General Counsel for Protected Resources and Habitat
Eileen Cooney, Regional Counsel, Northwest
Joel MacDonald, Regional Counsel, Northeast
Mariam McCall, Assistant General Counsel for Sustainable Fisheries
Mike McLemore, Regional Counsel, Southwest
Craig O'Connor, General Counsel
Jonathan Polland, Staff Attorney, Alaska

Office of Policy and Strategic Planning
Rodney Weiher, Chief Economist

NATIONAL MARINE FISHERIES SERVICE

Headquarters
William Hogarth, Assistant Administrator for Fisheries
John Oliver, Deputy Assistant Administrator for Operations
Rebecca Lent, Deputy Assistant Administrator for Regulatory Programs
Laurie Allen, Senior Policy Advisor, Regulatory Affairs
Carol Ballew, Former Executive Director, Resource Requirements Report
Laurel Bryant, Constituent Affairs Coordinator, Office of Constituent Services
James Burgess, Chief, Budget Development and Appropriations, Office of Management and Budget
Wanda Cain**,** Acting Deputy Director, Office of Protected Resources
Linda Chavez, Deputy Director, Office of Constituent Services
Jack Dunnigan, Director, Office of Sustainable Fisheries
Bob Gorrell, Capacity Reduction/Disaster Assistance Coordinator, Office of Sustainable Fisheries
Mark Holliday, Chief, Fisheries Statistics and Economics Division, Office of Science and Technology
Norris Jeffrey, Management Analyst, Office of Management and Budget
Dale Jones, Chief, Office of Law Enforcement
Don Knowles, Director, Office of Protected Resources
James Lecky, Assistant Administrator, Protected Species, Southern Region
Margaret Lorenz, Office of Protected Resources

James McCallum, Policy Analyst, Office of Management and Budget
Bruce Morehead, Acting Director, Office of Sustainable Fisheries
Maureen Pulver, National FRS Manager, Budget Execution Division, Office of Management and Budget
Alan Risenhoover, Acting Director, Office of Management and Budget
Richard Schaefer, Director, Office of Constituent Services
Richard Surdis, Chief, Regulatory Services Division, Office of Sustainable Fisheries
Ann Terbush, Chief, Permits, Conservation and Education Division, Office of Protected Resources
Donna Wieting, Acting NEPA Coordinator and Chief, Marine Mammal Conservation Division, Office of Protected Resources
Phil Williams, Acting Deputy Director for Protected Resources

Northeast Regional Office
Mary Colligan, Assistant Regional Administrator for Protected Resources
Peter Colosi, Assistant Regional Administrator for Habitat Conservation
George Darcy, Assistant Regional Administrator for Sustainable Fisheries
Pat Kurkul, Regional Administrator
Chris Mantzaris, Deputy Regional Administrator
Howard Mears, Director, State, Federal and Constituent Program Office
Earl Meredith, Cooperative Research Coordinator
Laura Robinson, Chief, Management and Budget
Roland Tanner, Chief, Information Resource Management

Northeast Science Center
John Boreman, Deputy Director
Peggy Donnelly, Budget Analyst
Teri Frady, Chief, Research Communications
Phil Logan, Chief, Social Services Branch
Richard Merrick, Chief, Protected Species Branch
Jack Moakley, Chief, Office of Management and Information
Steve Murawski, Chief, Population Dynamics Branch
Fred Serchuk, Chief, Resource Evaluation and Assessment Division

Southeast Regional Office
Georgia Cranmore, Assistant Regional Administrator for Protected Resources
Stephen Holiman, Director, Fisheries Economics Office
Michael Justen, Fishery Management Specialist
Andy Mager Jr., Assistant Regional Administrator for Habitat Conservation
Anibal Mulero, Enforcement Program Administrator
Gary Petrae, Acting Deputy Regional Administrator
Joseph Powers, Acting Regional Administrator
Christopher Smith, Public Affairs Officer
Peggy Solomon, Head, Budget and Information Team
Frederick Sutter, Fisheries Permit Administrator
Bob Stone, Deputy Special-Agent-in-Charge

Jim Weaver, Assistant Regional Administrator for Sustainable Fisheries

Southeast Science Center
Alex Chester, Acting Deputy Director
Roseta Lima, Budget Officer
James Nance, Chief, Fishery Management Branch
Jerry Scott, Director, Sustainable Fisheries Division
Nancy Thompson, Director
Peter Thompson, Manager, Coral Reef Program
Roger Zimmerman, Director, Galveston Lab

Northwest Regional Office
Donna Darm, Assistant Regional Administrator for Protected Resources
Rosemary Furfey, Natural Resources Specialist, Protected Resources Division
Garth Griffin, Branch Chief, Protected Resources Division
Spencer Hovekamp, Environmental Policy Coordinator
Brigitte Kenny, Administrative Officer
Robert Lohn, Regional Administrator
Bill Robinson, Assitant Regional Administrator for Sustainable Fisheries
Joe Scordino, Deputy Regional Administrator
Russell Strach, Fisheries Administrator
Michael Tehan, Chief, Oregon State Branch, Habitat Conservation Division

