TAKING STOCK

OF THE

REGIONAL FISHERY MANAGEMENT COUNCILS

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NOTES ON TERMINOLOGY

In recent years, NMFS has begun to call itself NOAA Fisheries. In this report we refer to the agency by its official name of National Marine Fisheries Service, or NMFS.

Congress has amended what is now known as the Magnuson-Stevens Fishery Conservation and Management Act several times since passing it in 1976. In addition, Congress has also twice renamed the law. The law was originally known as the Fishery Conservation and Management Act (or FCMA). Later, in recognition of the contributions of Senator Warren Magnuson, Congress renamed the statute the Magnuson Fishery Conservation and Management Act. In 1996, recognizing the many contributions of Senator Ted Stevens, Congress gave the law its current name. For purposes of simplicity, we generally refer to the law in this report as the "Magnuson-Stevens Act" except when it is used in the context of historical events.

EXECUTIVE SUMMARY

Over a third of the nation's fish stocks currently are overfished (not counting those stocks for which the government has inadequate information to judge their status). These stocks historically supported some of America's most important fisheries: cod, salmon, rockfish, tuna, red snapper, lobster, and blue crab, to list only a few. An essential step in helping these stocks recover is to end the overfishing that has contributed to these fisheries' decline. But overfishing is still occurring in over half of these fisheries.

Few Americans know who manages the nation's fisheries or how management decisions are made. Eight regional fishery management councils play the major role in developing management plans and supporting regulations for each of the coastal fisheries in need of conservation. The Magnuson-Stevens Fishery Management and Conservation Act ("Magnuson-Stevens Act"), which is the main national law in the fisheries field, sets out standards and guidelines for the management plans but leaves the councils with significant discretion in implementing the standards and guidelines. Although the National Marine Fisheries Service (NMFS) within the U.S. Department of Commerce has oversight authority over the regional councils, NMFS in practice seldom rejects the councils' decisions.

This study, which was initiated and supported by The Pew Charitable Trusts, looks in detail at the mandates, constitution, rules, and procedures of the regional councils to determine whether the councils can effectively manage the nation's fisheries. To gain a detailed picture of the councils, we surveyed members of the four councils that manage the country's four most important fishing regions (obtaining a greater than 50 percent response rate), studied in depth how each council resolved a major fishing management issue, and obtained relevant information from NMFS regarding the councils, including the financial interests of council members. We then measured the councils against the standards for "good governance" found in congressional statutes regulating federal agencies, state fish and game laws, and relevant studies and analyses by political scientists and organizational experts.

Based on this study, we conclude that the councils are unlikely to solve the current problems facing the nation's fisheries for at least three principal reasons. First, the councils have two major responsibilities that, in practice, are in conflict. The councils must limit the number of fish that can be caught to ensure their conservation while also allocating the allowable catch among members of the industry. Because allocating a limited catch among diverse fishing interests is not politically easy, councils face significant pressure to increase the size of fishery quotas and thus the amount of fishing rights that can be apportioned. One of the

easiest ways to reduce the pain of allocating a catch, in short, is to raise the size of the catch — to the detriment of conservation.

Second, the highly homogeneous membership of the councils fails to bring diverse viewpoints to council discussions and decision-making. Prior studies show that groups with diverse viewpoints look at broader information and generally make better decisions. For this reason, Congress requires federal advisory commissions to be "fairly balanced in terms of points of view represented and the functions to be performed by the advisory commission." The councils, however, are not subject to the Federal Advisory Committee Act, and in each year since 1985 approximately 80 to 90 percent of appointed council members have represented fishing interests. By contrast, national conservation organizations currently have a representative on only one of the councils. Although state fishery officials and a representative of NMFS also sit on each council, fishing interests still hold a majority of seats on most councils, and the imbalance in council perspectives undercuts effective and creative problem solving.

Finally, council members often face significant potential conflicts of interest in their deliberations and decision-making. For over a century, federal and state governments have prevented regulatory officials from participating in decisions in which they have a conflict of interest. As legislatures have recognized, conflicts of interest can undermine the American commitment to equal treatment of equal claims and undercut effective regulation; even the appearance of a conflict of interest can undermine the integrity of the regulatory process and public confidence in regulatory institutions. The councils, however, are again exempt from the general federal conflict-of-interest standard, and 60 percent of appointed council members have a direct financial interest in the fisheries that they manage and regulate.

Many of the council members whom we surveyed agreed that there are problems with the current system and that these problems should be addressed. More than half of the surveyed council members, for example, reported that environmental interests are underrepresented on the councils. Approximately a third of the respondents also reported that they had felt it unfair in one or more past instances for a fellow council member to participate in a decision in which he or she had a financial interest in the outcome. A similar percentage expressed concern about decisions in which the relatives or friends of voting council members had a financial interest in the outcome.

These are not the only problems undermining the councils' ability to restore and protect the nation's fisheries, although they are the most serious. The complex and decen-

tralized system of council decision-making, for example, also discourages broad national participation in deliberations concerning fisheries management. Council members, moreover, generally lack the time and resources needed to master the complex issues before them. Finally, the split in responsibilities between the councils and NMFS removes effective accountability for the status of the nation's fisheries.

Congress did not give careful thought to optimal management institutions when it created the council system in 1976 as part of the original Magnuson-Stevens Act. At the time, Congress was concerned first and foremost with the perception that foreign fishing fleets were catching too many fish off American shores. Thus, the primary purpose of the act was to keep foreign boats out, while providing incentives for U.S. citizens to invest heavily in replacement vessels. In the 1,200-page legislative history of the act, there are only a handful of references to the council system. There are no discussions of any alternatives, no evaluations of the potential advantages and disadvantages of the council system, no studies of whether the council system would be effective at conservation.

Thirty years of experience with the council system suggests that reform is now needed. Although NMFS and the Secretary of Commerce could help to improve council decision-making by working to ensure greater diversity in council appointments and by tightening current conflict-of-interest regulations, only Congress can provide substantial reform. Council representation and conflicts of interest are two important areas for congressional attention. To ensure the future health of the nation's fisheries, however, Congress should separate the institutional responsibilities for conservation and allocation. Conservation is a national concern and should be the responsibility of a national regulatory body that is subject to the standard rules of good governance and that has both significant scientific expertise and adequate resources. The councils, with their greater local expertise, should remain responsible for allocative decisions within the scope of the national management plan.

Introduction

A significant fraction of American fisheries are in trouble. According to the federal government, over a third of the nation's known coastal fish stocks are currently "overfished," and almost a quarter are experiencing "overfishing." Twenty percent are both overfished and suffering from overfishing. These troubled stocks include what were once some of the most valuable recreational and commercial fisheries in the United States: cod in New England, flounder in the mid-Atlantic region, snappers and red drum in the Gulf of Mexico, and rockfish off the Pacific coast. The problems have persisted for nearly three decades despite improved laws and the investment of billions of federal dollars in fishery science.

Although multiple factors have contributed to these problems, the composition and rules of the eight regional fishery management councils ("regional councils") that are responsible for regulating the nation's coastal fisheries make effective regulation difficult. The regional councils face immense pressure to permit some or all segments of the fishing industry to catch more fish. Yet fishing interests dominate the councils, robbing the councils of the diverse and robust perspectives needed to withstand pressures and make wise but controversial decisions. The general public plays little role in fishery management. Council members, moreover, face frequent conflicts of interest but are seldom required to recuse themselves. Although scientific uncertainty makes fishery regulation innately difficult, the councils are poorly designed to deal with the difficult problems facing fishery management.

The institutions that regulate our nation's public resources are as important as the substantive laws that say how those resources should be managed. Even highly specific laws leave regulators with significant discretion. Legislatures cannot predict and address every issue, and they often need to delegate individual management decisions to the expertise of the regulators. The identity of the regulators and the procedures and safeguards that govern their work therefore often determine the effectiveness of the regulatory system.

The U.S. Congress over the years has drawn up a number of general laws designed to promote beneficial regulation by ensuring objective officials, open public participation, and transparency in decision-making. As early as 1863, Congress barred governmental officers or agents from participating in governmental decisions that could benefit them financially.[1] Under the Administrative Procedure Act of 1946, Congress mandated that federal agencies explain their decisions and provide the public with ample opportunity to comment.[2] In 1972, Congress tried to ensure balanced and public input from advisory boards through the Federal Advisory Committee Act.[3] These and similar laws collectively reflect broadly agreed-upon principles of "good government" — broad representation of interest groups, no conflict of interest, and open and active public participation.

Yet the regional councils that regulate fisheries in the waters off the coasts of the United States are exempt from a number of these laws, in part because they technically are not federal agencies. The regional councils are among the most obscure regulatory bodies in the United States. Although virtually everyone knows that the U.S. Environmental Protection Agency protects the country's air and water quality and that the USDA Forest Service manages the country's public forests, few people have ever even heard of the regional councils. Yet the regional councils collectively manage a geographic region larger than the continental United States. And they are responsible for the health of a $25 billion commercial

fishing industry and an even larger recreational fishing industry. Perhaps most importantly, the regional councils are the trustees for some of the most extensive and important resources held by the American public — the hundreds of species of marine fish that live in the country's coastal waters, and the ecosystems that they inhabit.

The Magnuson-Stevens Fishery Conservation and Management Act (commonly referred to today as the "Magnuson-Stevens Act") divides the jurisdictional waters off the coast of the United States into eight regions, each managed by a separate regional council[4] (see Box 1). The regional councils prepare fishery management plans for the fish stocks in their regions, subject to oversight by the National Marine Fisheries Service (NMFS) in the U.S. Department of Commerce. The voting members of each council consist of state fisheries officials, various appointed members (most of whom are themselves members of the fishing industry that the councils regulate), and a single representative of the federal government.

As discussed later in this report, four key problems plague the councils. First, by asking councils to decide both how many fish can be caught and how this catch should be allocated among fishermen, the Magnuson-Stevens Act has undermined the odds of effective conservation. The pressure to avoid tough allocation choices encourages councils to shortchange conservation and allow larger catches. Second, councils are dominated by the fishing industry and, as a result, do not enjoy the breadth and robustness of perspectives important for good decision-making. Third, council members who represent the fishing industry face frequent conflicts of interest, which threaten to undermine both balanced decision-making and the public's confidence in the councils. Finally, although NMFS oversees the councils' decisions, its oversight has been deferential and thus not an adequate answer to the concerns regarding the councils' decision-making.

Our survey of members of four regional councils supports these findings. Nearly all of the council members we surveyed reported flaws in the system, and many respondents pointed to one or more of these four key problems.

Key Findings:

We identify four reasons why the regional councils are not able to effectively regulate coastal fisheries:

- The councils decide both how many fish can be caught and who can catch them. Because larger catches are easier to divide up among competing fishery interests, the councils' responsibility to allocate catches encourages them to set lax fishery limits, undermining conservation.
- More than 80 percent of the citizens who are appointed to the councils by the Secretary of Commerce represent the fishing industry. Homogeneous groups are less likely to produce well-considered decisions than groups with diverse membership.
- The large number of council members drawn from industry results in ubiquitous conflicts of interest. Yet the conflict of interest rules that apply to the councils are very weak compared to those that apply to other government decision-makers.
- Despite its legal responsibility to carefully oversee the councils, NMFS gives them significant leeway in decision-making.

Box 1:

The Eight Regional Fishery Management Councils

The eight regional fishery management councils govern an ocean area larger than the continental United States. Of all the councils, the Western Pacific Council manages the largest ocean area, comprising more than 1.5 million square miles. Most of the councils manage sections of the exclusive economic zone bounding the waters of multiple states. The Mid-Atlantic Council, for example, manages an area that borders seven states. The North Pacific Council manages waters off the coast of only one state, Alaska. The Caribbean Council is the only council whose jurisdiction does not border any state's waters.

To manage fisheries, the councils have adopted forty federal fishery management plans that cover more than 900 fish stocks. Some stocks that migrate among the jurisdictions of two or more councils are managed under joint management plans.


New England Council
Mid-Atlantic Council
Pacific Council
South Atlantic Council
Gulf of Mexico Council
Caribbean Council
Puerto Rico and U.S. Virgin Islands

A Brief History of Fishery Management in the United States

Direct federal management of the nation's marine fisheries is of relatively recent vintage. Until 1976, states primarily managed the fisheries off the coast of the United States and only to a distance of 3 miles, the extent of their jurisdictional waters. Beyond that narrow border of state waters, fisheries were subject to a "tragedy of the commons" as fishing vessels of multiple nations raced to catch stocks of fish before other nations' vessels fished out the stocks. Congress attempted to change this in 1976 by declaring a fishery conservation zone (FCZ) extending out 200 nautical miles and by establishing a federal system for regulating fisheries in the region between the 3-mile state waters and the end of the FCZ (now known as the exclusive economic zone, or EEZ).[5] A brief history of the state management of coastal fisheries, however, helps in understanding the current regional councils and their shortcomings.

STATE FISHERY REGULATION: THE STATE COMMISSIONS

In the early 1800s, U.S. marine fisheries were regulated by the states under a hodgepodge of laws restricting fishing gear and by the federal government under trade and ship-licensing laws. Beginning in the late nineteenth century, most states created special commissions to oversee the management of fisheries, including marine fisheries where the states had coastal waters. Indeed, a number of state constitutions mandate the use of fishery commissions. In most cases, the same commission also manages terrestrial wildlife.

In line with the progressive efforts of the late nineteenth and early twentieth centuries, many of these constitutional provisions attempt to ensure that the commissions have the necessary expertise and broad public perspectives to regulate fisheries wisely. Most states require that gubernatorial appointments to the commissions be confirmed by the state senate, and several states require that appointments include members of different political parties.[6] Louisiana's constitution provides that, although three of the seven commission members must be coastal residents who are "representatives of the commercial fishing and fur industries," the other four must be "electors from the state at large *other than* representatives of the commercial fishing and fur industries."[7] State law provides that the Nevada Board of Wildlife Commissioners must include a rancher, a farmer, a person "actively engaged" in wildlife conservation, and a member "who represents the general interests of the public."[8] The Tennessee Wildlife Resources Commission is required to have at least one member older than sixty years of age, two women, and one "member of a racial minority."[9]

A number of states also explicitly require commission members to have expertise in relevant scientific disciplines or in the management of fish and wildlife.[10] Arkansas requires its commission to include the head of zoology at the University of Arkansas.[11] Indiana's Natural Resources Commission includes the president of the Indiana Academy of Science.[12]

The history of the Alaska Board of Fisheries sheds valuable light on the importance of the membership and organization of fishery management agencies. Before Alaska entered the Union as the forty-ninth state in 1959, the federal government managed local fish stocks through the U.S. Department of the Interior. In anticipation of statehood, Alaska's legislature created the seven-member Alaska Fish and Game Commission, and the governor appointed to the commission three commercial fishermen, a sports fisherman, a [fish] processor, a hunter, and a trapper.[13] Congress was sufficient-

ly concerned whether a board consisting entirely of fishermen, processors, and hunters could effectively manage Alaska's fish and game that it conditioned the handing over of regulatory authority on Alaska's correcting the imbalance. In the Alaska Statehood Act of 1958, Congress specified that the federal government would retain management of Alaskan fisheries until "the Secretary of the Interior certifies to the Congress that the Alaska State Legislature has made adequate provision for the administration, management, and conservation of said resources in the broad national interest."[14]

In response to Congress' concern, the Alaska legislature replaced the commission with a Board of Fish and Game to be composed of seven members "having a general knowledge of the fish and game resources of the State and selected without regard to political affiliation or special interest."[15] In 1960, the Secretary of the Interior certified this change, and President Eisenhower transferred regulatory authority to Alaska in 1960. Although separate boards of fisheries and game have since replaced the Board of Fish and Game, Alaska law continues to mandate broad public representation on the boards. Alaska law instructs the governor to "appoint each member on the basis of interest in public affairs, good judgment, knowledge, and ability in the field of action of the board, and with a view to providing diversity of interest and points of view in the membership."[16]

EARLY FEDERAL REGULATION OF FISHERIES

The federal government first became involved in fishery management in 1870 with the formation of the U.S. Commission on Fish and Fisheries. A year later, Congress instructed the new commission to find out "whether any… diminution of the number of food-fishes of the coast and the lakes of the United States has taken place; and, if so, to what causes the same is due; and whether any and what protective, prohibitory, or precautionary measures should be adopted."[17] Recognizing that the qualifications of the decision-maker are important, Congress also charged that the commissioner of fish and fisheries should be a civil officer or employee of the government with "proved scientific and practical acquaintance with the fishes of the coast." In the preamble to this legislation, Congress cited worries that "the most valuable food fishes of the coast and the lakes of the United States are rapidly diminishing in number." Management of coastal fisheries, however, remained with the states, and the commission itself focused most of its attention on discovering new stocks of fish, developing innovative fishing technology, and promoting fish sales.[18]

The commission underwent multiple transformations over the next century. The commission moved to the Department of Commerce in 1903, becoming the U.S. Bureau of Fisheries. Then, in 1939, the bureau moved to the Department of the Interior, where it subsequently became a division of the new U.S. Fish and Wildlife Service. In deciding that the bureau should be relocated, President Franklin Roosevelt noted that the bureau dealt with "conservation and utilization of the [aquatic] wildlife resources of the country" and thus should be part of the Department of the Interior, the federal agency that "is directly responsible for the administration and conservation of the public domain."[19] Throughout these various moves, however, the bureau's focus remained on research designed to increase the economic wealth of the fishing industry. To most people, the ocean continued to look ripe for exploitation.

In 1966, Congress established a bipartisan Commission on Science, Engineering, and Resources, popularly known as the Stratton Commission, to "formulate a comprehensive, long-term, national program for marine affairs designed to meet present and future national needs in the most effective possible manner."[20] The commission issued its report, titled *Our Nation and the Sea: A Plan for National Action*, in 1969. The commission recommended forming a new federal agency with cabinet-level status that would enjoy comprehensive management authority over the nation's oceans. Although the commission was willing for states to continue to be the principal managers of coastal fisheries, it proposed that the new federal agency "be authorized to assume regulatory jurisdiction over endangered fisheries if the States fail to take necessary conservation measures."[21]

The Stratton Commission emphasized that a "new, strong Federal focus for marine activity is essential to a national ocean effort." While noting the value of maximizing the productive use of the nation's fisheries, the commission warned that "there are biological limits on the productivity of individual stocks of fish and shellfish" and that "[s]ensible fisheries management must prevent overexploitation of heavily utilized species." The commission recognized the political realities that had undermined effective conservation by the states in the past. First, "fishing communities form the constituencies of important elements in State legislatures" and "their desire to maintain the status quo has a strong influence on fishing legislation and on regulations of State agencies." Second, the desire to protect fishermen from cutbacks clashes with the need to limit catch. The dearth of progressive fishing management, according to the commission, reflected "the pressures on the States to find some way to limit the take from exploited fisheries without excluding any of the participants."

President Richard Nixon responded to the Stratton Commission by creating the National Oceanic and Atmospheric Administration (NOAA) in the Department of Commerce, rather than a separate cabinet-level agency.[22] He also moved federal fishery management from the Department of the Interior to the new National Marine Fisheries Service in NOAA. In its early years, NMFS focused on using grants and technical assistance to encourage and help states to develop more effective management plans for coastal fish stocks.[23]

THE BIRTH OF THE FEDERAL COUNCIL SYSTEM

The regional councils date to 1977 and passage that year of the Fishery Conservation and Management Act of 1976 (FCMA). In the FCMA, Congress declared a 200-mile FCZ off the nation's coasts and established a management system for the fisheries in the newly claimed U.S. waters. The FCMA created the eight regional councils that still govern federal waters today and awarded them primary responsibility for managing the fisheries in their jurisdictions. Most of the congressional debate centered on the legality and wisdom of establishing unilaterally a 200-mile FCZ. Management issues, and in particular the structure and makeup of the new regional councils, received scant congressional attention or thought.[24] Congress invented the councils without any prior study or discussion of alternatives and without any analysis of the possible advantages and disadvantages of such a system. There were no similarly structured natural resource management systems in place at the time. And, as Box 2 points out, the system has not been widely emulated since it was created.

The regional council system represented a compromise, forged in the FCMA, between those members of Congress who wanted federal control over fishery management and those

who favored retaining state primacy. Congress gave the states tremendous say in council membership. Except for one representative of NMFS, voting members would be state representatives or members appointed on the recommendation of state governors (or, in the case of the Pacific Council, a tribal representative). NMFS, however, would review and approve the fishery management plans (FMPs) adopted by each council and, in limited settings, write its own management plan. The FCMA also gave NMFS responsibility for enforcing the management plan. In reporting on the legislation, the Senate Commerce Committee described the relationship between the councils and NMFS as one between legislative and executive branches:

> The regional Councils are, in concept, intended to be similar to a legislative branch of government. The Councils are afforded a reasonable measure of independence and authority and are designed to maintain a close relation with those at the most local level interested in and affected by fisheries management. The Secretary of Commerce is given authority under the bill to act as the "executive," with ultimate authority to make decisions about management regulations for the entire nation. However, the Secretary's responsibility is by no means intended to be plenary. His duties will be to insure that the Councils are properly constituted; that they operate according to the procedures set forth in the Act; that the management regulations which the Councils recommend are compatible with the national management conservation standards; that such regulations do not conflict with any provision of this Act or other applicable law; and generally that the Councils abide by this Act.[25]

As indicated in this and other portions of the act's legislative history, Congress did not intend for NMFS to play a strong role in the formulation of management plans or conservation measures. The act effectively limits NMFS' responsibilities to providing the councils with scientific and economic information, making sure that the councils do not exceed their broad legal authority, and implementing and enforcing the plans and measures written by the councils. Moreover, as discussed later in this report, NMFS generally has not attempted to override the decisions of the councils.

Box 2:

How Do Other Countries Regulate Fisheries?

No nation gives its fishing industry as much authority to make large-scale decisions about fisheries conservation and management as the regional councils enjoy. In most other countries, fishermen play important but advisory roles. Governmental agencies have the final decision-making authority. This is true even in countries such as Iceland, where fishermen make up more than 10 percent of the country's workforce, and Norway, where fisheries make a tenfold greater contribution to gross domestic product than they do in the United States.

In a 1997 study, *Towards Sustainable Fisheries,* the Organization for Economic Cooperation and Development described the roles that fishermen play in various countries' fishery management systems. In most of the twelve countries surveyed, and in the European Union, legislation limits fishermen to a consultative role. Finland, Iceland, Denmark, Norway, France, and New Zealand are all examples of this kind of system. Governments give fishermen, and other interested members of the public, seats on boards that advise agencies on conservation and management measures. But the agencies are the decision-makers.

Only a few countries have systems in which fishermen are given responsibility anywhere close to the authority they exercise under the council system. Australia's Fisheries Management and Administration Acts of 1991, for example, created a structure similar to that created by the Magnuson-Stevens Act. The federal agency, the Australian Fisheries Management Authority, delegates substantial authority to twelve management advisory committees that are predominantly composed of fishing industry members. The results of this system to date are not encouraging. In 1992, the Australian government classified 25 percent of known stocks as overfished. Today, it reports that 50 percent of the known stocks are overfished.

THE REGIONAL COUNCILS

VOTING MEMBERSHIP

Each of the eight regional fishery management councils consists of seven to twenty-one voting members, including both appointed members and mandatory governmental members (see Box 3). The mandatory governmental members are the regional NMFS administrator and the "principal State official," or his or her designee, with "marine fishery management responsibility" in each of a council's constituent states.[26] The regional NMFS administrator is the only voting representative of the federal government on each council. In those regions where NMFS has two regional administrators, NMFS must choose one of the two to serve on the council. Other federal officials, including representatives of the U.S. Coast Guard, the U.S. Fish and Wildlife Service, and the U.S. Department of State, sit on the councils but only as nonvoting members.

The Secretary of Commerce appoints additional voting members to each council from candidates nominated by the governors of each of the council's constituent states. These appointed members make up a majority of every council's voting members. In three of the councils (Gulf, New England, and Pacific), appointed members constitute almost two-thirds of the voting members. Under the original Senate bill, the president would have made the appointments, with the advice and consent of the United States Senate, from lists submitted by the governors. Senator Warren Magnuson considered this approval process to be an important part of "balanc[ing] the national perspective with that of the individual States."[27] The final act, however, favored the less time-consuming approach of having the secretary of commerce make the appointments.

Councils must have at least one appointed member from each constituent state (and, in the case of the Pacific Council, from a local fishing tribe). These are known as the "obligatory" members of a council. Each governor submits a list of at least three names to the secretary of commerce, who then must choose from those

Box 3:

VOTING MEMBERS OF THE PACIFIC COUNCIL

Although the makeup of the various councils varies to some degree, the Pacific Council is fairly typical of the interests and governmental agencies represented. The bulk of appointed members are drawn from the recreational and commercial fishing industries. Some of the industry members are fishermen, while others are employed by fishing industry associations. The state representatives who attend council meetings are rarely, if ever, the head of the relevant state agency. Rather, they tend to be lower-level officials who serve as designees for the agency heads.

Of the nine appointed members of the Pacific Council in June 2003, one was a commercial fisherman, two were recreational anglers, and two owned recreational fishing businesses. One appointed member worked for a commercial fishing association, while another worked for a recreational fishing association. One member worked for a seafood processing company. Finally, there was a tribal representative who worked as a fisheries manager for the Quinault Indian Nation.

At right is brief biographical information about each of the members. Except for the bracketed information concerning Chairman Radtke, this information came from the council's Web site, www.pcouncil.org.

■ **Robert Alverson**
Fishing Vessel Owners' Association
Appointed, at-large

Mr. Alverson is Manager and Executive Secretary of the Fishing Vessel Owners' Association and has held this position since 1976. He represents vessel owners who fish for Pacific halibut and sablefish with long-line gear, and he operates the Seattle Fishermen's Exchange which auctions halibut, sablefish, and other groundfish.

■ **Ralph Brown**
Commercial Fisherman
Appointed, at-large

Mr. Brown is . . . from Brookings, Oregon. . . . He has many years first-hand experience in the fishing industry, including troll, pot, trawl, and processing. He is currently the President of the Fishermen's Marketing Association, a member of the Port of Brookings Harbor Commercial Fishing Advisory Committee, and a member of the Board of Directors for the Oregon Fisheries Congress. In addition, Mr. Brown is the owner of two 75-foot trawl vessels which participate in the shrimp and groundfish fisheries.

■ **James Caito**
Caito Fisheries
Appointed, obligatory (California)

Mr. Caito, a [seafood] processor from Fort Bragg, California, is Vice-President of Caito Fisheries, Inc. and a former member of the Council's Salmon Advisory Subpanel. He is currently Chairman of the California Seafood Council, Vice-Chairman of the California Salmon Council, and a member of both the California Fisheries and Seafood Council and the National Fisheries Institute.

■ **Mark Cedergreen**
Westport Charterboat Association
Appointed, obligatory (Washington)

Mr. Cedergreen . . . participated in the commercial fisheries during the time period from 1964 through 1975, both as a crew member on crab fishing boats and with his own salmon troller. From 1976 through 1996, Mr. Cedergreen owned and operated his own Charter-boat business in Westport.

■ **Donald Hansen**
Dana Wharf Sportfishing
Appointed, at-large

Mr. Donald Hansen is . . . from Dana Point, California [and] is the Council's Vice Chairman. Mr. Hansen is a life-long participant in marine fisheries off California and has been the owner of Dana Wharf Sportfishing since 1971. He has been the Vice President of the Sportfishing Association of California since 1987 and the President of Dana Point Harbor since 1992.

names. The FCMA specifies that nominees should be "individuals who, by reason of their occupational or other experience, scientific expertise, or training, are knowledgeable regarding the conservation and management, or the commercial or recreational harvest, of the fishery resources of the geographical area concerned." Before submitting the list of nominees, the governor must, "to the extent practicable," consult with "representatives of the commercial and recreational fishing interests of the State." And, in choosing the appointees from the lists, the Secretary of Commerce must, "to the extent practicable, ensure a fair and balanced apportionment, on a rotating or other basis, of the active participants (or their representatives) in the commercial and recreational fisheries." There is no comparable requirement that any appointee represent conservation interests or the public at large.

In addition to the obligatory appointed members, each council has a number of at-large appointed members. The number of at-large members in each council varies from two (on the Caribbean Council) to six (New England and Mid-Atlantic). Although he is not obligated to do so by the FCMA, the Secretary of Commerce historically has distributed these at-large seats equitably among the states in each council region.

WORK AND RESPONSIBILITIES

The principal job of a regional council is to prepare an FMP for every fishery within its geographical jurisdiction that "requires conservation and management." The FCMA, which is now known more commonly as the Magnuson-Stevens Act, requires each FMP to contain all "conservation and management measures" that are "necessary and appropriate for the conservation and management of the fishery." To guide the councils' development of FMPs, the Magnuson-Stevens Act sets out ten "National Standards." The first standard takes precedence over all other standards and requires the adoption of conservation and management measures

"ALL YOU HAVE TO DO IS LOOK AT THE MAKEUP OF THE COUNCIL AND SEE THE CONFLICT OF INTEREST. IT'S JUST TOO EASY FOR THE POLITICAL SYSTEM TO MESS AROUND WITH THE MAKEUP. I THINK WE NEED A MORE FUNDAMENTAL CHANGE IN THE SYSTEM."

— DR. HANS RADTKE, FORMER CHAIRMAN OF THE PACIFIC COUNCIL

James Harp
Quinalt Indian Nation
Appointed, obligatory (Tribal)

Mr. Harp is the first person to be appointed to the newly-created tribal seat on the Council. . . . He served as the appointed at-large member from Washington from 1988 to 1997. Prior to his appointment as a voting Council member, Mr. Harp represented the coastal Washington tribes on the Salmon Advisory Subpanel from 1984 to 1988. Mr. Harp holds the position of Fisheries Manager for the Quinault Indian Nation based in Taholah, Washington.

David Ortmann
Appointed, obligatory (Idaho)

Mr. David W. Ortmann [is] a fishery biologist and recreational angler from Coeur d'Alene, Idaho. He served briefly with California Department of Fish and Game and retired from Idaho Department of Fish and Game in 1995. He has been an avid recreational angler since the age of eight and is the author of more than 50 technical fisheries research and management reports.

Hans Radtke
Appointed, obligatory (Oregon)

Dr. Radtke is . . . from Oregon, residing in Yachats. . . . Dr. Radtke is a sport fisher and a freelance economist specializing in the relationship between resource-based industries of the Pacific Northwest and regional, state, and national economies. He has worked on a variety of projects, including impact analyses of fishery management alternatives for the Oregon Department of Fish and Wildlife and the Council. [Until June 2003, Dr. Radtke served as chairman of the Pacific Council. However, Dr. Radtke was not reappointed. At that time, he issued a statement regarding the council system. "All you have to do is look at the makeup of the Council and see the conflict of interest," he said. "It's just too easy for the political system to mess around with the makeup. I think we need a more fundamental change in the system."]

Roger Thomas
Golden Gate Fishermen's Association
Appointed, at-large

Mr. Thomas is . . . from California. He has been a commercial passenger fishing vessel owner/operator since 1968, fishing primarily for salmon. He is the President of the Golden Gate Fishermen's Association.

Phil Anderson
Washington Department of Fish and Wildlife
Mandatory

Mr. Anderson is the designee for Dr. Jeffery Koenings, the director of the Washington Department of Fish and Wildlife. Mr. Anderson joined the Department in 1994. . . . Prior to this position, he was the appointed obligatory Council member from Washington from 1987 to 1994 and served as Vice-Chairman and Chairman during that time. From 1970 to 1994, he was a charter fishing vessel owner/operator and participated in the recreational fisheries for salmon, halibut, groundfish, and albacore. Among other past activities, he was President of the Washington State Charter Boat Association.

Neal Coenen
Oregon Department of Fish and Wildlife
Mandatory

Mr. Coenen is the principal designee for Mr. Lindsay Ball, director of the Oregon Department of Fish and Wildlife. (Full bio not available at this time.)

Svein Fougner
National Marine Fisheries Service
Mandatory

Mr. Fougner is the designee for Mr. Rod McInnis, Acting Regional Administrator of the National Marine Fisheries Service Southwest Region. Mr. Fougner has worked for National Marine Fisheries Service since 1975 and has been the Assistant Regional Administrator for Sustainable Fisheries in the Southwest Region since 1998.

Eric Larson
California Department of Fish and Game
Mandatory

Mr. Larson represents Mr. Robert C. Hight, Director of the California Department of Fish and Game. (Full bio not available.)

Jerry Mallet
Idaho Fish and Game
Mandatory

Mr. Mallet is Idaho Fish [and] Game Director Steve Huffaker's designee to the Council. He is a retired Assistant Director for the department. Mr. Mallet served the department from 1956 to 2000.

THE COUNCILS ENJOY SIGNIFICANT DISCRETION IN WRITING FISHERY MANAGEMENT PLANS.

to "prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry." Other important provisions of the law require councils to use the "best scientific information available," to reduce bycatch and bycatch mortality, and to protect essential fish habitat. FMP provisions also must minimize costs "where practicable" and take into account the economic interests of fishing communities, but only to the extent "consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks)." The Magnuson-Stevens Act thus provides a limited role for economics, but not at the cost of avoiding overfishing and ensuring the continuing optimum yield of each fishery.[28]

The councils have significant discretion in determining the annual "optimum yield" of a fishery. The Magnuson-Stevens Act establishes a ceiling for the optimum yield but provides little additional guidance. Under the act, optimum yield cannot exceed the "maximum sustainable yield" (MSY) of a fishery. A fishery's MSY is that amount of fish that a stock will "produce" annually when it is at its most productive size. Although often debated, theories developed by fishery science hold that a fish stock will produce its MSY when the population is somewhere between 40 and 60 percent of its pre-fishing level.[29] A council is free to reduce optimum yield below MSY if such a reduction can be justified on the basis of "any relevant economic, social, or ecological factor." However, a council cannot reduce optimum yield to zero based on consideration of these factors, unless it can show that refraining from fishing a species will provide "the greatest overall benefit to the nation."[30]

Councils enjoy additional discretion as a result of the scientific uncertainty involved in estimating fish populations and safe catch levels (see Box 4). Scientists have a very difficult time identifying with precision exactly what the MSY of a fishery is. NOAA scientists, who advise the councils on such matters, thus almost always present the councils with a range of possible MSYs. For example, scientists might tell a council that there is an 80 percent chance that the MSY is between 10 and 25 million pounds annually. This spread provides a council with a large amount of discretion. The council may choose to "set" the MSY of the fishery at any level between 10 million and 25 million pounds. The combination of this scientific discretion and the legal discretion in the Magnuson-Stevens Act gives the councils significant latitude, power, and responsibility.

NMFS must review and approve all FMPs and amendments to the plans. Councils submit their plans or amendments to NMFS, after which there is a sixty-day public comment period. Within thirty days after the comment period closes, NMFS must approve, disapprove, or partially approve the plan or amendment. If NMFS does not act within this period, the plan or amendment automatically goes into effect. If NMFS disapproves or partially approves a plan, the council can submit a revised plan or amendment. During the time that a council is revising a disapproved plan, the status quo established by prior regulations remains in effect. NMFS cannot prepare and adopt its own FMP unless the council does not revise its plan or amendment (or fails to prepare any plan for a fishery that requires conservation and management). Even then, NMFS must ask for the council's views before finalizing the federal FMP and can never unilaterally create a plan that restricts the number of fishermen who can participate in a fishery.[31]

When a council submits an FMP to NMFS for review and approval, the council also submits proposed regulations implementing the plan. Councils can propose modifications to the regulations at any time. Although NMFS must review the proposals before promulgating the final federal regulations implementing the FMP, NMFS again enjoys only very limited authority to revise the regulations on its own. Once final regulations are in place, the federal government through NMFS and the Coast Guard implements and enforces the regulations.