Northwest Science Center
Elizabeth Clarke, Director of Fisheries Resources Analysis and Monitoring Division
Jeff Jard, Acting Director, Conservation Biology Division
Celina Hedger, Assistant to the Deputy Science Director
Robert Iwamoto, Director, Resources Enhancement and Utilization Technologies Division
Linda Jones, Deputy Director
Carol Murray, Strategic Planner
Mike Shiewe, Director, Fish Ecology Division
John Stein, Director, Environmental Conservation Division
Usha Varanasi, Director

Alaska Regional Office
James Balsiger, Regional Administrator
Ronald Berg, Deputy Regional Administrator
John Goreman, Chief Operating Officer
Peter Jones, Budget Officer

Alaska Science Center
Lori Budbill, Executive Officer
Jim Coe, Deputy Director
Doug Demaster, Director

FISHERY MANAGEMENT COUNCILS

Gulf of Mexico Fishery Management Council
Steven Atran, Population Dynamics
Peter Hood, Fishery Biologist
Tony Lamberte, Economist
Rick Leard, Senior Biologist
Cathy Readinger, Administrative Officer
Wayne Swingle, Executive Director
Roy Williams, Chair

Mid-Atlantic Fishery Management Council
Daniel Furlong, Executive Director
Christopher Moore, Deputy Director
Rick Savage, Chair
Valerie Whalen, Fishery Management Specialist

New England Fishery Management Council
Anne Beaudreau, Fishery Technician
Tom Hill, Chair
Paul Howard, Executive Director
Chris Kellogg, Deputy Executive Director

Pacific Fishery Management Council
Donald McIsaac, Executive Director
Jim Seger, Economic Analysis Coordinator
Dan Waldeck, Staff Officer

MARINE FISHERIES COMMISSIONS

Atlantic State Marine Fisheries Commission
Dave Borden, Commissioner, Rhode Island
Jack Dunnigan, Executive Director
George LaPointe, Commissioner, Maine
Preston Pate, Commissioner, North Carolina
Jack Travelsted, Commissioner, Virginia

Pacific States Marine Fisheries Commission
Randy Fisher, Executive Director

OTHER FEDERAL AND STATE OFFICIALS

Lt. Timothy Brown, Office of Fisheries Law Enforcement, U.S. Coast Guard
Eugene Buck, Senior Analyst, Resources, Science and Industry Division, Congressional Research Service
Lt. Commander Michael Cerne, Office of Fisheries Law Enforcement, U.S. Coast Guard
Carol Nurse, Office of the Inspector General, Department of Commerce
Gary Reisner, NMFS Examiner, Office of Management and Budget
John Sisk, Special Assistant to the Governor of Alaska

U.S. Commission on Ocean Policy
Tom Kitsos, Executive Director
James Watkins, Chairman

U. S. House of Representatives
José Serrano, Ranking Minority, Committee on Commerce, Justice, State, the Judiciary and Related Agencies

U.S. Senate
Luke Nachbar, Professional Staff Member, Senate Appropriations Subcommittee, Committee on Commerce, Justice, State, and Judiciary Appropriations
Margaret Spring, Senior Counsel, Oceans, Atmosphere and Fisheries Subcommittee, Committee on Commerce, Science and Transportation

CONSTITUENT AND RESEARCH GROUPS

Natural Resources Defense Council
Sarah Chasis, Senior Attorney and Director, Water and Coastal Program
Brad Sewell, Senior Project Attorney, Water and Coastal Program

The Ocean Conservancy
Jane Davenport, Program Counsel for Protected Species
Coby Dolan, Program Counsel for Fish Conservation
Sonja Fordham, Fish Conservation Project Manager
Jack Sobel, Director of Ecosystem Programs
Eli Weissman, Ocean Governance Program Manager

Pew Oceans Commission
Steve Ganey, Fisheries Director
Christopher Tulou, Executive Director

OTHER

Lee Crockett, Executive Director, The Marine Fish Conservation Network
Richard Gutting, Jr., President, National Fisheries Institute
Eldon Greenberg, Attorney, Garvey, Schubert & Barer
Robert Hayes, Lawyer for Coastal Conservation Association
Judy Jamison, Executive Director, Gulf and South Atlantic Fisheries Foundation
Jay Johnson, Attorney, Ball Janik LLP
Bob Jones, Executive Director, Southeast Fisheries Association
Phil Kline, Fisheries Program Director, American Oceans Campaign
Gerry Leape, Management Program Director, National Environmental Trust
Rodney Moore, Executive Director, West Coast Seafood Processors Association
Eric Schmidt, Licensed Captain, Commercial Fishing Vessel
Bob Spaeth, Executive Director, Southern Offshore Fishing Association
Bob Zales, Owner/Operator, Zodiac Charter Fleet