In response to growing concerns regarding the health of the nation's fisheries, Congress in 1996 added provisions to the Magnuson-Stevens Act designed to rebuild overfished fisheries. Congress specified that FMPs must pro-

FIGURE A: MANAGEMENT OF THE KING MACKEREL FISHERY, 1985–1999

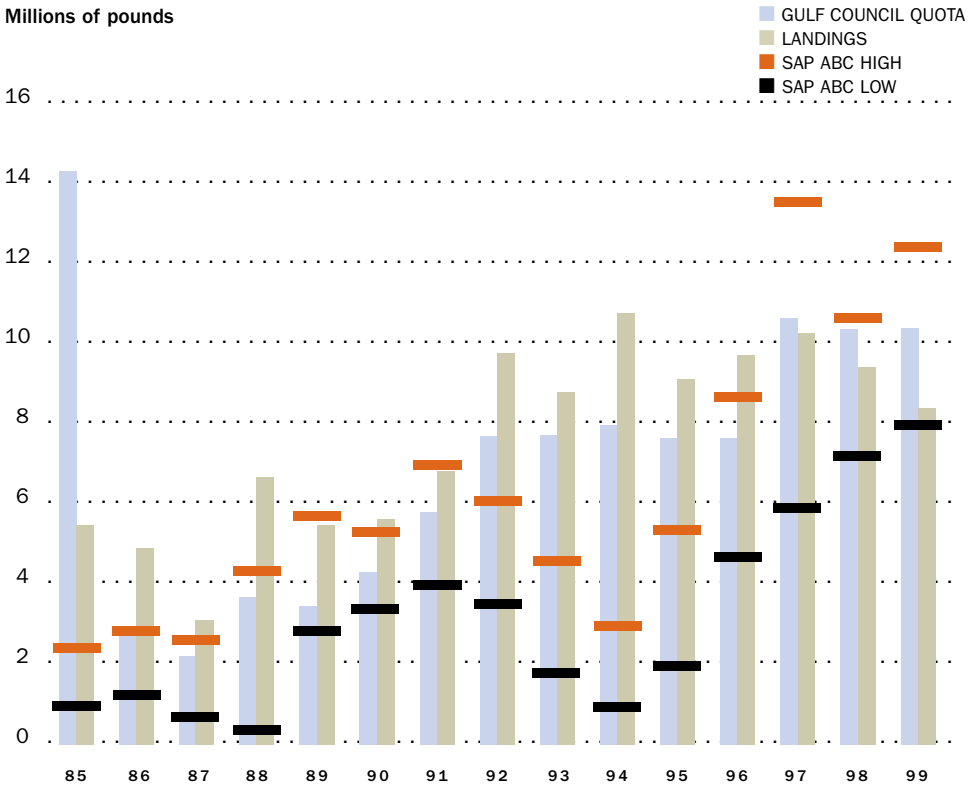
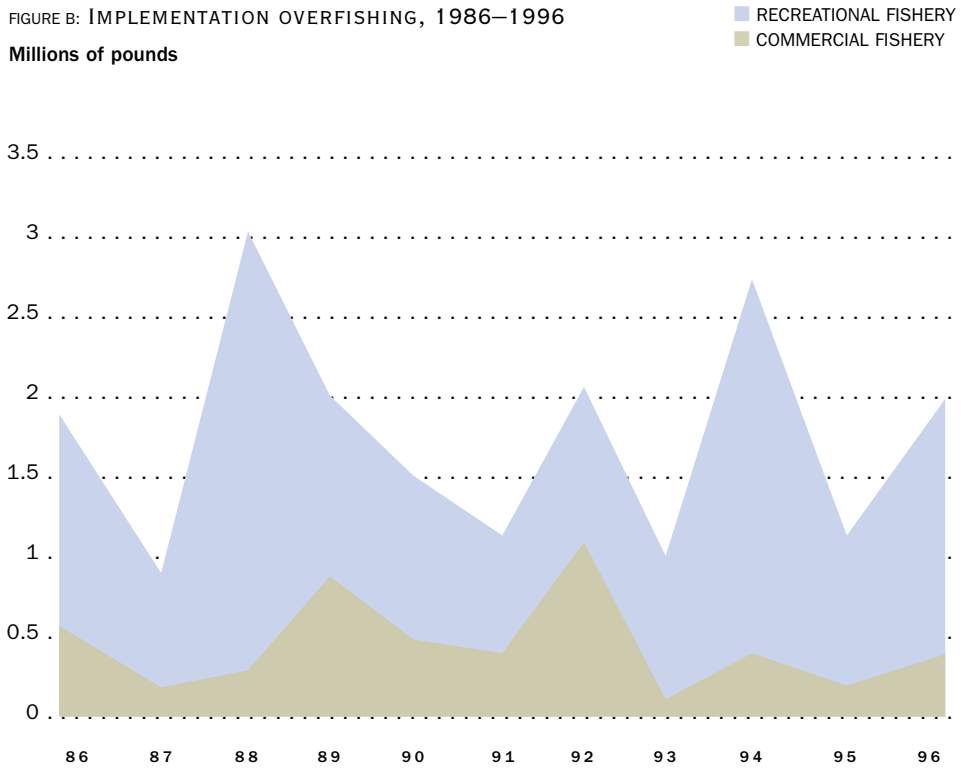


FIGURE B: IMPLEMENTATION OVERFISHING, 1986–1996



Box 4:

SCIENTIFIC UNCERTAINTY AND COUNCIL DISCRETION

The Magnuson-Stevens Act requires the regional councils to use the "best scientific information available" in making their management decisions. An examination of several case histories, however, shows that councils sometimes ignore the recommendations of fishery scientists. More importantly, the uncertainty inherent in scientists' estimates of appropriate catch levels gives the councils significant discretion in setting quotas and other management measures. Councils often use this discretion to set lax quotas and management measures that are unlikely in the long run to achieve the Magnuson-Stevens Act's objectives.

In an earlier paper, two of the authors of this report examined the use of scientific recommendations in the Gulf Council's management of king mackerel and the Pacific Council's management of widow rockfish.* Both councils occasionally chose quotas that were higher than the allowable biological catch (ABC) range recommended by NMFS scientists. More importantly, rather than choosing a quota in the middle of the recommended range, the councils almost always chose quotas that were at or near the top of the range, making effective management unlikely.

Figure A, for example, shows the quotas and landings for Gulf king mackerel compared with the range recommended by the NMFS stock assessment panel (SAP). As can be seen, the Gulf Council set quotas that were above the recommended range in five years (1985 and 1992–1995). The council set the quota at or below the midpoint of the range only in 1989 and 1990. In all other years, the council set a quota that exceeded, often by significant amounts, the midpoint recommendation.

As Figure A illustrates, setting a high quota within the recommended range makes it very likely that the actual catch level will exceed the scientific recommendation. From 1985 through 1996, the reported landings exceeded the upper end of the recommended range in every year except for 1989 (the only year in which the council set the quota at or below the midpoint of the range). Actual landings, moreover, almost certainly exceeded reported landings as a result of illegal fishing. Implementation of fishery regulations is inevitably imperfect. Fisheries experience "overages," in which reported catch exceeds quotas, because of imperfect reporting systems and because of political pressure not to close fisheries even after they have met their quotas. **Figure B** shows the overages, or "implementation overfishing," in the Gulf king mackerel fishery for the years studied.

* Josh Eagle and Barton H. Thompson Jr., "Answering Lord Perry's Question: Dissecting Regulatory Overfishing," *Ocean and Coastal Management* 46 (2003): 649–679.

vide for the rebuilding of overfished stocks in a time period that is "as short as possible," taking into account various factors including the status and biology of the fish stock and the needs of fishing communities. Unless the biology of the fish stock, other environmental conditions, or international agreements dictate otherwise, the rebuilding period must not exceed ten years. If a council does not submit a plan within a year of learning that a fishery is overfished, NMFS must submit a federal plan to rebuild the stock. NMFS also must review council FMPs every two years to ensure that they are leading to "adequate progress toward ending overfishing and rebuilding affected fish stocks."[32]

Box 5:

The Role of Council Advisory Committees: A Case Study of the North Pacific Council and the Pacific Cod Fishery

Development of an FMP and of yearly quotas is a long and complicated process, involving input from multiple advisory committees. Although committees vary from council to council, the North Pacific Council's annual quota-setting process for Pacific cod provides a valuable illustration.

The Alaska Fisheries Science Center, one of six NMFS regional science centers, starts by preparing and compiling scientific and catch data into a yearly stock assessment for Pacific cod. The center presents the assessments for various Gulf of Alaska groundfish stocks in a draft Stock Assessment and Fishery Evaluation Report ("SAFE Report"). The SAFE Report contains a maximum allowable biological catch (ABC) recommendation, along with a harvest level recommended by the science center's fisheries scientists.

Next, the North Pacific Council's Groundfish Plan Team discusses the SAFE Report, together with the underlying stock assessments. Members of the Plan Team are appointed by the council, and the team consists of NMFS and academic fisheries scientists, council members, the NMFS regional administrator for Alaska, a representative of the Alaska Department of Fish and Game, a representative of the Washington Department of Fish and Wildlife, a representative of the International Pacific Halibut Commission, and a representative of the U.S. Fish and Wildlife Service. The Plan Team reviews the various stock assessments and writes a summary chapter for the SAFE Report in which it makes ABC recommendations. The Plan Team then delivers the SAFE Report to the council so that it may set final ABCs and corresponding total allowable catches (TACs) for the fisheries.

The Gulf of Alaska Groundfish SAFE Report and its recommendations go to the North Pacific Council's Advisory Panel (AP), its Scientific and Statistical Committee (SSC), and all council members. The AP, composed of industry and fishing representatives, does not usually make numerical ABC or harvest level recommendations to the council, but instead comments on the socioeconomic impacts of the proposed management measures. The SSC, composed of biologists, economists, statisticians, and social scientists, does make recommendations to the council on ABCs and advises the council on the information contained in the SAFE Report. The SSC is the final step before council action.

The council tentatively sets the preliminary TACs for the following year at the council's September meeting and finalizes the TACs at its December meeting after a public comment period.

Congress also added language in 1996 requiring that the councils take steps to reduce bycatch and address the effects of fishing on ocean habitats. The provisions mandate that the councils reduce these ecosystem effects "to the extent practicable."[33]

ADVISORY COMMITTEES

In making their management decisions, the councils receive advice and support both from fishery scientists in and out of government and from a variety of advisory groups (see Box 5). Scientists at regional NMFS offices typically prepare stock assessments and recommend allowable biological catch levels. Under the Magnuson-Stevens Act, moreover, each council must form a Scientific and Statistical Committee to advise it on catch levels and other scientific issues, as well as a Fishing Industry Advisory Committee to provide the fishing industry's perspective on issues before the council. Each council also is free to form other advisory committees; many have formed panels to advise them on issues ranging from industry operations and market conditions to the design and timing of regulations and emerging environmental concerns. Councils appoint the members to these various advisory groups and may use them to broaden the expertise and perspectives available to the councils. Most socioeconomic panels, for example, include one or two representatives of nonfishing groups. The fishing industry, however, dominates all the nonscientific advisory groups, and the ultimate management decisions remain with council members themselves.

THE RECORD OF THE REGIONAL COUNCILS

Managing a wild fish stock is not an easy task. Scientists often have only limited data on fishing stocks, and models are under constant refinement. Managers therefore must constantly decide on the appropriate degree of conservatism to use in protecting a fishery, and even conservative fishery plans can turn out to have overestimated the health of a stock. Conservatism, moreover, can come at a short-term cost to the local fishing industry and thus frequently con-

fronts political opposition. However, even with these problems recognized, the regional councils' record, as measured by the actual status of the fish stocks that they are responsible for managing, is disappointing.

One reasonable means of evaluating the health of a fish stock would be (1) to compare the current fishing mortality rate with the rate that, in the long run, would achieve the MSY, and (2) to compare the current population size with the population size that would provide the MSY (P_{MSY}). As discussed earlier, the Magnuson-Stevens Act requires councils to ensure that fisheries achieve the MSY on a continuing basis. Scientists also commonly use the MSY as a point for comparison. Where the current fishery catch exceeds the level that would produce MSY on a continuing basis, the fishery suffers from overfishing. Where the current population level is lower than P_{MSY}, the fishery is overfished.

In practice, however, determining the true state of council-managed fisheries is difficult for a number of reasons. First, the United States lacks even basic information about a number of important stocks. There are 932 stocks under federal management in the United States' EEZ, but NMFS has information sufficient to evaluate the full status of about 25 percent of them, slightly more than 230. Of the nearly 700 stocks of "unknown" status, 99 are "major stocks" (defined as stocks with annual landings of more than 200,000 pounds). Nine of the 30 most valuable domestic fisheries are of "unknown" status. Thus, NMFS does not know whether the two most valuable fisheries managed by the councils — pollock and brown shrimp — are overfished or not.[34]

There also are no independent assessments of the condition of fish stocks in U.S. waters. NMFS reports to Congress each year on the overall condition of U.S. fisheries. In classifying fish stocks, however, NMFS must rely on definitions written by the regional councils. Under the Magnuson-Stevens Act, the councils define the points at which a stock is overfished and at which the mortality exceeds MSY. NMFS must measure the success of the councils, therefore, using the targets that the councils themselves have set. This might not be a problem if determining overfished and overfishing conditions for a stock of fish were an easy, straightforward, and noncontroversial task. But the scientific uncertainty that surrounds even "known" fish species (i.e., those whose status is known) leaves significant discretion to the decision-maker. Environmental organizations, scientists, and fishermen all have criticized the definitions of "overfished" and "overfishing" adopted for particular fisheries as being either too low or too high. The councils, moreover, have not yet even developed definitions for a large number of stocks, making it impossible to measure their health.

Using the regional councils' own definitions, the state of the fisheries under their jurisdictions is not good. Of the 237 known stocks for which there is sufficient information to evaluate current stock levels, NMFS classifies approximately 36 percent (86) as overfished. Of the 274 stocks for which it can be determined whether overfishing is occurring, about one-quarter (66) are experiencing overfishing. Significantly, 48 stocks — about 20 percent of known stocks — are both overfished and experiencing overfishing, which suggests that effective rebuilding plans either have not yet been implemented or have not taken effect. These numbers are not much better for major stocks, which provide more than 99 percent of all fish — 9 billion pounds in total — caught by U.S. fishermen. Twenty-seven percent of major stocks are overfished, while 24 percent are subject to overfishing.[35]

There is a sharp difference among the councils in percentages of overfished fisheries and stocks subject to overfishing. As shown in Figure 1, more than 35 percent of the known major stocks in five council regions (New England, Mid-Atlantic, South Atlantic, Gulf of Mexico, and Caribbean) are subject to overfishing. By contrast, only one known major stock in the Pacific region is subject to overfishing and none in the North Pacific region is. About four of every ten major stocks are overfished in the five council regions plagued by overfishing, and 20 percent of known

TWENTY PERCENT OF FISHERIES WITH KNOWN STOCKS ARE BOTH OVERFISHED AND EXPERIENCING OVERFISHING.

major stocks managed by the Pacific Council are. According to the North Pacific and Western Pacific Councils, however, none of their stocks is overfished. These numbers should be viewed with caution, given that the overfished status of 40 percent (25 of 63) of the major stocks managed by those two councils is unknown. Box 6 explores why the North Pacific Council may have been more successful than others.

Although one should be careful in making direct comparisons with statistics from other countries, given the variation in definitions of "overfished" and the reliability of the available data, the United States' management record is surprisingly lackluster in light of the nation's relative success in managing other resources. Indeed, the U.S. record appears to be slightly worse than the average management record for the world as a whole. According to the Food and Agriculture Organization of the United Nations, of the worldwide fish stocks for which information is available, 28 percent are overfished — compared, as noted earlier, with 37 percent of all major and minor fisheries managed by regional councils in the United States.[36] This is worrisome because fishery scientists in the United States, particularly those working at NMFS, enjoy a reputation as some of the most sophisticated and accomplished fisheries science

Figure 1. STATUS OF MAJOR STOCKS*

	Major stocks	Major stocks with unknown population level	Known major stocks that are overfished	Cannot be determined if fishing is occurring at a sustainable rate	Known major stocks experiencing overfishing	Known major stocks that are both overfished and experiencing overfishing
NEW ENGLAND COUNCIL (Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut)	29	2 (7%)	10 (37%)	6 (21%)	8 (35%)	4 (17%)
MID-ATLANTIC COUNCIL (New York, New Jersey, Delaware, Maryland, Virginia)	11	2 (18%)	4 (44%)	0 (0%)	4 (36%)	3 (33%)
JOINT NE/MA	3	1 (33%)	1 (50%)	0 (0%)	3 (100%)	1 (50%)
SOUTH ATLANTIC COUNCIL (North Carolina, South Carolina, Georgia, Florida [Atlantic coast])	23	5 (22%)	8 (44%)	5 (22%)	9 (50%)	8 (44%)
GULF OF MEXICO COUNCIL (Florida [Gulf coast], Alabama, Louisiana, Mississippi, Texas)	23	14 (61%)	4 (44%)	12 (52%)	4 (36%)	3 (33%)
JOINT SA/GOM	8	2 (25%)	1 (17%)	2 (25%)	0 (0%)	0 (0%)
CARIBBEAN COUNCIL (Puerto Rico and Virgin Islands)	4	2 (50%)	1 (50%)	2 (50%)	1 (50%)	1 (50%)
PACIFIC COUNCIL (Washington, Oregon, California)	62	27 (44%)	7 (20%)	25 (40%)	1 (3%)	1 (3%)
WESTERN PACIFIC COUNCIL (Hawai'i)	13	4 (31%)	0 (0%)	13 (100%)	n/a	n/a
NORTH PACIFIC COUNCIL (Alaska)	50	21 (42%)	0 (0%)	6 (0%)	0 (0%)	0 (0%)
TOTAL	226	80 (35%)	36 (22%)	71 (31%)	30 (19%)	21 (14%)

Source: National Oceanic and Atmospheric Administration, *Status of Fisheries of the United States,* 2002.

*In calculating percentages for the table, the denominator in the second and fourth columns is the total number of major stocks managed. In the third column, the denominator is the number of those stocks for which NMFS has information sufficient to make an "overfished" determination. In the fifth column, it is the number of stocks for which the agency can assess whether or not overfishing is taking place. In the sixth column, the denominator is the number of stocks for which NMFS can make both determinations.

experts in the world. Given the ability of the scientists, one would expect that the United States' management record would be better, certainly not worse, than the worldwide record.

The councils also have not been very successful to date in rebuilding fisheries. NOAA's most recent report on the status of fish stocks claims that a few dozen stocks have improved from "overfished" to "not overfished" since 1997. However, NOAA does not claim that any of these stocks has been rebuilt to a level at which it can produce its MSY. The difference is significant. For example, a stock may be classified as overfished when its population is less than 20 percent of its level prior to fishing (the "unfished level"). A growth in population from 19.5 percent of the unfished level to 20.5 percent of the unfished level will result in the stock being reclassified from overfished to not overfished. But that stock cannot be considered "rebuilt" within the definition of the Magnuson-Stevens Act until such time as it reaches P_{MSY}. So long as stock size is less than P_{MSY}, the fishery is not producing as many fish as it can and potential production is being lost. Although P_{MSY} varies from stock to stock, usually fisheries scientists estimate it to be around 40 to 60 percent of a stock's unfished level. More than 60 percent of the stocks that are currently under council rebuilding plans, moreover, are still experiencing overfishing — suggesting that the councils have not yet adequately addressed the problem (too much fishing) that led to the fisheries becoming overfished in the first place and thus suggesting that rebuilding is unlikely to be successful.[37]

The record of the councils has not been entirely negative. More than half of the known, managed major species in the U.S. EEZs are not overfished. Moreover, councils on occasion have taken politically unpopular actions to help preserve species at risk. A recent example of an unpopular but biologically warranted decision is the Pacific Council's 2002 closure of rockfish fisheries. Although this draconian measure was necessitated in part by prior Pacific Council management, the council should be given credit for attempting to correct its previous errors.

A neutral observer, however, could not help but see significant room for improvement. If the nation is to protect and restore its vast fishery resources for this and future generations, it must do a better job of managing the fisheries.

Box 6:

Explaining the Possible Success of the North Pacific Council

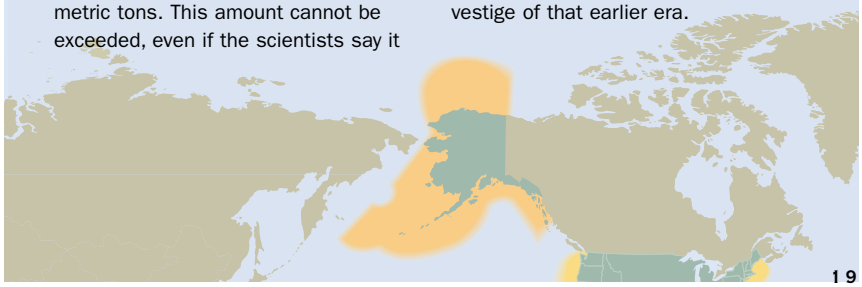
According to NMFS reports, the North Pacific Council leads the way in successful fisheries management. None of its major stocks is currently listed as overfished or subject to overfishing. Many observers do not believe that the North Pacific Council has been as successful as this statistic suggests. First, the "overfished" status of many of the major stocks in the region — including some that support the enormous pollock fishery — is unknown. Critics also point out that the council has presided over the decline of several stocks, including valuable king and tanner crab fisheries, and that North Pacific fisheries discard more than 300 million pounds of bycatch annually. Finally, some conservation groups have criticized the council's management of the pollock fishery and its effects on Steller sea lions. Nonetheless, it is still worth considering the possible reasons why this council, unlike most of the others, seems to be achieving some management success.