COURT DECISIONS REVIEWED

2002
Midwater Trawlers Cooperative v. DOC [2002 U.S. App. LEXIS 3419][1]

2001
Ace Lobster Company v. Evans [2001 LEXIS 6050]
Alsea Valley Alliance v. Evans [161 F. Supp. 2d 1154]
Conservation Law Foundation v. Evans [2001 U.S. Dist. LEXIS 21991]
Conservation Law Foundation v. Evans [131 F. Supp. 2d 19]
Center for Biological Diversity v. NMFS [2001 U.S. Dist. LEXIS 20862]
Cook Inlet Beluga Whale v. Daley [156 F. Supp. 2d 16]
Defenders of Wildlife v. Hogarth [177 F. Supp. 2d 20862]
Hall v. Evans [2001 LEXIS 6038]
Humane Society v. Clinton [236 F. 3d 1320]
NC Fisheries Association v. Evans [172 F. Supp. 2d 792]
New York v. Evans [162 F. Supp. 2d 161]
NRDC v. Daley [168 F. Supp. 2d 1149]
Pacific Coast Federation of Fishermen's Associations v. NMFS [2001 U.S. App. LEXIS 19742]
Recreational Fishing Alliance v. Evans [2001 LEXIS 15048]

2000
American Oceans Campaign v. Daley [2000 LEXIS 15991]
AML Intl. v. Daley [107 F. Supp. 2d 90]
Blue Water Fishermen's Association v. Mineta [122 F. Supp. 2d 150]
Brower v. Daley [2000 U.S. Dist. LEXIS 4624]
Connecticut v. Daley [204 F. 3d 413]
Federation of Fly Fishers v. Daley [2000 U.S. Dist. LEXIS 20450]
Greenpeace v. Mineta [122 F. Supp. 2d 150]
Greenpeace v. NMFS [106 F. Sup. 2d 1066]
Greenpeace v. NMFS [80 F. Supp. 2d 1137]
Metcalf v. Daley [2000 U.S. LEXIS 12837]
NRDC v. Daley [2000 U.S. App. LEXIS 7602]
Prowler Partnership v. NMFS [242 F. 3d 383]

1999
American Rivers v. NMFS [1999 U.S. APP. LEXIS 3860]
Dell v. DOC [1999 LEXIS 18796]
Greenpeace v. NMFS [55 F. Supp. 2d 1248]
Southern Offshore Fishing Association v. Daley [55 F. Supp. 2d 1336]
Washington v. Daley [173 F. 3d 1158]
Parker v. NMFS [1999 LEXIS 4732]

[1] Because the U.S. Court of Appeals did not rule on this case until 2002, it is not included in our quantitative analysis, which focuses on decided cases by the highest court ruling on a challenge from 1977 to 2001.

Commonwealth of Massachusetts v. Daley [1999 U.S. App. LEXIS 2878]

1998
Cape Cod Community Hook Fisherman's Association v. Daley [30 F. Supp. 2d 111]
Foss v. NMFS [161 F. 3d 584]
MA Audubon Society v. Daley [31 F. Supp. 2d 189]
MA Division of Marine Fisheries v. Daley [10 F. Supp. 2d 74]
NC Fisheries Association v. Daley [27 F. Supp. 2d 650]
Native Village of Eyak v. NMFS [154 F. 3d 1090]
Oregon Natural Resources Council v. Daley [6 F. Supp. 2d 1139]
Smee v. NMFS [1998 LEXIS 18754]
Southern Offshore Fishing Association v. Daley [995 F. Supp. 1411]

1997
Associated Fisheries of ME v. Daley [1997 U.S. App. LEXIS 24436]
F/V Robert Michael v. Kantor [961 F. Supp. 11]
NC Fisheries Association v. Daley [16 F. Supp. 2d 647]
Norbird Fisheries v. NMFS [112 F. 3d 414]
Texas Shrimp Association v. Daley [1997 U.S. Dist. LEXIS 17875]
Wright v. NMFS [112 F. 3d 518]

1996
Alliance Against IFQs v. Brown [84 F. 3d 343]
Center for Marine Conservation v. Brown [917 F. Supp. 1128]
Fishermen's Dock Cooperative v. Brown [U.S. App. LEXIS 1567]
NC Fisheries Association v. Brown [917 F. Supp. 1108]
Ramsey v. Kantor [96 F. 3d 434]
Trawler Diane Marie v. Kantor [1996 U.S. App. LEXIS 18120]

1995
Idaho Rivers United v. NMFS [1995 U.S. Dist. LEXIS 22084]
J. H. Miles & Company v. Brown [910 F. Supp. 1138]
Parravano v. Babbitt [70 F. 3d 539]

1994
Alcoa v. NMFS [1994 U.S. Dist. LEXIS 21612]
Idaho Department of Fish and Game v. NMFS [850 F. Supp. 886]
Organized Fishermen of Florida v. Franklin [846 F. Supp. 1569]

1993
Conservation Law Foundation v. Franklin [989 F. 2d 54]
Center for Marine Conservation v. Brown [1993 U.S. Dist. LEXIS 3801]
Greenpeace Action v. Franklin [982 F. 2d 1342]
Northwest Resource Information Center v. NMFS [1993 U.S. Dist. LEXIS 19549]

1992

NW Environmental Defense Center v. Brennan [958 F. 2d 930]
United Boatmen of NJ v. Mosbacher [1992 LEXIS 664]
Coastal Conservation Association v. Mosbacher [1992 LEXIS 576]

1991
C&W Fish Company v. Fox [289 U.S. App. DC 323]
Southeastern Fisheries Association v. Mosbacher [773 F. Supp. 435]
Sea Watch International v. Mosbacher [762 F. Supp. 370]
Washington Crab Producers v. Mosbacher [924 F. 2d 1438]

1990
National Fisheries Institute v. Mosbacher [732 F. Supp. 210]
Southeastern Fisheries Association v. Mosbacher [42 F. Supp. 692]
Stinson Canning Co. v. Mosbacher [731 F. Supp. 32]

1989
Kramer v. Mosbacher [878 F. 2d 134]
Midwater Trawlers Cooperative v. Mosbacher [727 F. Supp. 12]
Readenour v. Mosbacher [1989 LEXIS 5459]

1988
Associated Vessels Services v. Verity [688 F. Supp. 13]
Islamorada Charter Boat Association v. Verity [676 F. Supp. 244]
Makah Indian Tribe v. Verity [1988 LEXIS 15340]
Northwest Environmental Defense Center v. Evans [1988 U.S. Dist. LEXIS 8977]
NW Environmental Center v. Gordon [849 F. 2d 1241]

1987
Alaska Factory Trawler Association v. Baldridge [831 F. 2d 1456]
Greenpeace U.S.A. v. Evans [688 F. Supp. 579]
Kelley v. Baldridge [831 F. 2d 190]

1983
WA State Charterboat Association v. Baldridge [702 F. 2d 820]

1982
Louisiana v. Baldridge [538 F. Supp. 625]

1981
Hanson v. Klutznik [506 F. Supp. 582]
WA Trollers Association v. Kreps [645 F. 2d 684]

1980
Pacific Coast Federation of Fishermen's Association v. DOC Secretary [494 F. Supp. 626]

1977
Maine v. Kreps [563 F. 2d 1043]

PRINCIPLES OF EFFECTIVE CONSULTATION

With NMFS' dependence on various constituents and partners to carry out its mission, it must find effective ways of working together with them at all levels—federal, state, and private. The Academy panel believes that effective consultations are a key to success.

The principles of effective consultation described in this study were derived from two sources: a review of research and practices in a variety of public and private fields that relate to communications with external parties; and additional research in connection with Academy reports on rural consultation processes for transportation programs and on practices for evaluating federally assisted housing programs.[1] Although those reports were done in connection with other program areas, the principles of consultation adapt well to other programs in the federal system, such as a constituent relations program within NMFS.

Consultations with external parties may include consultations with other governmental officials and representatives from the private sector. For NMFS to effectively carry out its mission, consultations are most needed with representatives of the commercial and recreational fishing industry, states, environmental groups, Native American tribes, seafood consumers, fisheries scientists and managers, as well as timber and power companies. Sound principles of effective consultation are the same for each group.

Reviewing Research and Practices Relating to Communication With External Parties

Some of the research the Academy panel reviewed in order to develop principles of effective consultation reflects broad-based efforts to enhance service through greater customer and citizen participation. Other research specifically addresses public involvement requirements in federal, state, and local aid programs. While the research was developed for other programs, it is equally applicable to federal fisheries management. The research presented here is drawn from the May 2000 Academy report, but the application to NMFS' constituent and partner relations programs is clear. In NMFS' case, "citizen participation" could be read as "participation of those groups with a stake in fisheries management, such fishers, states and environmentalists."

The Quality Management Movement

Ever since the book *In Search of Excellence*[2] was published, corporations and governments have been seeking ways to get "close to their customers." This quest is part of a larger effort to improve quality in products, services, and management.[3] The international standard for quality

---

[1] National Academy of Public Administration, *Rural Transportation Consultation Processes*, May 26, 2000, Washington, D.C.; and *Evaluating Methods for Monitoring and Improving HUD-Assisted Housing Programs*, December 2000, Washington, D.C.

[2] Thomas Peters and Robert H. Waterman, *In Search of Excellence*, reissue edition (New York: Warner Books, 1988).

[3] H. James Harrington, with James S. Harrington, *Total Improvement Management: The Next Generation in Performance Improvement* (New York: McGraw-Hill, 1995).

management (ISO 9000)[4] addresses external communications needs; similar features are included in the Malcolm Baldrige National Quality Award for businesses, the President's Quality Award (for federal agencies), and similar awards in other countries.