Two policies might account for the relative health of North Pacific fish stocks: strict catch limits and a high level of observer coverage. The council pursues strict catch limits in three ways. First, it uses only hard quotas that place a firm limit on how many fish can be caught. Hard quotas, unlike the effort-based regulations favored by many other councils, go a long way toward ensuring that a fishery is closed when the biologically safe amount has been caught. Second, the council consistently follows the advice of science advisors. Unlike other councils (see Box 4), the North Pacific Council has rarely, if ever, set catch limits higher than scientific recommendations on safe catch levels. Finally, the council has adopted conservative caps on the total amount of fish that can be caught even when scientists believe higher catches may be permissible. For example, the council has limited Bering Sea catches of all groundfish to 2 million metric tons. This amount cannot be exceeded, even if the scientists say it can, unless the council decides in the future to amend the FMP.

Compared with other councils, the North Pacific Council also requires that a high percentage of boats carry independent observers. Observers are valuable to management. They provide reliable information on the amount and kinds of fish that fishing vessels are actually catching. In many regions, observers are not used because they are expensive and because some fishermen see them as an intrusion or as onboard police. The North Pacific Council requires that observers be present on all vessels longer than 60 feet, and it also mandates that the fishing industry pay for this coverage.

People have provided a variety of explanations for why the North Pacific Council has often adopted a more conservative approach. One reason may be council representation. Although the council does not have a member from any environmental organization, for example, at least one council member is active in a local conservation group. In our survey, several members of the council reported that diversity of perspectives aided their deliberations.

The North Pacific Council also may illustrate that history and long-term culture matter. The seeds of the council's approach may have been planted in the first decade and a half of the council's existence. From the passage of the Fishery Conservation and Management Act in 1976 until the late 1980s, foreign fleets dominated EEZ fisheries off Alaska. During this period, the council was extremely conservative in its management, and it faced no domestic political opposition to the imposition of strict conservation measures. In fact, domestic fleets, which were gradually building up their operations, urged the council to limit catches so that there would be an abundance of fish left once the U.S. fleets could operate at full capacity. The council's current approach may well be the fortunate vestige of that earlier era.



THE STUDY

To examine whether the makeup and structure of the regional fishery management councils might be undermining their effectiveness, we conducted a comprehensive study of the operations of four of the eight regional councils: the Gulf of Mexico Council (Gulf Council), the New England Council, the North Pacific Council, and the Pacific Council. We chose these councils because they manage the four most economically important fishing regions in the United States.

We began by visiting each council and conducting an initial survey of the council members' views, both by mail and in person. We also studied in depth how each council evaluated and resolved a major fishing management issue currently before it. Finally, we asked all members of each council, including both voting and nonvoting members, who had not completed an earlier questionnaire to complete a slightly shorter version of the questionnaire. Both questionnaires asked each council member about his or her background and education, the types of information considered in making decisions, the adequacy of the information, opportunities for input into the council's decisions both by the general public and by fishing interests, potential and perceived conflicts of interest, and whether the council member had ever recused himself or herself because of a potential conflict of interest.

The survey results are summarized in the Appendix. We ultimately received responses from more than half of the voting members of the four councils studied. Response rates ranged from a high of almost 80 percent for the Pacific Council to only 24 percent for the Gulf Council (in the latter of which, we were later informed, council members were told that it is generally not advisable to participate in such surveys). If the Gulf Council surveys are excluded from the total numbers, more than 60 percent of the total voting members of the other three councils completed the surveys. Two-thirds of the responses were from appointed members of the councils. Although we sent the surveys to all the members on the four councils, we received completed questionnaires from only five of the sixteen nonvoting members.

In the remainder of this report, we have tried as much as possible to let the council members speak for themselves. Because we promised the council members anonymity, we do not attribute comments to particular council members. But we have not changed the words used by the council members in their responses to our questions (except occasionally to correct punctuation or spelling or to replace acronyms with complete names). The quotations therefore are an accurate description of how the council members themselves view their institutions and decision-making processes.

Using the federal Freedom of Information Act, we also requested information about the councils from NMFS. We requested copies of the financial disclosure forms that all council members are required to complete and make available to the public; council members are required to disclose their financial interests in fishing or the seafood industry. We also requested information regarding recusals of council members due to financial conflicts of interest. We asked for any written queries sent by council members to NMFS regarding potential conflicts and for NMFS' written opinions, if any, on whether or not recusal was advisable. Finally, we asked for letters sent by NMFS to any council in which the agency fully or partially disapproved of the council's proposed conservation or management measures. NMFS is required to send such a letter to a council if a proposed action is deemed, upon review, to be inconsistent with the national standards or other provisions of the Magnuson-Stevens Act.

PROBLEMS WITH COUNCIL DECISION-MAKING

Although we looked at a number of different issues, four problems with the councils' structure have risen to the forefront. First, by giving the same body responsibility for making both conservation and allocation decisions, the Magnuson-Stevens Act reduces the likelihood of effective

conservation. The pressure to avoid difficult allocation decisions encourages the councils to neglect conservation. Second, councils are dominated by fishing industry representatives and, as a result, do not enjoy the diversity of perspectives necessary for good decision-making. Third, council members representing the fishing industry face frequent conflicts of interest, which threaten both effective decision-making and the public's confidence in the councils. Finally, although NMFS oversees the councils' decisions, its oversight historically has been deferential and is not an adequate answer to the concerns regarding the councils' decision-making.

COMBINING CONSERVATION AND ALLOCATION

Regional fishery management councils must make two difficult and related management decisions. First, councils must decide what size quota or other management controls to impose on a fishery. Scientific uncertainty complicates this task and leaves the councils with significant discretion. As discussed already, scientists often know only a limited amount about the stocks of fish that the councils must manage. As a result, the scientists' recommendations of optimum catch levels are merely best estimates, clouded by uncertainty. As one New England Council member said: "When the scientists give the council advice, the council members know that there's a wide range of probabilities. If they [NMFS scientists] say it's 782, they might say there's a 90% probability that it's somewhere between 325 and 1275; yes it's probably somewhere in there."[38] Councils must evaluate the scientific and other information and make their best judgment on what is necessary to rebuild overfished fisheries and sustain fisheries that are currently healthy.

Second, having made their conservation decisions, councils must decide how to allocate the quotas, or any other rights and benefits created by the management regime, among the members of the fishing communities. This task is never politically easy. Councils often must decide how to allocate a limited quota among diverse fishing interests, all of whom have significant economic and, frequently, social and cultural interests at stake. Councils must decide on the relative claims of commercial and recreational fishermen, small and large fishing interests, longtime fishermen and relative newcomers, varying geographic areas and boat types, and fishermen from different regions, among others.

This pairing of tasks is not inevitable. In theory, the two tasks could be divided between two different decision-makers — one deciding on the appropriate conservation measures (the "conservation decision") and the other allocating quotas or rights among the fishermen (the "allocation decision"). As discussed in our later section on recommendations, we believe the functions should be separated. Under current law, however, the regional councils make both decisions.

Requiring the regional councils to make both conservation and allocation decisions creates significant pressure to adopt higher quotas and less stringent conservation measures. Faced with the painful task of allocating a limited quota among competing fishing interests, councils can reduce the pain only by increasing the

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— NEW ENGLAND COUNCIL MEMBER

size of the quota and thus the amount of fishing rights that can be apportioned. As councils consider the difficult allocation decisions that are down the road, they inevitably are tempted to relax the conservation measures that they otherwise might adopt. And the inevitable scientific uncertainty surrounding the appropriate quota level often makes it easy for councils to succumb to this temptation by abandoning caution and setting lax standards.

The Gulf Council's decision to set a high quota for king mackerel in the early 1990s, despite the mackerel's overfished condition, is a vivid example of this problem (see Box 7). Not wishing to reduce the bag limits for recreational fishermen, and not willing to reduce the relative quota shares for various classes of commercial fishermen, the council ultimately allowed 9.8 million pounds of mackerel to be caught in the 1992–1993 season — compared with the "total allowable catch" of 6.1 million pounds recommended by the council's Mackerel Management Committee. The ultimate catch had only a 20 percent chance of achieving the fishery's rebuilding goals.

Box 7:

How Allocation Impacts Conservation: The Gulf King Mackerel Fishery

The 1992–1993 Gulf king mackerel fishery provides several good examples of how the conservation/allocation conflict plays out in actual decisions. The Gulf Council's Mackerel Management Committee recommended an overall quota for that fishing year of 6.1 million pounds.* Based on long-standing council policy, the Gulf Council normally would have allocated 68 percent of the quota (4.2 million pounds) to the recreational fishery and 32 percent (1.9 million pounds) to the commercial fishery.

These numbers, however, presented a political problem for the council. The recreational fishery was managed by "bag limits" — a restriction on the number of fish each recreational fisherman could catch on each fishing trip. The bag limit for any given year equaled the quota (converted to units of ten-pound fish) divided by the estimated number of recreational fishing trips for the year. Because over 280,000 fishing trips were projected for 1992–1993, the council would have had to set the bag limit at 1.5 fish per person per trip if the recreational quota were set at 4.2 million pounds. Prior to 1992, the bag limit in the king mackerel fishery had been three fish per person per trip. Since it is impossible to catch just half a fish, the council would have had to set the bag limit at only one fish.

Many council members were unhappy with this outcome. They did not want to reduce the bag limit below two fish. A bag limit of two, however, would require giving recreational fishermen a quota of well over 5 million pounds of king mackerel. In the end, the council allocated more fish to the recreational anglers by relaxing conservation. The council set the overall quota at 7.8 million pounds, almost 1 million pounds higher than *even the industry advisory panel had recommended*. This permitted the council to give 5.3 million pounds to the recreational fishery and 2.5 million to the commercial fishery. Estimates made after the 1992–1993 fishing season showed that landings for the recreational fishery that year totaled more than 6.2 million pounds, nearly 50 percent higher than scientific recommendations.

The conservation/allocation conflict was also evident in the management of the commercial fishery that year. When the Gulf Council raised the recreational quota to accommodate the two-fish bag limit, it was compelled to raise the commercial quota an equal 26 percent in order to maintain the traditional allocation ratio between the two sectors. The resulting 2.5 million pound commercial TAC was allocated between eastern and western zones. The eastern zone, which received 1.73 million pounds, consisted of the Gulf and Atlantic coasts of Florida. The council made no regulatory allocation between these two Florida fisheries. The commercial fisheries in the eastern zone reached 1.73 million pounds by the end of 1992 and were closed on January 13, 1993.

Due to a variety of factors, including a court decision that invalidated several Florida state regulations and bad weather that "muddied the waters, making the detection of fish difficult," commercial landings of king mackerel in the eastern zone were far higher off the Gulf coast of Florida than they were off the state's Atlantic coast. The fishermen off the Atlantic coast complained to the council that this was not fair because both the weather conditions and the judicial decisions were outside their control. Furthermore, while there had been no formal allocation in the past, "[e]qual sharing of this resource by east [Atlantic] and west [Gulf] coast fisheries is clearly evident in historical landings. Yearly and average landing estimates for the past 23 years both before and after implementation of Federal quota management indicate that, despite some disproportionate yearly catches, the east/west coast catches trend toward parity."† Finding a "social and economic emergency," the council recommended that the Atlantic commercial fishery be reopened to allow for an additional 259,000 pounds of king mackerel to be caught.

In the end, recreational and commercial fishermen caught a total of 9.8 million pounds of king mackerel during the 1992–1993 season, even though the stock already was listed as overfished. By contrast, NMFS scientists had estimated that the quota should be set around 5 million pounds (and no higher than 6.1 million), and the council's own king mackerel committee had recommended that the quota be set at 6.1 million pounds.

According to scientists, there was more than an 80 percent chance that the actual landings of 9.8 million pounds exceeded the "true" allowable biological catch.

* Although the Gulf and South Atlantic Councils jointly manage the Gulf and Atlantic king mackerel fisheries, the Gulf Council has primary decision-making authority with respect to the Gulf fishery, which includes commercial fishing off the east coast of Florida.

† 58 *Fed. Reg.* 10990 (1993).

LACK OF DIVERSE VIEWPOINTS

Research on decision-making has shown that diverse perspectives are extremely valuable in making effective decisions.[39] Groups with diverse perspectives on an issue tend to look at and consider a broader set of information in making their decisions. Researchers have found that, where groups are dominated by a particular group perspective, they look far more at information that is supplied by or accepted by the dominant group (what psychologists call "shared information") than at other information that may cast doubt on the shared information. One study of group decision-making, for example, found that nondiverse groups discussed 45 percent of the shared information that was available to them but only 18 percent of the other information.[40]

Groups with diverse perspectives also appear to make better decisions. There are several reasons for this. First, diverse groups bring a greater array of experience to the table. In the business field, for example, companies that have diverse business experiences tend to make better acquisition decisions and to pay less for their acquisitions.[41] In addition, members of homogeneous groups tend to reinforce one another's views. As a result, the group is less likely to challenge traditional viewpoints that are widely held within the group but wrong. This problem is significant enough that social scientists have dubbed it "groupthink."[42]

Where commissions or councils make regulatory decisions, the diversity of the group is also important to the democratic validity of the decisions. Fearing that members of well-defined groups often may be predisposed to the views of that group, citizens with different perspectives fear that highly homogeneous groups will not give them a fair hearing. As a result, participation is discouraged, and citizens may end up suspecting even well-grounded decisions.

Legislatures often have recognized the value of including diverse perspectives on governmental boards and commissions. As noted earlier, for example, many states require fish and game commissions to include diverse perspectives. Congress also has mandated diversity in numerous settings. By law, for example, the U.S. Securities and Exchange Commission, the Federal Trade Commission, and the Federal Energy Regulatory Commission must have members from more than one political party.

In 1972, moreover, Congress passed the Federal Advisory Committee Act (FACA) requiring that advisory committees provide broad and diverse perspectives. Under FACA, the membership of an advisory committee must be "fairly balanced in terms of points of views represented and the functions to be performed by the advisory committee."[43] Congress criticized prior advisory commissions that sometimes reflected the view only of the industry being regulated:

> When [one advisory committee] met with government officials to consider a proposed national industrial wastes inventory questionnaire, only representatives of the industry were present. No representatives of conservation, environment, clean water, consumer, or other public interest groups were present. This lack of balanced representation of different points of view and the heavy representation of parties whose private interests could influence their recommendation should be prohibited by the provision contained in [FACA].[44]

Although the regional councils are exempt from FACA's requirements, the diversity requirements speak directly to the value of including broad perspectives on the councils. The regional councils look very much like advisory committees, with one important exception — they make fishery management decisions themselves rather than merely giving advice to NMFS. The fact that the councils are themselves making the key decisions argues even more strongly in favor of ensuring broad perspectives.

So how broad are the perspectives and viewpoints represented on the regional councils? If the councils were responsible only for allocating an overall fishing quota among various groups of commercial and recreational fishing interests, they might score well. As discussed in more detail later in this report, the voting members of the councils reflect a fairly diverse set of

"[STATE DIRECTORS ARE] THE MOST SUSCEPTIBLE TO CONSTITUENT PRESSURES ON A WIDER VARIETY OF ISSUES THAN ANY SINGLE CONSTITUENCY COUNCIL MEMBER WOULD BE."

—FORMER COUNCIL MEMBER

commercial and recreational fishing interests. Few fishing interests lack a voice on the regional councils.

But the councils provide little diversity of perspective on conservation questions. Most council members are affiliated with or reflect commercial and recreational fishing interests. Virtually none comes from the conservation world or the public at large.

As noted earlier, "appointed members," who are selected by the Secretary of Commerce from gubernatorial lists, make up a majority of every council. In some councils, almost two-thirds of the voting members are appointed. Appointed members, in turn, are primarily fishing interest representatives. In 2002, 83 percent of all appointed council members represented fishing interests. In total, 47 percent represented commercial fisheries and 36 percent represented recreational fisheries. As shown in Figure 2, these percentages — with the exception of those for the Caribbean Council — did not vary significantly among councils. Fishery representatives controlled a majority of the votes on four of the eight councils — and almost a majority on the others.

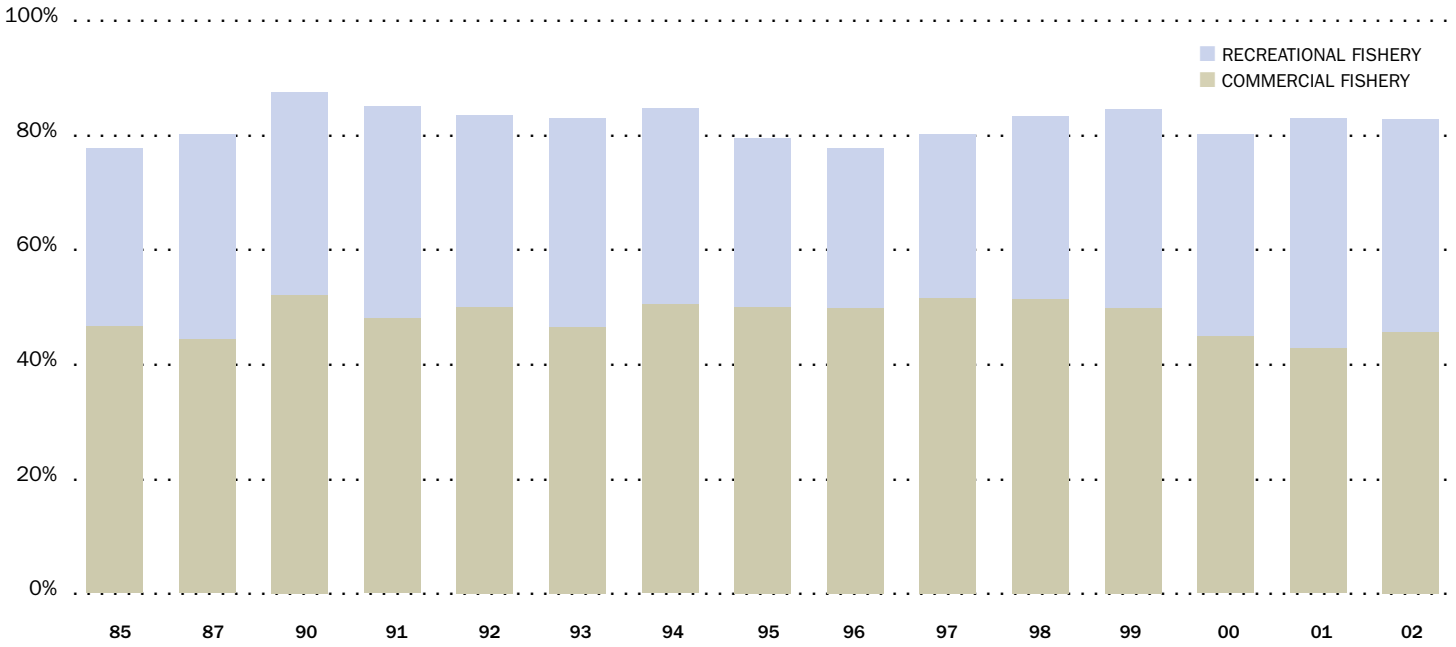
Only 18 percent of the appointed council members in 2001 did not directly work in or represent the fishing industry. Many of these members, moreover, were academic scientists or economists with long-standing affiliations with the fishing industry. Only the New England Council currently includes a representative from a national conservation organization, Environmental Defense. Some of the councils include fishing representatives who are also members of local conservation organizations. The North Pacific Council, for example, includes the owner of a small boat who is also a board member of the Alaska Marine Conservation Council, a local fishery conservation group. In the entire history of the council system, however, only a

Figure 2. APPOINTED MEMBERS ON EACH COUNCIL 2002

	Total voting members	Appointed members			Voting members who were appointed	Appointed members who were fisheries representatives	Voting members who were fisheries representatives
		Commercial	Recreational	Other			
NEW ENGLAND	18	9	2	1	67%	92%	61%
MID-ATLANTIC	21	6	5	2	62%	85%	53%
SOUTH ATLANTIC	12*	3	3	1	58%	86%	50%
CARIBBEAN	7	2	1	1	57%	75%	43%
GULF OF MEXICO	17	3	7	1	64%	91%	58%
PACIFIC	14	3	3	2	57%	75%	43%
NORTH PACIFIC	11	4	1	2	64%	71%	45%
WESTERN PACIFIC	13	3	3	2	62%	75%	46%
TOTAL	**113**	**33**	**25**	**12**	**62%**	**83%**	**51%**

Source: National Oceanic and Atmospheric Administration, 2002 *Report to Congress on Apportionment of Membership of the Regional Fishery Management Councils*, 2003.
*One appointed seat was vacant in 2002.

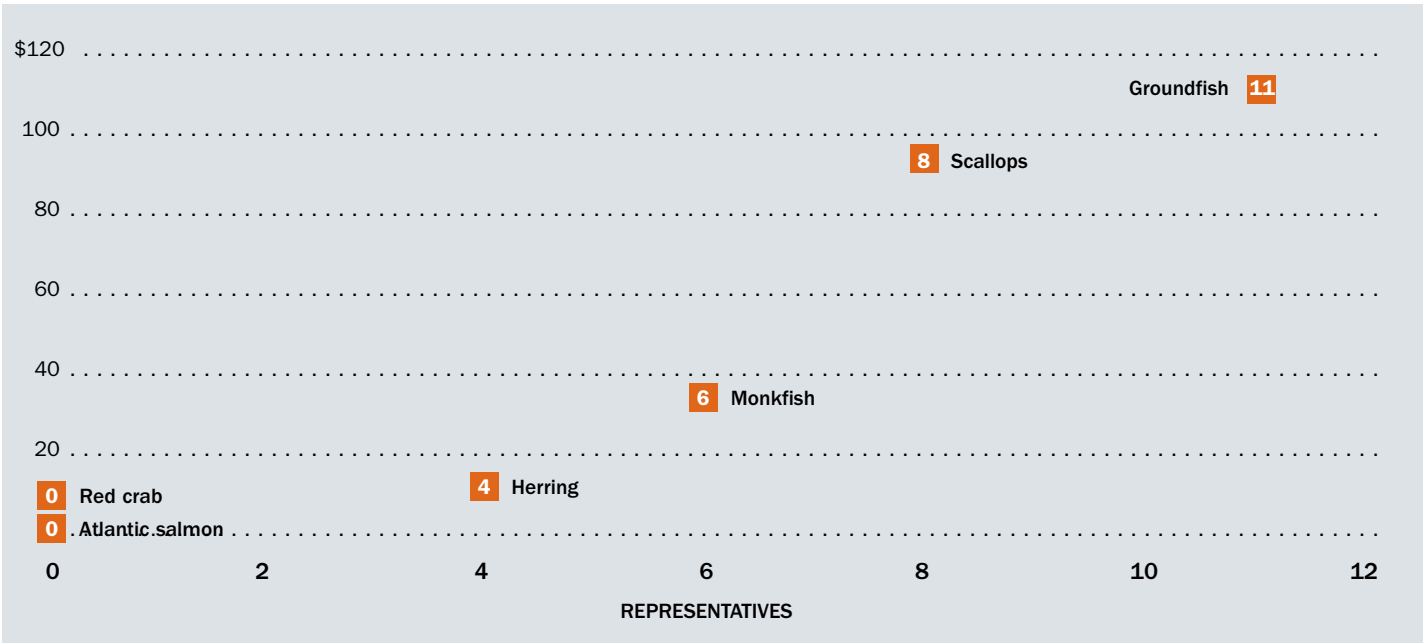
Figure 3. REPRESENTATION OF VARIOUS SECTORS OVER TIME



Sources: Cicin-Sain and Knecht, *The Future of U.S. Ocean Policy,* 2000; National Oceanic and Atmospheric Administration, 2002 *Report to Congress on Apportionment of Membership of the Regional Fishery Management Councils,* 2003.

Figure 4. NUMBER OF SEATS HELD BY FISHERY REPRESENTATIVES ON THE NEW ENGLAND COUNCIL AS A FUNCTION OF THE ECONOMIC VALUE OF THE FISHERY

Some members represent or participate in more than one fishery.



Sources: National Oceanic and Atmospheric Administration, *2002 Report to Congress on Apportionment of Membership of the Regional Fishery Management Councils,* 2003; NOAA Fisheries, Division of Fisheries Statistics and Economics, Landings Database, http://www.st.nmfs.gov/st1/commercial/index.html.

In our survey, more than 90 percent of the appointed members reported that they were appointed to represent, and did represent, a particular sector of the fishing industry.

handful of representatives of conservation groups have served as members.

Since 1985, the percentage of council members who directly work in or represent the fishing industry has ranged as high as 88 percent, never dropping below 78 percent (see Figure 3). Commercial representation among appointed members during the period has varied between 45 and 50 percent, and recreational representation has ranged from 20 to 27 percent of the total. The number of appointed seats held by representatives of a particular fishery can be correlated on some councils with the economic value of that fishery (see Figure 4). Representation of "other" interests throughout the councils has been as low as 12 percent of the total and as high as 22 percent.[45]

Representatives of the fishing industry, of course, are not monolithic, and some see themselves as bringing other perspectives to council meetings. As noted already, one of the fishermen on the North Pacific Council also serves on the board of a local conservation group, and a nonvoting member of the North Pacific Council reported that a "number of council members have a strong conservation ethic." Most appointed members, however, believe that they represent the fishing group from which they are drawn. In our survey, more than 90 percent of the appointed members reported that they were appointed to represent, and did represent, a particular sector of the fishing industry. Many further believed that they represented the interests of particular geographic areas or fishing ports.

State employees who serve as governmental members of the councils also could bring alternative views. Several state representatives noted that they represented the public interest generally (including conservation-oriented interests such as sustainable fisheries), and some emphasized that they were legally required to represent all constituencies. The added diversity, however, is marginal for several reasons. First, many of the governmental members, although they recognize their broader responsibilities to the public, align themselves closely with fishing interests. Asked whom he represented, for example, one state representative noted that he "directly represent[ed] the fishermen, commercial and recreational," of his state. Nongovernmental council members also reported that governmental representatives often reflected fishing interests. A member of the New England Council, for example, observed that "state directors essentially represent fishing industry participants." One former council member went so far as to suggest that state directors were "the most susceptible to constituent pressures on a wider variety of issues than any single constituency council member would be."

Second, when governmental members try to represent a broader set of public interests (and many do), they almost inevitably balance the interests of their various constituencies. While appointed members feel free to argue for a particular constituency, those governmental members who seek to represent both fishermen and the environment must appear to weigh and reflect the concerns of all constituents. They are thus unlikely to advocate strongly for environmental concerns in the face of strong fishing interests. As a result, they do not bring the diversity of perspectives to the council process needed to ensure that orthodoxy is challenged, other points of view are fully considered, and difficult political decisions are made.

Finally, even if some state representatives bring conservation perspectives to council deliberations, fishing interests still dominate to a degree that undermines effective decision-making. Even groups that include a few minority voices often fall victim to the problem of homogeneity. Debate is most effective when it incorporates a robust, open, and full exchange of different perspectives. Our study, by contrast, found a consistent underrepresentation of environmental views in council deliberations.

Several council members also suggested that the imbalance in council members is remedied in part by broader representation on some of the council advisory committees. While broader representation on these subsidiary bodies is impor-

tant, the panels are not a substitute for balanced councils. Recommen-dations made by the panels are given to the councils only after they have been approved by majority vote, so the councils do not generally hear multiple perspectives. Ordinarily, moreover, only one or two of the ten or more members of a panel come from outside the fishing industry.

In summary, many of the council members we interviewed believed that the councils did not fully reflect or represent all public constituencies. As one council member put it, the "current 'architecture' of the Council system is too 'coarse' to be a true and fair multi-party negotiation." Council members in particular were concerned about the adequacy of environmental representation.

More than half of the respondents, representing all of the four councils surveyed, believed that environmental interests were underrepresented on their councils. Even council members who pointed out that appointees often bring multiple perspectives to the council reported that environmental interests were underrepresented.

POTENTIAL CONFLICTS OF INTEREST

The potential for conflicts of interest heightens the concerns posed by the fishing industry's dominance of the regional fishery management councils. Advocates of good government often worry that regulated industries may "capture" the agencies that are supposed to regulate them. In a "captured" agency, governmental employees who are sworn to protect the public interest instead protect the interests of the industry.[46] In the case of the councils, there is no concern about capture because the "agency" itself is composed of industry leaders. The councils cannot be captured by industry because their members *are* the industry. The question is how seriously council members' financial interests in fishing and seafood businesses affect the quality of, and the public's trust in, council decisions.

Avoidance of conflicts of interest has long been a hallmark of good government in the United States. According to scholars and policy makers, there are several reasons why governments should eschew conflicts.[47] First, conflicts of interest inherently undermine the American commitment to equal treatment of equal claims. As citizens of the United States, we each expect and demand that the government will treat our interests no differently from those of other citizens. When conflicts of interest exist, however, there is a significant risk that some interests will receive more of a hearing and would be given more weight in the final decision.

Second and relatedly, even *potential* conflicts of interest can undermine the integrity of government policy-making institutions. The United States is firmly committed to democratic decision-making processes in which governmental agencies and institutions listen and respond in an open and transparent fashion to differing interests. Potential conflicts of interest open up the possibility of decisions being made not through these democratic processes but through discussions or understandings outside the governmental processes themselves.

Third, conflicts of interest can lead to inefficient regulation. When personal, financial, or relational considerations influence a regulator's decision, even unconsciously, the regulator is less likely to make the decision that is best for the population as a whole. Potential conflicts of interest, in short, can cloud judgment even

AS ONE APPOINTED MEMBER BLUNTLY PUT IT, "EVERYONE HAS CONFLICTS."

CURRENT CONFLICT RULES SET A "VERY HIGH THRESHOLD" THAT IS SELDOM TRIGGERED.

for the regulator who has the best of intentions and has studied an issue extensively.

Finally, potential conflicts of interest can undermine public confidence in governmental institutions. The people's trust in regulatory agencies such as the regional councils depends on a faith that the institutions are focused on the overall public good rather than on personal gain. When potential conflicts of interest come to light, that trust can be permanently damaged. As a consequence, citizens lose faith in the institutions and are more likely to sue or to ignore the institution's mandates when they disagree with a decision.

It is important to emphasize that none of these concerns assumes that governmental regulators consciously act on conflicts of interest in order to place themselves in a better financial position. One of the most pernicious aspects of conflicts of interest is that they can undermine effective governance even when a regulator makes the best effort to ignore the conflict and pursue what he or she believes is the public interest. Part of the reason is that it is all too easy for all of us to believe that what is in our own interest is also best for the public at large. We might think we are promoting the public's best interests when we in fact are advancing our own. Another part of the reason is that the public perception of a conflict of interest having influenced a decision is damaging whether or not the conflict actually did affect the decision.

MORE THAN 60 PERCENT OF ALL APPOINTED MEMBERS REPORTED HAVING A DIRECT FINANCIAL INTEREST IN FISHERIES THAT THEIR COUNCILS MANAGE AND REGULATE.

For all these reasons, both federal and state governments have outlawed conflicts of interest for more than a century. The principal federal prohibition on conflicts of interest within the executive branch imposes criminal liability on any federal officer or employee who participates "personally and substantially … through decision, approval, disapproval, recommendation, the rendering of advice … or otherwise" in a "ruling or other determination" in which "he, his spouse, minor child, general partner, [or] organization in which he is serving as officer, director, trustee, general partner or employee" has a financial interest.[48] Although the statute does not define "financial interest," the courts have interpreted it broadly as a "real possibility of gain or loss."[49]

Individual regulatory agencies also have adopted internal rules designed to avoid any potential conflict of interest in their decision-making. The Federal Communications Commission, for example, has long prohibited its officials and employees while they are working for the agency from participating in or having any financial interest in the telecommunications industry.[50] These prohibitions extend to relatives and business associates of officials and employees as well.[51] The former Interstate Commerce Commission also barred its members and employees from holding any securities or other financial interests in any transportation carriers or other entities that were subject to regulation under the Interstate Commerce Act.[52] Similar regulations have been adopted by a large number of independent and executive federal regulatory agencies, including the Bureau of Alcohol, Tobacco, Firearms and Explosives,[53] the Office of Thrift Supervision,[54] the Federal Energy Regulatory Commission,[55] the U.S. Food and Drug Administration,[56] and the Farm Credit System Insurance Corporation.[57]

When Congress passed the FACA, one of the issues it considered was the advisability of permitting advisory bodies that often include industry representatives to make ultimate decisions. As Congress noted, a "number of committees … have been allowed to take on a quasi-decision-making status."[58] In Congress' view this was dangerous, in part because special interest groups might "exert undue influence upon the government through the dominance of advisory committees which deal with matters in which they have vested interests."[59] FACA therefore provides that the "function of advisory committees should be advisory only, and … all matters under their consideration should be determined, in accordance with law, by the official, agency, or officer involved."[60] Congress, in short, did not want committees subject to conflicts of interest to be involved in ultimate decision-making.

Potential conflicts of interests, however, are the rule rather than the exception among appointed members of the regional fishery management councils, who are specially exempted from federal conflict-of-interest laws. To determine the degree of the potential conflict, we examined the financial disclosure forms that council members had filed in the previous six years. These forms show the particular fisheries in which members have financial interests (although they do not disclose the extent of their interests). Not surprisingly, given their backgrounds, more than 60 percent of all appointed members reported having a direct financial interest in fisheries that their councils manage and regulate. This percentage actually understates the potential degree of conflict on the councils because it does not include appointed members who lobbied or otherwise represented fishing industries for financial compensation but who did not participate in the fishery.

Under existing conflict-of-interest rules governing the regional councils, moreover, council members can frequently vote on management decisions even though the decisions may directly affect their business interest. Members of the regional councils appear to be the only governmental decision-makers at the federal level who are exempt expressly from criminal liability for conflicts of interest.[61] Under the Magnuson-Stevens Act, a council member is free to vote on a management action unless the action "would have a significant and predictable effect" on his or her financial interests. According to the act, moreover, an action has a "significant and predictable effect" only when the member would enjoy an "expected and substantially disproportionate benefit … relative to the financial interests of other participants in the same gear type or sector of the fishery."[62] Under NMFS regulations, council members follow a "10 percent rule" in which council members recuse themselves if their interest in the fishery at issue is greater than 10 percent.[63] As one council member observed, this is a "very high threshold" that is seldom triggered.

Governmental records indicate that council members seldom formally recuse themselves in practice. To determine how often council members actually recuse themselves from council decisions because of potential conflicts of interest, we asked NMFS for copies of all formal recusals filed by council members. NMFS, in turn, was able to produce documentation of only two recusals since 1997, despite the fact that council members participated in thousands of management decisions during this period of time. Two survey responses referred to voluntary recusals other than those documented by NMFS, suggesting that council members sometimes might recuse themselves or decline to vote without following formal procedures. The survey responses as a whole, however, indicate that even informal recusals are infrequent events. Instead, council members often find reasons to justify voting on issues in which they, family members, or friends have financial stakes (see Box 8).

Council members confirmed in the surveys that conflict-of-interest standards are quite lax. According to one appointed member of the

THE SURVEY RESPONSES AS A WHOLE INDICATE THAT EVEN INFORMAL RECUSALS ARE INFREQUENT EVENTS. INSTEAD, COUNCIL MEMBERS OFTEN FIND REASONS TO JUSTIFY VOTING ON ISSUES IN WHICH THEY, FAMILY, OR FRIENDS HAVE FINANCIAL STAKES.

Gulf Council, members "are required to disclose any and all financial connections we have to industry every year. Once that is done, we are able to vote on any or all matters!" A member of the North Pacific Council reported that he could not imagine any situation in which a council member would recuse himself or herself because of involvement in the fishing industry. "I'm not sure that it would ever happen. I think the system is designed whereby Council members representing industry vote their self-interest." Most council members simply seemed resigned to the existence of conflicts of interest on the councils. As one appointed member bluntly put it, "Everyone has conflicts."

Council members are themselves concerned about conflicts of interest among the members. As the outgoing chairman of the Pacific Council, Hans Radtke, recently said, "All you have to do is look at the makeup of the Council

Box 8:

Is There Any Justification for Allowing Conflicts of Interest on the Councils?

In our survey, we tried to get a sense of how council members themselves felt about the conflict-of-interest issue. No council member disagreed that potential conflicts pervade the council system. At the same time, council members differed as to what, if anything, ought to be done about conflicts.

Some council members reported that they felt uncomfortable about voting on particular issues but ultimately justified to themselves that it was okay to vote. One of the council members, who was from a commercial fishery, justified voting on the ground that only a small number of commercial representatives sat on the council, so recusal would undermine the commercial voice. Another council member dealt with uncomfortable situations in which a vote would favor friends or former business associates either by not saying much during council debates or by announcing the nature of the potential conflict at the start of discussion so that other council members would know.

A number of council members tried to justify the current lax conflict-of-interest rules. Some argued that council members should not recuse themselves, even if they have a personal interest in the fishery at issue, because members with potential conflicts may have knowledge or expertise of importance to the debate. As one nonvoting member observed, appointed members are on the councils because of their "knowledge and experience." Or, in the words of another nonvoting member, "members are (or should) be selected on their basis of fishery knowledge and often the member most involved is the one who can make significant contributions to the discussion." According to these council members, the only issue should be whether council members reveal their potential conflicts. "As long as you know their involvement they may be the expert you need."

As discussed in Box 11, however, fishermen do not need to vote on fishing measures in which they or friends have financial interests in order to provide their expertise to the management process. Conflicts of interest become troubling only when fishermen are involved in, or vote on, final decisions about management measures that affect them, their family, or friends.

Several other members believed that a council member should not recuse himself, even if his fishing constituency would benefit, because a central purpose of the councils is to ensure that all fishing interests are represented. According to one council member, representing a particular fishery "constituency" inevitably means voting for measures that will benefit friends, neighbors, or clients. Or, in the words of another council member, "Their constituents expect them to stand up for them, which should be expected." Again, disclosure was the key to most of these council members. If a council member reports the potential conflict, other council members can take that into account in evaluating their views. In the opinion of several respondents, conflicts of interest always have been present but seldom have influenced decisions.