The standards for excellence in external communications extend to customers, suppliers and partners. Increased outsourcing of tasks throughout business and government makes such communications a growing necessity for success. This practice is similar in many ways to the constituent and partner relationships found in cooperative federal fisheries programs in, for example, enforcement and statistics. Increasingly—and not surprisingly—success comes to those who can work together most smoothly and productively with their counterparts in the total enterprise.

In the civic sector as well, good external communication is taken as a sign of excellence. The civic index, used to help judge candidates for the All-America City Award, is heavy on inter-group communications and the ability to work together within local communities and regions. The index contains 10 sections that evaluate "the social and political fabric of a community: how decisions are made, how citizens interact with one another and government, and how challenges to the community are met."[5] The 10 sections in the index are:

1. citizen participation
2. community leadership
3. government performance
4. volunteerism and philanthropy
5. intergroup and intragroup relations
6. civic education
7. community information sharing
8. capacity for cooperation and consensus building
9. community vision and pride
10. regional cooperation

The relationship of these 10 sections to NMFS' relations with constituents and partners is clear. As indicated earlier, "citizen participation" in the fishery management context refers to commercial and recreational fishers, states, environmentalists and others.

Studies by the Advisory Commission on Intergovernmental Relations

Public involvement requirements in federal-aid and state and local programs have a long history. In 1979, the U.S. Advisory Commission on Intergovernmental Relations (ACIR) prepared and adopted an exhaustive study of them. ACIR found them to have a wide variety of purposes, and

[4] ISO 9000 is a set of structures and concepts established by the International Organization for Standardization that must be followed to obtain ISO registration.
[5] National Civic League, *All-America City Award 2000: Application and Instructions*, pp. 8-11.

they are implemented through a wide variety of techniques.[6] The ACIR report listed eight main purposes of citizen participation:[7]

- give information to citizens
- get information from or about citizens
- improve public decisions and programs
- enhance acceptance of public decisions and programs
- supplement public agency work
- alter political power patterns and resource allocations
- protect individual and minority group rights and interests
- delay or avoid difficult public decisions

In the fishery management context, "citizens" are fishers, states, environmentalists and others—NMFS constituents and partners. The reader should keep this in mind.

For each of these purposes, ACIR found multiple forms of participation being used. About 50 techniques were identified.[8] However, after reviewing several studies on the effectiveness of these participation activities, the Commission reached two conclusions:

> Many Americans expect a great deal of participation in governmental affairs to be open to them, even though they may not always take advantage of the opportunities to participate.
>
> There is a substantial gap between the amount of influence that many participants expect their involvement to have and the actual effects of participation. Some believe this gap arises largely from deficiencies in the current citizen participation processes and that it causes substantial dissatisfaction. The legal opportunities for citizen participation—whether or not they are exercised—may have a substantial indirect effect on the actions of public officials. Yet, direct effects often are limited because:
>
> - Citizen participation opportunities are not provided until the latter stages of decision making (for example, providing for public hearings just before a decision actually is made).
> - Opportunities for participation are frequently limited to a small advisory committee and an open public hearing at the end of the process.
> - The opportunities provided are too passive (leaving to citizens' own devices the initiative and the development of capabilities to participate constructively in very complex governmental processes).

---

[6] U.S. Advisory Commission on Intergovernmental Relations, *Citizen Participation in the American Federal System* (Washington, DC: U.S, Government Printing Office, 1980).

[7] ACIR, *Citizen Participation*, p. 72.

[8] More recently, an inventory of public involvement techniques prepared for the Federal Highway Administration and the Federal Transit Administration found a similar number of techniques in use in the transportation field. See Howard/Stein-Hudson Associates, Inc., and Parsons, Brinkerhoff, Quade & Douglas, *Public Involvement Techniques for Transportation Decision-Making*, prepared for the Federal Highway Administration and the Federal Transit Administration (Washington, DC: U.S. Department of Transportation, 1996).

- Citizens don't have the time, information, or experience to participate in a meaningful way.[9]

As shown in Chapter 6, these "citizen concerns" are very similar to those expressed by constituents and partners in their dealings with NMFS.

However, the Commission also recognized that an elaborate participation program could be expensive. Therefore, it cautioned governments not to require more participation than needed to meet the purposes of a program. Recognizing that state and local governments have many participation requirements of their own, the Commission recommended the following components of a cost-effective participation policy for federal-aid programs:

- establish clear objectives for citizen participation in federal aid programs
- enunciate performance standards that encourage the use of timely, effective, and efficient citizen participation methods tailored to diverse situations
- prohibit detailed federal specification of exact techniques and procedures to be followed by state and local recipients of federal aid
- through a certification process, to the maximum extent consistent with objectives established [by the federal government], rely upon citizen participation provisions of state and local law and established practices there under
- authorize the use of federal research, technical assistance, and training resources for the support of citizen participation objectives in federal aid programs[10]

Although they are couched in terms of citizen participation, these components or principles of a participation process clearly can be applied to NMFS' consultations with its constituents and partners.