A variant on this argument is that conflicts of interest are not significant on the councils because fishermen will want to preserve the very fisheries that support them. As one council member observed, the "original concept of the [Magnuson-Stevens] Act was that fishermen would make the 'right' decision because they were (1) most knowledgeable, (2) it was in their best interest to do so."

Other council members suggested that the structure of the councils makes conflicts of interest less troubling than they might first appear. Several council members, for example, suggested that the diversity of fishing interests on the councils reduces the risk that conflicts of interest will undermine the public interest. Fishermen, one council member suggested, are good at pointing out when colleagues are voting their interest rather than good public policy: "There is no one who can cause a red face issue faster than a competitor or someone in a like situation." The same council member also suggested that the presence of state and federal officials, as well as the occasional appointee from outside the fishing industry, "buffers" the conflicts. One NMFS representative similarly suggested that "there are enough voting members of the Council to balance viewpoints."

Because council members are often appointed to represent particular fishing interests, several council members suggested that members should recuse themselves only when they would benefit more than other members of the industry. As one governmental member described the issue, the important distinction is the "boundary between [the council member's] particular fishery need and the needs of all those involved in that fishery. The former may be C of I; the latter is not." Or, as another council member expressed the difference, only "specific benefits," not "sectoral benefits," justify recusal.

As other council members noted, however, these arguments ignore the imbalance in interests represented on the councils. As discussed in the text, conservation interests are not represented on most councils. In answer to the question of whether he thought it was ever "unfair" for another council member to participate in a vote in which he or she had a conflict of interest, one appointed representative replied:

"All the time. Self-interest defined as direct financial interest is much too low an ethical standard. If this were a true multi-party negotiation with all 'stake holders' adequately represented at the table, then the self-interest question would tend to balance out in negotiation. However, the current structure is much too 'coarse' and it is possible for one sector to economically disadvantage another through coalition building amongst the voting members. Direct financial interest is hidden in management trends over time."

and see the conflict of interest."[64] About a third of those who responded to our survey reported that they had considered it unfair in one or more instances for a fellow council member to participate in a decision because he or she had a financial interest in the outcome. Similarly, one-third believed it had been unfair for a fellow member to vote in light of financial interests held by relatives or friends. Written comments further highlighted the nature of these concerns. One member of the New England Council, for example, reported that "many council members are influenced by impact of decision on selves or friends," even where there was no technical conflict under the council regulations. One nonvoting council member reported "times when I felt that council members pushed the envelope" and noted that the "current regs are fairly ineffectual."

Some council members observed that it was difficult for council members to isolate themselves from conflicts of interest and vote the public interest. One state representative put the point well when he said: "There are very few truly objective Council members who aren't always thinking about impact of rules on their livelihoods. Just human nature. The few Council members who look beyond parochial interests are the real fisheries management heroes and heroines." Even those council members who wish to take a more public perspective sometimes find it difficult to achieve. According to one commercial fisherman who is a member of a council, although the "culture" of that council is to "strive for the ideal — conservation above constituency," the "reality is that a few Council members make blatant allocation grabs, and/or lobby shamelessly for a specific constituency — forcing the entire body into a much cruder form of negotiation." As one member put it: "How could I be expected to vote against my job and my community?"

The participation of fishermen in management decisions involving their fishery also heightens the tension between conservation and allocation described earlier. As one appointed council member related the problem, "Council members view every decision as allocative. Every member feels his role is to defend his sector." Council members vote for laxer fishing standards to ensure that their sectors are protected.

One might wonder, however, why representatives of the fishing industry do not worry more about the long-term sustainability of fisheries in making conservation decisions. Industry representatives typically have a short-term interest in high catches, but future employment in the fishing industry depends on sustainable fisheries. Indeed, supporters of the council system frequently argue that fishermen ought to be in charge because their livelihoods depend on the continued existence of healthy fish stocks.

Social scientists have long been interested in whether resource users such as fishermen will favor their short-term or long-term interests when the two interests conflict. Researchers have found that resource users typically resolve the conflict in favor of avoiding short-term sacrifices, for several reasons. First, people are inherently optimistic, particularly if there is any scientific uncertainty regarding the impending tragedy. Resource users believe that gloomy predictions of resource depletion are unlikely to come true, and that, if the predictions do come true, they will find a way to deal with the problem. Second, resource users tend to discount strongly the future benefits of current sacrifices. Trying to weigh the current costs of catching fewer fish against the future benefits of having a sustainable fishery, people focus on the current costs. Third, most people, not just fishermen, will accept significant future risks to avoid even relatively small current losses. People do not like to sacrifice and so will gamble on the future to avoid a current sacrifice. Finally, resource users are slow to blame themselves for the decline of their resource and thus typically are unwilling to support solutions that damage their own interests. All of these cognitive "biases" combined make it very unlikely that most fishermen will support significant catch reductions even where needed to ensure the long-term sustainability of their fishery.[65]

"[THERE WERE] TIMES WHEN I FELT THAT COUNCIL MEMBERS PUSHED THE ENVELOPE AND [THE] CURRENT REGS ARE FAIRLY INEFFECTUAL."

— A NONVOTING COUNCIL MEMBER

THE QUESTION IS HOW SERIOUSLY COUNCIL MEMBERS' FINANCIAL INTERESTS IN FISHING AND SEAFOOD BUSINESSES AFFECT THE QUALITY OF, AND THE PUBLIC'S TRUST IN, COUNCIL DECISIONS.

LITTLE EFFECTIVE FEDERAL OVERSIGHT

These various structural problems might not lead to adverse results for U.S. fisheries if NMFS were able to easily police the councils' decisions and substitute its own judgment when needed. Although NMFS in theory enjoys the authority to oversee the councils, the procedures established by the Magnuson-Stevens Act make it difficult for NMFS to execute this authority effectively. NMFS, moreover, does not have the resources, nor perhaps the political clout, to police the councils closely.

"COUNCIL MEMBERS VIEW EVERY DECISION AS ALLOCATIVE. EVERY MEMBER FEELS HIS ROLE IS TO DEFEND HIS SECTOR."

— AN APPOINTED COUNCIL MEMBER

NMFS' principal power over the councils, as noted earlier, is its authority to disapprove all or parts of council plans and management measures that are inconsistent with the national standards and other provisions of federal law. Yet the Magnuson-Stevens Act allows NMFS only ninety days in total (including sixty days for public comments and thirty days for review of those comments) in which to decide whether to approve submitted plans. While the exigencies of fishery management dictate as speedy a review as possible, the review period often is too short to permit a thorough and adequate review. If NMFS disapproves all or part of an FMP, moreover, the plan returns to the councils, which enjoy unlimited time to amend and submit a revised plan. In deciding whether to reject a management measure, NMFS therefore must balance the costs of approving an inadequate measure with the possible costs of delaying needed action.

Not surprisingly, NMFS seldom has disapproved submitted FMPs. In order to assess the rate at which NMFS has disapproved council measures, we examined the *Federal Register* for all actions by NMFS since 1980 approving or disapproving an FMP. Because the Magnuson-Stevens Act does not require NMFS to publish such actions in the *Federal Register*, we also used the Freedom of Information Act to request copies of all "Section 304(a)(2) letters" sent by NMFS to the councils in the six-year period between 1997 and 2002. Under section 304(a)(2) of the Magnuson-Stevens Act, NMFS must send such a letter, explaining its reasoning, to any council whose FMP it rejects or partially accepts.

The two studies show that disapprovals of council management measures are rare. Between 1980 and 2000, NMFS partially disapproved only 62 of approximately 860 proposed plans, amendments, or annual specifications — resulting in a partial disapproval rate of 7 percent.

This figure, moreover, overstates the actual degree to which NMFS disapproves specific council decisions. FMPs can include scores of individual management measures, and partial disapprovals may remand only one or two of these measures. The annual specification for the Pacific groundfish fishery, for example, contains well over 100 management measures: annual catch quotas for more than 100 species of fish, as well as seasonal restrictions, area restrictions, and gear restrictions.

In order to more accurately assess the rate of disapprovals, we therefore examined the rate at which NMFS has disapproved the individual management measures that are contained in each plan, amendment, or specification. For purposes of our study, an "individual management measure" is a provision in a management document aimed at controlling a particular fishing or fish processing activity. Parsing each plan into its individual measures was not simple, and necessarily involved some judgment. We therefore took a conservative approach that erred in favor of finding a high rate of NMFS disapprovals.

Using this conservative approach, we determined that each plan, amendment, or specification during the period studied contained on average approximately twenty individual management measures. We then looked at each NMFS disapproval since 1980 and found that, when it disapproved a plan, NMFS on average disapproved slightly more than one measure each time. In 51 of the 62 cases, NMFS disapproved only one individual management measure. During the study period, therefore, NMFS disapproved at best 0.4 percent of the individual management measures submitted by the councils — or only one in every 250 measures.

Formal disapproval of a management measure is not the only way for NMFS to oversee council decision-making. A voting representative from the agency sits on each council. According to one state representative on the New England Council, this seat is quite "powerful" because the NMFS representative can warn a council that NMFS is likely to reject a particular management measure if it is not modified. While the council is not obligated to heed these warnings, such advice may have some effect on the final vote. In practice, however, the low rate of NMFS disapprovals undermines the effect of such a warning on council decisions. In the king mackerel case study (Box 7), for example, the NMFS delegate voted against the proposed quota on the ground that it violated the Magnuson-Stevens Act. The regional administrator later approved this same quota.

In three limited situations, NMFS has the authority to draft federal management plans. As already noted, NMFS can prepare a "secretarial plan" when a regional council fails to write an FMP for a fishery that "requires conservation and management" or does not make changes to a plan that NMFS has not fully approved. NMFS also may write emergency regulations or interim measures for a fishery when "needed to reduce overfishing." Finally, NMFS is obligated to write a rebuilding plan for a fishery when a council fails to do so within a year of being notified that the fishery is overfished. In the history of the Magnuson-Stevens Act, however, NMFS has rarely used any of this authority to create and implement a plan or management measure over the objection of the regional councils. In each of the three situations, a council must effectively grant NMFS jurisdiction to write a plan by abdicating its primary responsibility.

If NMFS does not effectively oversee council decision-making, what of judicial review? While federal courts are in a position to "disapprove" council actions, judicial oversight is limited. First, courts will not review a council action unless a plaintiff files a lawsuit challenging the legality of the action. And lawsuits are costly, time-consuming, and complex. To file a lawsuit, plaintiffs must have standing to bring the case, must have significant funding, and must have been closely following the often-complicated administrative proceedings. Plaintiffs are further constrained by time: a plaintiff has only thirty days in which to challenge an NMFS approval. While the number of such lawsuits has increased over the past ten years, there are not nearly enough plaintiffs and resources to review the vast majority of council actions.[66]

Even when a lawsuit is filed, judicial review of the NMFS decision is narrow. Courts will overturn an NMFS decision when it is found to be "arbitrary and capricious." This is a very unusual finding, and it is reserved for cases in which the agency's actions are clearly egregious. On the basis of extensive precedent, courts provide great deference to agencies, especially where legislative standards are broad and the science is complicated and uncertain.[67]

Neither NMFS oversight nor judicial review, in summary, is designed as an effective substitute for good decision-making by the councils. Both agency review and judicial review are fail-safe systems designed to catch and remedy the occasional error. They cannot cure the institutional problems that currently plague the councils' work.

"YOU CAN'T LEGISLATE AGAINST APATHY."

— COUNCIL MEMBER

OTHER ISSUES

In addition to the central problems discussed earlier, several other factors undermine the councils' ability to manage the nation's fisheries. First, the council process discourages broad national participation in fishery decisions. Fishery management is complicated, and the process by which decisions are made is often opaque. Decision-making is decentralized, requiring interested members of the public to follow processes in multiple councils, each with slightly different procedures. Even though the general public has opportunities to comment on council decisions by going to council meetings or submitting written comments, the process seems inaccessible to much of the public. The widely held perception that, because of conflicts of interest, the councils are predisposed to discounting views other than those of their fishing constituents further discourages public participation.

"A SPECIFIC QUOTA OF SEATS SHOULD BE HELD BY PEOPLE WITHOUT FISHING INTERESTS."

— COUNCIL MEMBER

A second problem arises from the limited time and resources available for council decision-making. Council members — almost all of whom hold full-time jobs elsewhere — can attend only a handful of short meetings each year, during which they must assimilate a great deal of information and make decisions with significant ecological and economic consequences.

Finally, the council process reduces accountability to the public. While councils make the important management decisions, only NMFS must formally respond to public comments regarding management. Furthermore, the "shared" authority of the councils and NMFS blurs responsibility. Because neither NMFS nor the councils are clearly responsible for management successes or failures, pressure to improve fishery management is diluted.

PUBLIC PARTICIPATION

There are two ways for the public to provide input into council decision-making. First, most council meetings and panel meetings are open to the public. While the councils are not subject to the public participation requirements of either the Federal Advisory Committee Act or the Administrative Procedure Act, the Magnuson-Stevens Act requires that members of the public be allowed to speak *or* submit written comments at all meetings. Although it is not required, the councils customarily schedule a time at meetings during which members of the public can address the council and the audience. Second, the public can submit written comments during the "notice and comment" period that follows publication of the proposed federal regulations. NMFS is legally obligated not only to publish proposed regulations in the *Federal Register* but also to respond to the public's written comments. In contrast, even though the councils draft the proposed regulations, however, the councils are not obligated to respond to any written comments submitted by the public.

Despite the limitations, almost 70 percent of the council members surveyed believed that the public had an adequate opportunity to provide input into council decisions. According to one governmental member, "There are numerous opportunities for public participation in the Council process. This is one of the most transparent processes I have ever worked under." A state representative similarly noted that council decision-making is a "very open, slow

moving process with tons of paper shipped out to anyone who wants it." One council member argued that

> the Council structure is far more open, for example, [than] the US Forest Service, NPS [National Park Service], BLM [federal Bureau of Land Management] decision processes that are essentially "in-house" with chief of staff and the Superintendent making all the decisions. The Council process exposes this for public scrutiny to a much higher degree than other agency processes. The NMFS must still, after receiving advice at the regional level, process and manage the decision through the normal agency processes. This gives the public more than a double-dip in terms of involvement.

Few of the interviewed council members, however, believed that the public took adequate advantage of existing opportunities to comment on council decisions. In responding to the survey, only 22 percent of council members reported that they believed the public took full advantage of available opportunities. Some council members attributed the low level of public participation to indifference and lethargy. "People who have an interest and want to take the time are involved, those who do not are not involved." Or, as another council member pithily put it, "You can't legislate against apathy." On the basis of our study, however, we believe that other institutional factors are also at work.

While there appear to be sufficient opportunities for the public to become involved in the council process, there are several significant impediments to such involvement. First, the public must actually know about the meetings and be able to get to them. Although fishery management is of national importance, the council system is decentralized, and councils often do not meet in large population centers. Second, the process by which the councils make their decisions is complex and lengthy, involving multiple advisory groups and steps. Unpaid participants find it difficult, to say the least, to follow the complex proceedings carefully enough and for long enough to provide meaningful, specific input at the correct stages. Third, the fishing industry's dominance of the councils dissuades participation by those outside the fishing industry. Many members of the public see little reason to participate in a process when the outcome appears to be predetermined or when they believe that their views are likely to be discounted.

A number of the council members who responded to our survey acknowledged the existence of some or all of these problems. According to one appointed council member, it is "often difficult to attend meetings due to costs." Another council member suggested that the "public is generally mystified by the process" and that the long-drawn-out nature of the process makes it more difficult to participate. One member of the Gulf Council also suggested that the council does not give much weight to public input when it is provided. After reporting that the public finds it difficult to participate because of travel and other costs, the council member continued: "Even more disconcerting, public testimony really doesn't seem to weigh too heavily with the Council." For this reason, the council member was not surprised that there was little active public participation.

"SCRAP CURRENT LAW AND PROCESS-RELATED REGS AND START OVER AGAIN. STOP TRYING TO FINE TUNE THE LAST FINE TUNING."

— COUNCIL MEMBER

It is not only members of the general public whose voices sometimes are not heard. Although one of the primary purposes of the councils is to assure fishermen that they have a say in fishing decisions, the system does not necessarily provide it. Several council members reported that fishermen do not participate as fully as they might in council proceedings because, to use the words of one council member, they "do not feel that they're part of the process." A number of these council members also reported that they believed that the fishermen "have a legitimate complaint" about the process.

"EVEN MORE DISCONCERTING, PUBLIC TESTIMONY REALLY DOESN'T SEEM TO WEIGH TOO HEAVILY WITH THE COUNCIL."

— COUNCIL MEMBER

PROCESS AND RESOURCE CONSTRAINTS

In managing the nation's coastal fisheries, the councils must meet a tight schedule when putting into place the appropriate management measures for the following year. Because underlying scientific and economic information is continuously being updated, the councils must revise management measures accordingly. This schedule can

"ALL TOO OFTEN, EXTREMELY COMPLEX ITEMS ARE QUICKLY DISCUSSED AND VOTED ON IN AN EFFORT TO GET THROUGH AN AGENDA AS QUICKLY AS POSSIBLE."

— COUNCIL MEMBER

force the councils to make decisions whether or not they have had ample time to consider them.

Despite the tight regulatory schedule and significant workload, council membership is only a part-time job. Almost all council members hold full-time jobs elsewhere and are able to focus on fishery management only during council meetings. The councils meet four times each year for, at most, a week at a time. This means that council members are working on fishery management for fewer than thirty days each year. Given the complex nature of the decisions that must be made, and the large amounts of economic and scientific information that must be assimilated, the temporal and human resource constraints make it difficult for council members to engage in careful and well-considered decision-making.

Many members agree that they have insufficient time and resources to carry out the responsibilities they are given. In our survey, several members specifically reported that the councils had too much to handle in the short periods of time they met. As a result, councils sometimes had to simplify their analyses. "All too often," one council member reported, "extremely complex items are quickly discussed and voted on in an effort to get through an agenda as quickly as possible."

ACCOUNTABILITY

Several council members who participated in our survey worried that the councils were not sufficiently accountable to the public for their management actions. The most specific concern focused on the council's voting system. As one former council member noted, most councils do not use roll call votes, so the public cannot determine later (or perhaps even at the time) how each council member voted. As a result, the council member concluded, "no one is accountable" for the decisions that are made. Because of exactly this concern, major federal regulatory agencies such as the Securities and Exchange Commission and the Federal Trade Commission record individual votes for significant actions. When forced to openly record their individual votes, members of a commission or committee may take greater responsibility for and care in their decisions.

The problem of accountability, however, extends beyond the council's voting method. The division of responsibility between the councils and NMFS also undermines the accountability of both organizations. As discussed earlier, the councils are responsible for writing the management plans and regulations, and NMFS is responsible for reviewing the plans' consistency with the Magnuson-Stevens Act and for implementing the regulations. This shared responsibility clouds ultimate accountability for failures in fisheries management. When two organizations share responsibility for an action, each of the organizations can blame the other for breakdowns, and neither organization may feel accountable for solving the problems.

Further undermining accountability, the councils' involvement in fisheries management officially ends after they have submitted proposed plans and regulations to NMFS. This partially shelters the councils from public disapproval of their actions. While the councils must provide for public participation, federal law does not require them to respond formally to public comments on their plans or regulations. NMFS, by contrast, must publish the proposed plans and regulations in the *Federal Register*, collect public comments, and respond to those comments. Members of the public who believe that a plan or regulation violates the Magnuson-Stevens Act may sue NMFS, not the councils. NMFS and other federal agencies, not the councils, are responsible for implementing the plan.

RECOMMENDATIONS

So what should the federal government do in response to the problems that we have outlined? Although some council members argue that the regional councils perform well despite their warts, the United States can and must do far better. Both the serious character of many of the councils' problems and the need to rebuild the nation's fisheries demand more than tinkering at the edges. The councils' balance is seriously askew; potential conflicts of interest are widespread and obvious; visibility and accountability to the American public at large are low. The problems are sufficiently fundamental and obvious that many council members with whom we talked, both voting and nonvoting, both governmental and appointed, reported there is a need for change. As one council member stated when asked which reforms were needed, "Scrap current law and process-related regs and start over again. Stop trying to fine tune the *last* fine tuning." With more than a third of American fisheries in need of rebuilding and over a quarter still being overfished, the nation needs to ensure that it has the most effective system in place to evaluate and manage its fisheries.

The question is how to reform the current management structure. The regional councils, as discussed in the first part of this report, face a variety of different problems. In thinking about reforms, however, the key is to focus on the most significant and basic problems — the tethering of conservation and allocation in a way that places pressure on the councils to relax conservation measures; the narrow perspectives represented on most councils; and the potential conflicts of interest that current law leaves largely unrestrained. If the councils are to be more effective in their conservation mission, reforms must solve these paramount problems. And only Congress can enact the needed reforms.

SEPARATING CONSERVATION AND ALLOCATION

The most important reform would be to separate conservation and allocation decisions, leaving allocation decisions in the hands of the councils but giving responsibility for conservation decisions to a separate governmental entity. As discussed in Box 9, ours is not the

Box 9:

PREVIOUS STUDIES OF THE COUNCIL SYSTEM

Studies of the council system began within a year of the passage of the Magnuson-Stevens Act. In 1977, a report to Congress written by the three interstate fishery management commissions recommended, among other things, that the act be amended to provide for more balanced council membership. Since that time, governmental agencies, scientific and environmental organizations, and academics have conducted more than thirty studies, an average of more than one per year.

In these studies, the most frequently made criticisms of the councils are that (1) they have failed to prevent overfishing; (2) they lack accountability; (3) they do not represent all legitimate interests and viewpoints; (4) they are hindered by ubiquitous conflicts of interest; (5) they favor short-term gains over long-term benefits; that is, they are better at encouraging development than they are at conservation; (6) they do not view themselves as trustees of fisheries resources; (7) they often yield to pressure from fishermen to raise quotas; and (8) they are not particularly well suited to the task of science-based decision-making.

The authors of prior reports have suggested five ways to solve these problems. First, more "environmental representatives" should be appointed to the councils. Second, council members should be subject to stricter conflict-of-interest rules. Third, NMFS should take a more active role in overseeing and reviewing council decision-making. Fourth, the language of the National Standards should be tightened to narrow the councils' discretion in carrying out the conservation mandate of the act. Finally, Congress should take the responsibility of conservation decision-making away from the councils and give it to a federal agency.

One of the most important studies was the 1986 Calio Report, prepared by eleven fishing experts at the request of Dr. Anthony J. Calio, then administrator of NOAA.* In its principal finding, the Calio Report concluded that fishery management would "be markedly improved by a clear separation between conservation and allocation decisions." When the same entity has responsibility for both decisions, the report found, "the pressures are always to add more effort to serve the interests of more users." The Calio Report therefore recommended that "NOAA set ABCs [allowable biological catches] for regional fisheries at the national level, on the basis of the best scientific information currently available" and using local and regional expertise. NOAA's decision-making would be subject to all the standards of good government, including the procedures of the federal Administrative Procedure Act. The regional councils would then make the allocations, which could not exceed the ABCs.

The Calio Report also concluded that the nomination process for appointed members of the councils, under which governors nominate three people, must be changed "to assure the selection of people who are capable of making knowledgeable, equitable and representative fishery management decisions." The report recommended inviting open nominations by any interested groups or individuals, including governors, within a council's geographic jurisdiction. A nine-member review board would then evaluate the nominees and, for each position to be filled,"certify to the Secretary of Commerce the three best qualified nominees."

* U.S. Department of Commerce, *NOAA Fishery Management Study* (Washington, DC: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, June 30, 1986).

first study to conclude that conservation and allocation decisions should be separated and made by separate governmental agencies. A 1986 study commissioned by the administrator of NOAA (commonly known as the "Calio Report") reached an identical conclusion, recommending that NMFS set quotas on a national level for regional fisheries and that the councils then allocate the quotas (or a lower catch level if the councils deemed it appropriate) among local fishing interests.[68] This recommendation was recently echoed by the Pew Oceans Commission.[69] We agree with the Calio and Pew Commission reports that conservation and allocation should be separated, although having NMFS set the quotas is only one of several options for relocating responsibility for the conservation decisions. As discussed in the first part of this report, having the councils make both conservation and allocation decisions creates unnecessary pressure to relax conservation standards. Many of the other problems discussed in this report would either disappear or become easier to resolve if the councils were responsible only for allocation decisions. As discussed in Box 10, Alaska's fishery management has benefited from a similar division of conservation and allocation decision-making between state agencies.

There are no compelling reasons, moreover, why the councils should make conservation decisions. As explained in Box 11, members of the fishing industry can provide useful input into conservation through other mechanisms, without having ultimate authority over conservation decisions. There are compelling arguments, by contrast, for having those individuals with relevant scientific expertise and training in risk assessment and risk management involved in conservation decision-making. There also is a strong case to be made for making conservation decisions at a national, rather than a regional, level. Coastal fisheries are a national resource, and the entire country has an interest in ensuring their sustainability. As discussed earlier, the council system, by decentralizing conservation decision-making, undermines active public participation in fisheries conservation.

The councils, however, could be effective institutions for making allocation decisions. The way in which quotas and other fishing rights are allocated among members of the

Box 10:

THE ALASKA SYSTEM: BENEFITS OF SEPARATING CONSERVATION FROM ALLOCATION

A desire for "home rule" of its fisheries was a driving force behind the Alaska statehood movement. In the Alaska Statehood Act of 1958, Congress conditioned the transfer of fisheries management authority from the federal government on Alaska's design of an effective system that would conserve the state's fisheries in a manner consistent with "the broad national interest."

Alaska eventually developed a system headed today by a board of fisheries. The Alaska Board of Fisheries works with a state agency, the Alaska Department of Fish and Game (ADF&G), to manage Alaska's fisheries resources from shore out to three nautical miles. The Board of Fish, as it is known, consists of seven members appointed by the governor and confirmed by the legislature. The board's current membership includes two retired ADF&G employees, two representatives of commercial fishing interests, one processor representative, one sportfishing representative, and one representative of native Alaskan interests.

Under Alaskan law, all the substantive management authority is vested in the Board of Fisheries. The board is responsible for setting quotas, establishing open and closed seasons, and allocating the quota among users. ADF&G's primary statutory responsibilities are to perform scientific research in support of fisheries management, make management recommendations to the board, and implement and enforce board regulations.

In practice, however, Alaska separates conservation and allocation decision-making, with the ADF&G determining the quota and the board then allocating the quota among fishermen. The Board of Fisheries almost always accepts the ADF&G's conservation recommendations. The board's deference to the ADF&G in this regard has been so complete that many of the ADF&G's own personnel are under the impression that it is the ADF&G, not the board, that has formal authority to set catch limits.

The ADF&G's commissioner, Frank Rue, believes that Alaska's system is "a model for success" because of the separated functions. According to Rue, "[The board] makes allocation decisions, and the [ADF&G] gives the board information on how many fish are available, tells it what management strategies are possible, and performs in-season management to make sure any surplus resource can be harvested."*

Rue is correct that the split management system has helped ensure effective conservation. In 2001, the Marine Stewardship Council certified the Alaska salmon fisheries — the source of most of the world's ocean-caught salmon and the largest employer in the state — as sustainably managed, one of the first fisheries in the world so certified.

* Testimony of Frank Rue to the Alaska House Resources Committee regarding HB 216, April 2, 2001.

fishing community, in most cases, is of far greater regional than national interest and importance. Regional councils, therefore, can enable those with the greatest stake in allocation decisions to participate more effectively in those decisions. Members of the fishing industry, moreover, often have specialized or localized knowledge that makes them well qualified to make many allocation decisions. Reforms are needed to ensure that councils do a fair and effective job of allocation, but, with reforms, councils could be valuable institutions for making allocation decisions.

In separating conservation and allocation, Congress will need to make several decisions. First, what body should be responsible for making conservation decisions? Although NMFS is an obvious candidate, Congress might also consider creating a new institution, such as an interagency scientific panel. The important criteria are that the decision-making be national, with significant scientific expertise and subject to the standard rules of good government. Second, Congress will need to provide some guidance on what constitutes a conservation, rather than an allocation, decision. Many conservation decisions have allocative impacts, and there is thus no bright line between conservation and allocation. The two functions are sufficiently separate, however, that they can be effectively split. In designing a new management system, Congress can draw on the lessons of other effective systems that separate protection and allocation, such as the federal Clean Air Act (see Box 12).

BROADENING COUNCIL REPRESENTATION

Regarding other potential changes, the most commonly recommended change suggested by the council members whom we surveyed was to expand the range of views represented on the councils. Some council members simply suggested, without specifics, that ways be found to represent more nonfishing interests on the councils. Other council members proposed more concrete changes to council representation. One governmental member, for example, suggested that council votes be split three ways, with commercial, recreational/charter, and environmental/academic interests each getting one-third of the votes. Another suggested that governors "be required to submit more slates of nominees" and that councils have "a specific quota of seats to be held by people without fishing interests." One nonvoting council member suggested that Congress

Box 11:

ENSURING FISHERMEN'S INPUT INTO MANAGEMENT

Fishermen can provide valuable input into fisheries management. Fishermen possess unique knowledge, particularly concerning the business of fishing. Policy makers can and should use this knowledge to make management more efficient, effective, and fair. Further, fishermen's involvement in management can increase the chances of success by creating greater "buy-in" to fisheries regulations. The more familiar fishermen are with the process by which regulations are created, the more likely they will be to support and comply with those regulations. Because fisheries rules are difficult to enforce on the ocean, obtaining the greatest possible buy-in is imperative.

In 1976, fishing interests voiced these rationales in support of giving fishermen the powerful role they have in the regional councils. Since that time, it has become clear that putting fishermen in command of fishery management creates more problems than it solves. However, the rationales do support the involvement of fishermen in a variety of other ways that do not raise the same concerns but generate the same benefits.

In the United States and other countries, fishermen are involved from the outset of the management process in collecting data to be used in management. Most fisheries data come from records of what fishermen actually catch. Other data come from independent studies, many of which are conducted in collaboration with fishermen. Fishermen are also involved in the review of the stock assessments upon which management measures will be based. For example, the Pacific Council has created what is known as the STAR (stock assessment review) process. STAR panels, composed of fishing industry representatives and outside scientists, review and critique stock assessments that have been developed by NMFS scientists. Decision-makers also can draw on industry advisory panels for input on the socioeconomic impacts of proposed management measures and ways to mitigate these impacts. Finally, fishermen can be involved in the enforcement of management measures. In the British system, for example, fishermen pay for, and take turns manning, the enforcement vessels that patrol for fisheries violations.

might want to "consider a public-at-large seat or a representative from a mainstream conservation group as opposed to an environmental group," while another nonvoting member suggested replacing a state at-large position with "an environmental type entity." A third nonvoting governmental member also recommended that Congress "[a]dd a seat for the environmental community."

If conservation and allocation were split, and councils handled only allocation decisions, problems of over- and underrepresentation would become less important. But they still would remain an issue. A frequent complaint of the appointed council members who were surveyed was that some fishing interests on their council also were underrepresented.

Broadening the interests represented on the councils remains a crucial and essential reform so long as the councils remain responsible for conservation. In our study, several members of the New England Council, the only council to include a representative of a national conservation organization, emphasized the value of having environmental views included in their conservation discussions and deliberations. As discussed earlier, broader representation is likely to lead councils to consider a wider range of perspectives and to identify and evaluate a more extensive set of options — to "think outside the box." The public also is more likely to accept the decisions of councils that are more pluralistic.

Comprehensive representation, however, is easier to mandate than to achieve in practice. If federal law required all councils to include an "environmental" representative, for example, would a commercial fisherman who also served on the board of a local conservation organization count? Would the federal government be expected to evaluate the beliefs of prospective appointees or the positions of the organizations to which they belonged? And, if so, how would the federal government determine if an individual or organization was indeed "environmental," given that there is no agreed-upon litmus test?

Other efforts to ensure that particular agencies or committees include broad perspectives have often been unsuccessful. Alaska, as noted earlier, requires its governor to choose members of the Board of Fisheries "with a view to providing diversity of interest and points of view in the membership."[70] Yet studies suggest that environmental interests are

Box 12:

The Clean Air Act: National Standards and Local Implementation

The Clean Air Act (CAA) provides an example of a regulatory system in which environmental protection decisions are separated from decisions about allocation. The CAA is extremely complex, so only a simplified description is possible here. Under the CAA, the Environmental Protection Agency (EPA) is responsible for determining how clean the nation's air must be in order to protect human health. The EPA sets National Ambient Air Quality Standards (NAAQS), which establish numeric limits (usually expressed in terms of parts per million) on the amount of major air pollutants that can legally be present in the air anywhere in the country. The fifty states are then responsible for ensuring that air within their borders meets the standards established by the NAAQS. The states must write State Implementation Plans (SIPs) that explain how they will meet or maintain these standards. The EPA must approve the SIPs.

Although the EPA determines the national standards, the states enjoy broad discretion in determining how to achieve the standards. This discretion allows states to tailor air quality management measures to maximize economic efficiency. For example, in some regions it may be more practical to invest in mass transportation, while in other regions it may be cheaper to significantly reduce pollution from industrial sources. This discretion allows the states, rather than the federal government, to make allocative decisions about who should bear the burden of paying for emissions reductions.

Just as NMFS provides scientific information and funding to the councils, the EPA supplies technical and financial assistance to the states to aid them in meeting air quality standards. The difference between the two systems is that the Magnuson-Stevens Act allows the councils to set the numeric limits on resource use, while the Clean Air Act requires that such limits be established by the federal government. The rationale behind the use of NAAQS is that healthy air is healthy air in every part of the country. By contrast, the Magnuson-Stevens Act allows each council, within broad national standards, to decide exactly how healthy it wants fish stocks to be.

Box 13:

What Do Overfishing and Overgrazing Have in Common?

Like the Magnuson-Stevens Act, the Taylor Grazing Act (TGA) was enacted to bring previously unregulated areas under federal management and promote conservation in those newly "enclosed" areas. Both laws faced similar challenges from the start. Like fisheries in 1976, rangelands in 1935 were in very poor condition. The federal range had been decimated in the first three decades of the twentieth century by a combination of overgrazing and drought, leading eventually to the tragedy known as the dust bowl. By 1935, only about 16 percent of federal rangelands were in "excellent" or "good" condition, while nearly 40 percent were in "poor" health.

Like fishermen in 1976, ranchers in 1935 were independent-minded, financially dependent on access to natural resources, and unaccustomed to regulation of any kind, working in rugged environments far from Washington, D.C., but not without substantial political muscle on Capitol Hill. In other words, ranchers were in general neither receptive to regulation nor easily regulated. The TGA contained vague conservation standards reminiscent of the National Standards found in the Magnuson-Stevens Act. For example, the TGA required the Department of the Interior "to stop injury to public grazing lands by preventing overgrazing and soil deterioration. . . ."

As initially designed, local branches of Interior's Grazing Service were to implement the TGA. The first director of grazing, Farrington Carpenter, however, felt strongly that users of the federal rangelands should have a strong role in implementing the TGA. He thus took it upon himself to create an extra-statutory system of institutions he called the Grazing Advisory Boards. (Congress amended the TGA in 1939 to incorporate the concept of advisory boards into the act.) Each grazing district elected a board from among ranchers in the district. These boards were to make recommendations to Interior on conservation and management measures for the district. Although the TGA anticipated that Interior would make the ultimate management decisions in cooperation with stockmen, as well as with state wildlife and land officials, Carpenter's system of boards included only stockmen. State wildlife and land officials were not represented. Carpenter bragged that the Grazing Service followed Grazing Advisory Board recommendations 98.3 percent of the time.

The TGA and the Grazing Advisory Boards made little progress in improving the condition of federal rangelands. In 1936, as noted, only 16 percent of those lands were in "excellent" or "good" condition; by 1975 the figure was still only 17 percent. These numbers did not begin to improve until after the passage of the Federal Land Policy and Management Act (FLPMA) in 1976. FLPMA subjected the Grazing Advisory Boards to the Federal Advisory Committee Act (from which the regional fishery management councils are still exempt) and adopted a new multiple-use standard for managing rangelands. By 1984, more than 36 percent of rangelands were in excellent or good condition, although 60 percent remained in fair or poor condition.

In 1994, Secretary of the Interior Bruce Babbitt eliminated the Grazing Advisory Boards as part of his rangeland reform initiative. A new system of twenty-four Resource Advisory Councils replaced the boards. By regulation, the new councils must have equal representation from three groups: extractive users (ranching, mining, timber, recreation); environmental and cultural interests (environmental groups, archeological groups, wild horse and burro groups); and other interests (state and local government, public-at-large, and academics). The Secretary of the Interior appoints these members upon nomination of governors of affected states.

Mandating broader representation, however, is easier to do on paper than in practice. According to Professor Joseph Feller of Arizona State University, "[F]or most of the five years since its inception, Arizona's BLM-appointed Resource Advisory Council has had no representative from any of the state's environmental organizations, and several of the Resource Advisory Council's members who nominally represent other interests are ranchers or their advocates or associates."* Perhaps as a consequence, the condition of rangelands has not changed very much since 1984. In 2001, BLM reported that 34 percent of inventoried lands were deemed to be in excellent or good condition.

* 31 Envtl. L. Rep. 10021 (2001).

still underrepresented.[71] In the 1990s, the Department of the Interior tried to reform the boards that controlled grazing policy on the federal public domain and that, like the regional fishery management councils, historically were dominated by industry (see Box 13). Although the reform has broadened the represented viewpoints, observers again believe that industry dominance remains largely unchecked.[72]

The Federal Advisory Committee Act (FACA) also provides a valuable lesson on the difficulty of ensuring broad representation on governmental bodies. As discussed, one of the main purposes of FACA was to afford inclusive representation on federal advisory groups. FACA therefore requires that the "membership of [an] advisory committee … be fairly balanced in terms of points of view represented."[73] No plaintiff, however, has ever successfully challenged the makeup of a federal advisory committee on the ground that its membership is not "fairly balanced."[74] Some courts have announced that the issue is "nonjusticiable" — meaning that the courts have decided that they are ill-equipped to police the requirement and must defer instead to the judgment of the appointing body.[75]

If Congress chooses to address the representativeness of council membership, it would do best either to expand the categories of mandatory governmental members or to change the process by which appointed members are selected. Both approaches are more likely to succeed than would an attempt to specify the political beliefs of some or all council members. Voting governmental representatives on the councils, as described earlier, currently include representatives only of state fishery agencies and NMFS. Congress could expand the viewpoints on the councils by awarding votes also to state and federal agencies with broad environmental mandates, such as state and federal environmental agencies and the federal Fish and Wildlife Service. Although many such agencies do not directly manage fisheries, they generally have extensive experience in evaluating similar scientific information, determining the appropriate levels of protection, and implementing regulations.