In a more recent study of collaborative intergovernmental decisionmaking that focused on water resources programs, ACIR emphasized the need to:

- analyze the applicable historical, legal, and political contexts for planning—including planning for needed changes—in the targeted area
- identify the key organizations, decisionmakers, and other stakeholders, and involve them in constructive interactions that get them to see each other's viewpoints
- get separate governments and agencies to see how their responsibilities interrelate
- assist non-technical citizens and elected officials to understand the key facts
- develop plans and necessary implementation elements through an open and visible involvement process
- get the key decisionmakers to take responsibility for needed actions[11]

[9] ACIR, *Citizen Participation*, p. 12.
[10] ACIR, *Citizen Participation*, pp. 14-15.
[11] ACIR, *Planning to Govern* (Washington, DC: ACIR, September 1994), pp. iii-iv. The points cited here are condensed and paraphrased.

Measures for Assessing Effective Involvement in Transportation Decision Making

A 1996 study of transportation decision-making found that a wide variety of public involvement techniques were used for statewide and metropolitan planning and for project planning. The study recommended basing effective public involvement programs be based on the following five fundamental guidelines:[12]

1. acting in accord with basic democratic principles
2. continuous contact between agency and non-agency people throughout [the] … decisionmaking [process]
3. use of a variety of public involvement techniques
4. active outreach
5. focusing participation on decisions

Although the study focused on the full range of participants outside the agency, its advice is applicable to consultations with local officials. The guidelines also have potential use in decisionmaking in housing programs.

In 1999, the Transportation Research Board's Committee on Public Involvement issued a draft self-assessment tool for use by transportation agencies in assessing the effectiveness of their project-based public involvement processes.[13] Peer-reviewed, this tool was developed over a substantial period of time by public involvement professionals. It includes 14 indicators of effectiveness, each supported by several quantitative measures. They are:

- accessibility to the decisionmaking process
- diversity of views
- opportunities for participation
- integration of concerns
- information exchange
- project efficiency
- project/decision acceptability
- mutual learning
- mutual respect
- cost avoidance
- indirect cost of time
- indirect opportunity costs
- indirect costs associated with authority and influence
- indirect costs associated with emotional issues

This self-assessment tool provides instructions and a scorecard to facilitate its use. It could be adapted for use in cooperative programs between NMFS and its partners.

[12] Howard/Stein-Hudson, et al, *op. cit*, p. iii.

[13] Committee on Public Involvement in Transportation, The Transportation Research Board, *Assessing the Effectiveness of Project-Based Public Involvement Processes: A Self-Assessment Tool for Practitioners* (www.ch2m.com/trb_pi).

Another 1999 study by the Board specifically addresses effective methods for working with elected officials. It suggests keeping the following principles in mind:[14]

- They do not like to be surprised.
- They do not like to be backed into a corner.
- Help them with intermediate decisions.
- Be sensitive to election cycles.
- Be sensitive to budgeting cycles.
- Bring newcomers up to speed.
- Be cognizant of established positions.
- Elected officials need information that takes only a short time to absorb and is simple to understand.
- Develop good communication linkages with elected officials' aides.
- Work with the town, city, or county clerks to understand their basic procedures for notification and when information needs to be submitted for placement on their agendas.

Summary

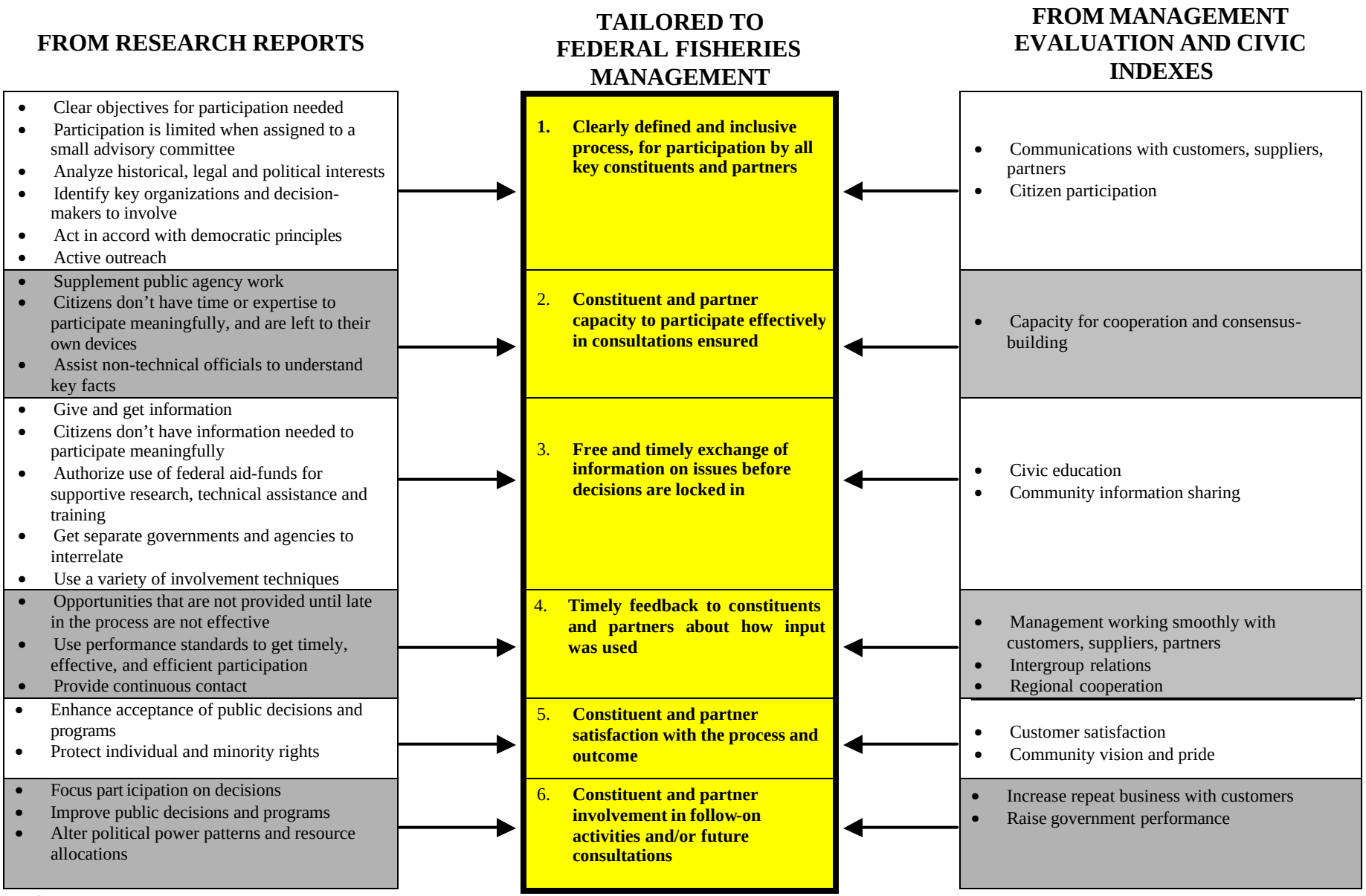
Meetings alone do not constitute effective consultations. The Academy panel believes that NMFS consultations with its constituents and partners would be more effective if they were based on the systematic application of six principles that evolved from the research described in the Academy's rural transportation consultation and assisted housing studies. They are:

- Provide a well-understood process for consultations. It should facilitate and provide opportunity for participation by all the key stakeholders; and give participants a role in establishing the process.
- Upon request, assist stakeholders in acquiring the levels of knowledge and capabilities that are needed to participate effectively in the consultations.
- Promote free and effective exchange of information about the issues that prompt consultation.
- Provide timely access to information before decisions are locked in, and timely feedback to stakeholders about how their input was used and the changes it caused.
- Promote satisfaction among stakeholders with the consultation process.
- Influence responses to stakeholders' needs, recognizing the larger decisionmaking context and resource constraints that may exist when one balances the needs of multiple stakeholders.

Figure 6-1 links the six principles of effective consultation to their strong underpinnings in both research and practice.

[14] Steven A Smith, *Guidebook for Transportation Corridor Studies: A Process for Effective Decision-Making*, NCHRP Report 435 (Washington, DC: Transportation Research Board, 1999), pp. 5-19.

Principles Of Effective Consultation With External Groups



msd

LAWS IMPACTING THE NMFS REGULATORY PROCESS

The regulatory role of the National Marine Fisheries Service emanates from several statutes that deal with the substance of the resource management and protection responsibilities of the agency. Three statutes constitute the majority of the agencies regulatory actions:

- Magnuson-Stevens Act, as amended by the Sustainable Fisheries Act
- Endangered Species Act
- Marine Mammal Protection Act

In carrying out their primary responsibilities under the above statutes, NMFS must also adhere to the requirements of other statutes, which impose specific analytical responsibilities or timetables:

Administrative Procedures Act

This act establishes procedural requirements applicable to informal rulemaking by federal agencies. The purpose is to ensure public access to the federal rulemaking process and to give the public notice and an opportunity to comment before the agency promulgates a final rule. The length of the comment period is not specified. A 30-day delay in effectiveness date is required for most final rules.

Magnuson-Stevens Act

The MSA provides for a public comment period for proposed rules of15 to 60 days. NMFS policy has a standard 45-day comment period for proposed rules that would implement an FMP or Amendment and a 30-day comment period for proposed rules for regulatory amendments.

Endangered Species Act

NMFS must determine whether Federal actions (including FMP/amendments) will have an impact on threatened or endangered species. Impacts (if any) must be included in the EA/EIS and are subject to the same timetable for public review. If a determination is made that there will be impacts, NMFS must determine whether formal consultation is required (ESA Section 7) to minimize adverse impacts. There are no separate time requirements in the ESA for regulatory actions.

Coastal Zone Management Act

This Act requires that any Federal activity affecting the land or water uses or natural resources of a state's coastal zone be consistent with that state's approved coastal zone management program, to the extent practicable. A consistency determination must be supplied to state agencies at least 90 days prior to final approval of the Federal action unless NMFS and states agree to an alternative notification schedule.

Executive Order 12866

E.O. 12866 requires that OMB review proposed regulatory programs that are considered to have a "significant" impact which is defined as regulations having an annual effect of $100 million or more on the economy, create serious inconsistency with an action by another agency, materially impact budget for entitlements, or raise novel legal policy issues.

National Environmental Policy Act

NEPA requires that the effects of major Federal activities on the human environment be assessed (including FMP's, permits and licenses). It also requires preparation of an EIS for actions that significantly affects the quality of the human environment, documentation of that finding for public consideration, and consideration of public comment before a decision. An environmental assessment (EA) is prepared for an action that will not significantly affect the human environment. If a draft EIS must be prepared, notice of availability must be published 30 days before an agency decision is made on the FMP/amendment or if an EA is prepared a finding of no significant impact must be made at the time of the agency decision. MSA and NEPA requirements for schedule, format and public participation are compatible and they enable one activity or document to fulfill both requirements.

Paperwork Reduction Act

If an FMP/amendment requires any form of information collection that requires additional effort, proposed rules must be accompanied by a request for OMB approval to collect such information.

Regulatory Flexibility Act

For each proposed rule that is subject to the notice and comment provisions of the Administrative Procedures Act, or other law, an initial regulatory flexibility analysis must be prepared unless the agency can certify that the proposed rule will not have a significant economic impact on a substantial number of small entities. The Small Business Administration reviews this analysis during the comment period on the proposed rule.

Executive Order 12612

E.O. 12612 lists nine fundamental federalism principles that agencies must adhere to in formulating and implementing policies. If proposed policies having sufficient federalism implications, such as preemption of state law, a federalism assessment must be prepared certifying agency compliance with E.O. 12612. State officials opposed to adoption of an FMP/amendment may file a dissenting report explaining the nature of the state's objection.

Executive Order 12630

E.O. 12630 requires each Federal agency to prepare a "takings" implication assessment for any action that may affect the use of any real or personal property. Prohibiting specific types of fishing gear could be considered a "taking" under this E.O.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910

THE DIRECTOR

JUN 17 2002

J. William Gadsby
Director, Management Studies
National Academy of Public Administration
1100 New York Avenue, N.W.
Washington, D.C. 20005

Dear Mr. Gadsby:

Thank you for the opportunity to comment on the National Academy of Public Administration (NAPA) draft report "Courts, Congress, and Constituencies: Managing Fisheries by Default." The Report is well informed, factual, and a laudable effort, especially given the complexity of the issues. The National Marine Fisheries Service (NMFS) does not find any major flaws or errors in the draft Report, and generally agrees with, and supports, the Report's Findings and Recommendations.

I am pleased to note that the Report highlights a number of steps NMFS has and is taking to improve its internal management, streamline regulatory processes, and enhance budget and administrative planning. We plan to continue these important activities. In addition, we agree wholeheartedly with the Report's conclusion that the agency is facing serious professional staffing challenges both through its mission complexity and its demographics.

I commend NAPA for the specific recommendations made to improve the Agency's performance in a number of important areas. In particular, integrating a fisheries and protected species stock assessment plan, improving record-keeping, and extending constituent relationships, among others. To best utilize the constructive recommendations in the Report, NMFS will prepare a detailed Implementation Plan to prioritize and address the Report's findings along with those of other studies. This Plan will identify the senior NMFS managers with responsibility for implementation of specific recommendations and will outline a system for monitoring and evaluating implementation.

With regard to leadership, the Report correctly notes the need for NMFS to be the leader in the living marine resource arena. Yet the Report does not seem to fully recognize or emphasize that such leadership is not possible without the strong, sustained support of the Agency's constituencies, the courts, the Congress, and the Administration. Some prioritization by NAPA of the Report's numerous recommendations along with estimating the associated resource requirements would serve to help the Agency meet its goal of providing this leadership in the future.

THE ASSISTANT ADMINISTRATOR
FOR FISHERIES

Finally, the title "Managing Fisheries by Default" does not fully recognize the significant activities and resulting progress NMFS is making in managing the Nation's living marine resources. Rather, "the Complexities of Managing Living Marine Resources" may better capture the condition in which the Agency finds itself.

A number of suggestions and specific comments are outlined in the enclosed summary of comments from NMFS Regions, Science Centers, and Headquarters Offices, and the NOAA Office of General Counsel.

Again, thank you for the opportunity to comment on the draft Report and for producing a useful and insightful critique of this Agency.

Sincerely,

William T. Hogarth

William T. Hogarth, Ph.D.
Assistant Administrator
for Fisheries

Enclosure