In the case of appointed members, moreover, each governor often believes that he or she must use nomination opportunities to choose council members who will strongly support the local fishing industry. If a governor does not do so, other states may gain an important edge in allocation decisions. So long as governors make the nominations and worry about allocation issues, they will have an incentive to nominate fishing industry representatives no matter what guidelines Congress provides.

To achieve a more representative set of appointed members, Congress therefore might want to modify the appointment process. Congress, for example, could require governors to submit lists of nominees much larger

than the current lists of three. A requirement that a governor submit a list of ten people, for example, would increase the chances of citizens outside the industry being nominated and might increase the ability of the Secretary of Commerce to create balanced councils. Congress could also require that some nominations be made by an independent body, such as the National Academy of Sciences, rather than by the governors. The earlier mentioned Calio Report (discussed in Box 9) recommended that a nine-member "review board" collect nominations from interested groups or individuals and then recommend the top three nominees for final selection by the Secretary.

ELIMINATING OR REDUCING CONFLICTS OF INTEREST

In suggesting reforms, a number of council members also focused on the value of eliminating potential conflicts of interest. As discussed earlier, there is no legitimate justification for exempting the regional councils from conflict-of-interest standards that apply to other regulatory agencies and are one of the foundations of good government.

One option would be to prohibit those holding financial interests in regulated fisheries from being appointed to a council, and to broaden the definition of "financial interests" to include lobbying for members of the fishery. One industry representative, for example, suggested that the law should encourage "people to serve without financial ties but with depth of background." This option would result in much different-looking councils, although it is unclear whom these disinterested council members would be.

Another option would be to lower the recusal threshold. A nonvoting member suggested that industry members should remain on the councils but be barred from voting "whenever there is economic gain or loss at stake that directly affects (or gives the perception to directly affect) that person's business or those of friends, family, clients, or close constituents." While it is possible that such a measure would change voting outcomes, it might also simply result in more frequent "logrolling" behavior — a "you scratch my back and I'll scratch yours" system.

The choice between these options depends in part on whether councils continue to handle both conservation and allocation decisions or are limited only to allocation. So long as the councils continue to make conservation decisions, limits need to be placed on council membership. Otherwise, as just suggested, "logrolling" could continue to undermine effective conservation measures. If councils make only allocation decisions, stricter recusal rules may adequately deal with the conflict-of-interest problem. But some form of action, either restricting membership or strengthening recusal rules, would need to be taken. Council members who participated in our surveys were as concerned about the effects of conflicts on allocation decisions as they were about their effects on conservation.

"THE LAW SHOULD ENCOURAGE PEOPLE TO SERVE WITHOUT FINANCIAL TIES BUT WITH DEPTH OF BACKGROUND."

—INDUSTRY REPRESENTATIVE

Conclusion: Implementing the Needed Changes

The regional fishery management councils, as currently structured, are unlikely to solve the problems facing coastal fisheries in the United States. The mixing of allocation and conservation decisions, the relatively uniform perspective of council members, the failure to avoid and regulate conflicts of interest among council members, and various other institutional deficiencies conspire to undercut effective protection of the fisheries. Until these defects are addressed, the nation is likely to remain disappointed in the Magnuson-Stevens Act and worried about the state of the nation's fisheries.

So who can make the needed changes? NMFS and the Secretary of Commerce by themselves can take a number of steps that would help to improve decision-making under the Magnuson-Stevens Act. First, NMFS could tighten the conflict-of-interest regulations. Under the act, a council member must recuse himself or herself if "there is a close causal link between the Council decision and an expected and substantially disproportionate benefit to the financial interest of the affected individual relative to the financial interests of other participants in the same gear type or sector of the fishery."[76] NMFS currently interprets "substantially disproportionate" to mean that a member must own or represent more than 10 percent of a gear type or sector.[77] A lower threshold would reduce the most direct conflicts of interest.

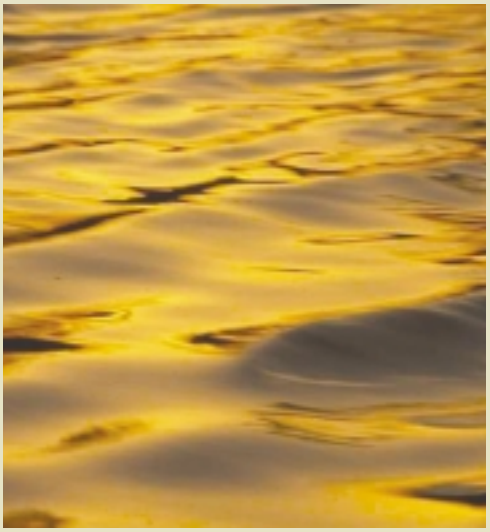
The Secretary of Commerce also could make a greater effort to improve council diversity. The Secretary could strive to select more diverse candidates from those lists that the governors currently submit. The Secretary, moreover, could work more closely with governors to encourage the governors to submit slates containing nominees with a wider range of perspectives and experience.

Finally, NMFS could improve council decision-making by changing the way in which it communicates scientific information to the councils and by increasing the intensity of its oversight. NOAA science centers and stock assessment panels currently provide most councils with a range of recommended catch levels, giving the councils substantial discretion in setting limits. The science centers and stock assessment panels could reduce that discretion by providing more specific recommendations. NMFS also could hold the councils' decisions to heightened scrutiny under the national standards and other substantive provisions of the Magnuson-Stevens Act.

The Magnuson-Stevens Act, however, limits the ultimate extent to which NMFS and the Secretary of Commerce can solve the deficiencies that this report identifies. The act, for example, explicitly permits

council members to participate in discussions about fishery decisions in which they have a vested financial interest. The act also prohibits NMFS from invalidating decisions on which conflicted members have voted. And by requiring that all members be chosen from lists submitted by the governors of local states, the act also limits the ability of the Secretary of Commerce to increase council diversity. In choosing appointed members, the Secretary must choose one of the three candidates nominated by the relevant governor. Finally, as discussed earlier in this report, the act also makes it difficult for NMFS to impose a regulation on a council that is not predisposed to accept it.

Thus, Congress must step in and reform the decision-making structure of the Magnuson-Stevens Act if the nation's coastal fisheries are to be protected. As discussed earlier, the most valuable step Congress could take would be to separate the conservation and allocation decisions that the councils now make. The councils can play a valuable role in allocating fishing rights, but a separate national entity, with strong scientific expertise, should make the initial conservation decisions. Congress should also prescribe tougher conflict-of-interest requirements and provide for greater council diversity. Although these latter changes are essential if the councils continue to make conservation decisions, they also are important to effective allocation decisions. By providing a strong decision-making structure, Congress can turn the vast promise of the Magnuson-Stevens Act into reality and ensure sustainable fisheries for future generations of American fishermen, consumers, and environmentalists.



NOTES

1. Association of the Bar of the City of New York, Special Committee on the Federal Conflict of Interest Laws, *Conflict of Interest and Federal Service* (Cambridge, MA: Harvard University Press, 1960), pp. 42–44.
2. Administrative Procedure Act, 5 U.S.C. §§ 551 et seq.
3. Federal Advisory Committee Act, 5 U.S.C. App. 2 (hereinafter FACA).
4. Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801 et. seq. (hereinafter FCMA).
5. Michael L. Weber, *From Abundance to Scarcity: A History of U.S. Marine Fisheries Policy* (Washington, DC: Island Press, 2002).
6. See, e.g., Cal. Const., art. IV, § 20; Mo. Const., art. IV, § 40(a).
7. La. Const., art. IX, § 7 (emphasis added).
8. Nev. Rev. Stat. § 501.171 (2003).
9. Tenn. Code § 70-1-201 (2003).
10. See, e.g., Mo. Const., art. IV, § 40(a).
11. Ark. Const., amend. 35, § 1.
12. Ind. Code § 14-10-1-1 (2003).
13. Stephen McIntosh Waste, "The Alaska Board of Fisheries: The Structure and Process of Decision-Making" (PhD diss., University of Washington, 1992).
14. Alaska Statehood Act of 1958, § 6(e), 72 Stat. 339.
15. 1959 Stat. Laws of Alaska, ch. 24.
16. Alaska Stat. § 16.05.221.
17. Act of Feb. 9, 1871, 16 Stat. 593.
18. Willis L. Hobart, ed., "Baird's Legacy: The History and Accomplishments of NOAA's National Marine Fisheries Service, 1871–1996," NOAA Technical Memorandum NMFS-F/SPO-18 (Silver Spring, MD: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, December 1995).
19. United States Reorganization Plan #2 of 1939, 4 *Fed. Reg*. 2731 (1939).
20. P.L. 89-454 (1966).
21. United States Commission on Marine Science, Engineering and Resources, *Our Nation and the Sea: A Plan for National Action* (Washington, DC: U.S. Government Printing Office, January 1969).
22. Exec. Order No. 11,564, 35 *Fed. Reg.* 15801 (1970).
23. Weber, *From Abundance to Scarcity*.
24. Senate Committee on Commerce, *A Legislative History of the Fishery Conservation and Management Act of 1976,* 94th Cong., 2nd sess. (1976).
25. United States Congress, *A Legislative History of the Fishery Conservation and Management Act of 1976* (Washington, DC: U.S. Government Printing Office, 1976), p. 684 (hereinafter FCMA Legislative History).
26. FCMA § 302(b), 16 U.S.C. § 1854(b).
27. FCMA Legislative History, pp. 454–55.
28. See *Natural Resources Defense Council v. Daley*, 209 F.3d 747 (D.C. Cir. 2000).
29. 63 *Fed. Reg.* 24212 (1998).
30. 64 *Fed. Reg.* 69989 (1999).
31. FCMA § 304(a), 16 U.S.C. § 1854(a).
32. FCMA § 304(e), 16 U.S.C. § 1854(e).
33. FCMA § 303(a), 16 U.S.C. § 1853(a).
34. National Marine Fisheries Service, *Annual Report to Congress on the Status of Fisheries of the U.S.: 2002* (Silver Spring, MD: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, 2003).
35. Ibid.
36. Food and Agriculture Organization of the United Nations, *The State of World Fisheries and Aquaculture, 2002* (Rome: Food and Agriculture Organization of the United Nations, FAO Fisheries Department, 2002).
37. National Marine Fisheries Service, *Annual Report to Congress*.
38. Barbara Stevenson, New England Council, quoted at http://www.habitatmedia.org/tran-stevenson.html.
39. See, e.g., P. E. Jones and P. H. M. P. Roelofsma, "The Potential for Social Contextual and Group Biases in Team Decision-Making: Biases, Conditions, and Psychological Mechanisms," *Ergonomics* 13, no. 8 (2000):1152; A. R. Flippen, "Understanding Groupthink from a Self-Regulatory Perspective," *Small Group Research* 30, no. 2 (1999):166; Michael A. Hogg and Sarah C. Hains, "Friendship and Group Identification: A New Look at the Role of Cohesiveness in Groupthink," *European Journal of Social Psychology* 28 (1998):323, 337.

40. See Garold L. Stasser et al., "Information Sampling in Structured and Unstructured Discussions of Three- and Six-Person Groups," *Journal of Experimental Social Psychology* 63 (1989):57, 67–78.
41. See Christine Beckman and Pamela R. Haunschild, "Network Learning: The Effects of Heterogeneity of Partners' Experience on Corporate Acquisitions," *Administrative Science Quarterly* 47 (2002):92–124.
42. Irving L. Janis, *Groupthink: Psychological Studies of Policy Decisions and Fiascoes* (Boston: Houghton Mifflin, 1982).
43. FACA § 5(b).
44. H.R. Rep. No. 92-1017.
45. For more analysis of council membership over time, see Thomas A. Okey, "Membership of the Eight Regional Fishery Management Councils in the United States: Are Special Interests Over-Represented?" *Marine Policy* 27 (2003):193–206.
46. Lawrence Lessig and Cass R. Sunstein, "The President and the Administration," *Columbia Law Review* 94, no. 1 (January 1994); Marver H. Bernstein, *Regulating Business by Independent Commission* (Princeton, NJ: Princeton University Press, 1955).
47. Association of the Bar of the City of New York, *Conflict of Interest and Federal Service*, pp. 6–7.
48. 18 U.S.C. § 208(a).
49. *United States v. Gorman*, 807 F.2d 1299 (6th Cir. 1986). See also 5 C.F.R. § 2635 (2003).
50. Association of the Bar of the City of New York, *Conflict of Interest and Federal Service*, p. 80.
51. 47 C.F.R. § 19.735-202 (2003).
52. Association of the Bar of the City of New York, *Conflict of Interest and Federal Service*, pp. 84–85.
53. 5 C.F.R. § 3101.105 (2003).
54. 5 C.F.R. § 3101.109 (2003).
55. 5 C.F.R. § 3401.102 (2003).
56. 5 C.F.R. § 5501.104 (2003).
57. 5 C.F.R. § 4001.103 (2003).
58. S. Rep. No. 92-1098.
59. H.R. Rep. No. 92-1017.
60. FACA § 2(b)(6).
61. House Committee on Merchant Marine and Fisheries, *Conflicts of Interest within the Regional Fishery Management Councils: Hearing before the Subcommittee on Fisheries Management,* 103rd Cong., 1st sess., 1994, p. 2.
62. FCMA § 302(j), 16 U.S.C. § 1852(j).
63. 50 C.F.R. § 600.235.
64. Statement of Hans Radtke, June 27, 2003 (copy on file with authors).
65. Barton H. Thompson Jr., "Tragically Difficult: The Obstacles to Governing the Commons," *Environmental Law* 30 (2000):241.
66. National Academy of Public Administration, *Courts, Congress, and Constituencies: Managing Fisheries by Default* (Washington, DC: National Academy of Public Administration, 2002).
67. See, e.g., *Associated Fisheries of Maine v. Daley*, 127 F.3d 104 (1st Cir. 1997).
68. U.S. Department of Commerce, *NOAA Fishery Management Study* (Washington, DC: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, June 30, 1986).
69. Pew Oceans Commission, *America's Living Oceans: Charting a Course for Sea Change* (Arlington, VA: Pew Oceans Commission, May 2003).
70. Alaska Stat. § 16.05.221.
71. See, e.g., Waste, "Alaska Board of Fisheries," p. 32.
72. Cathy Carlson and Johanna Wald, *Rangeland Reform Revisited* (New York: Natural Resources Defense Council, Center for the Wild West, 2001).
73. FACA § 5(b).
74. Steven P. Croley and William F. Funk, "The Federal Advisory Committee Act and Good Government," *Yale Journal on Regulation* 14 (1997):451, 518.
75. *Public Citizen v. National Advisory Commission on Microbiological Criteria for Foods*, 708 F. Supp. 359, 364 (D.D.C. 1988).
76. FCMA § 302(j), 16 U.S.C. § 1852(j).
77. 50 C.F.R. § 600.235.

SELECTED LITERATURE ON THE COUNCILS: A CHRONOLOGICAL BIBLIOGRAPHY, 1985–2003

PUBLISHED LITERATURE

Finch, R. 1985. "Fishery Management under the Magnuson Act." *Marine Policy* (July): 170–79.

Barber, W. E. 1987. "The Fisheries Management Structure and Process under the MFCMA: A North Pacific Perspective." *Fisheries* 12, no. 6:10–17.

Miller, M. L. 1987. "Regional Fishery Management Councils and the Display of Scientific Authority." *Coastal Management* 15:309–18.

Marasco, R. J., and **M. L. Miller.** 1988. "The Role of Objectives in Fisheries Management." Pp. 171–83 in *Fishery Science and Management,* ed. W. S. Wooster. New York: Springer-Verlag.

Smith, M. E. 1990. "Chaos in Fisheries Management." *Mast* 3, no. 2:1–13.

Sissenwine, M. P., and **A. A. Rosenberg.** 1993. "Marine Fisheries at a Critical Juncture." *Fisheries* 18, no. 10:6–10.

Hanna, S. 1995. "User Participation and Fishery Management Performance with the Pacific Fishery Management Council." *Ocean and Coastal Management* 28:23–44.

Cloutier, T. 1996. "Conflicts of Interest on Regional Fishery Management Councils: Corruption or Cooperative Management?" *Ocean and Coastal Law Journal* 2:101–52.

Iudicello, S. 1996. "Overfishing Lures Legislative Reforms." *Forum for Applied Research and Public Policy* (Summer):19–23.

Dana, D. 1997. "Overcoming the Political Tragedy of the Commons: Lessons Learned from the Reauthorization of the Magnuson Act." *Ecology Law Quarterly* 24:833–46.

Cicin-Sain, B., and **R. W. Knecht.** 2000. *The Future of U.S. Ocean Policy.* Washington, DC: Island Press.

Hennessey, T., and **M. Healey.** 2000. "Ludwig's Ratchet and the Collapse of New England Groundfish Stocks." *Coastal Management* 28:187–213.

H. John Heinz III Center for Science, Economics and the Environment. 2000. *Fishing Grounds: Defining a New Era for American Fisheries Management.* Washington, DC: Island Press.

Butler, M. J., L. Steele, and **R. Robertson.** 2001. "Adaptive Resource Management in the New England Groundfish Fishery: Implications for Public Participation and Impact Assessment." *Society and Natural Resources* 14:791–801.

Grimes, S. 2001. "Comment: The Federal Regional Fishery Management Councils: A Negotiated Rulemaking Approach to Fisheries Management." *Ocean and Coastal Law Journal* 6:187–204.

Weber, M. L. 2002. *From Abundance to Scarcity: A History of U.S. Marine Fisheries Policy.* Washington, DC: Island Press.

Eagle, J., and **B. H. Thompson.** 2003. "Answering Lord Perry's Question: Dissecting Regulatory Overfishing." *Ocean and Coastal Management* 46:649–79.

Okey, T. A. 2003. "Membership of the Eight Regional Fishery Management Councils in the United States: Are Special Interests Over-Represented?" *Marine Policy* 27:193–206.

UNPUBLISHED LITERATURE AND REPORTS

Hargis, W. J., et al. 1986. *NOAA Fishery Management Study ("The Calio Report").* Silver Spring, MD: National Oceanic and Atmospheric Administration.

Greenberg, E. V. C. 1992. "The Magnuson Act after Fifteen Years: Is It Working?" Presentation to the 1992 National Fishery Law Symposium, 15–16 October 1992. Washington, DC: Garvey, Schubert & Barer.

Pautzke, C. G. 1992. *The Magnuson Act after Fifteen Years: Is It Working?* Anchorage, AK: North Pacific Fishery Management Council.

Stroud, R., ed. 1994. *Conserving America's Fisheries*. Leesburg, VA: National Coalition for Marine Conservation.

World Wildlife Fund. 1995. *Managing U.S. Fisheries: Public Interest or Conflict of Interest?* Washington, DC: World Wildlife Fund.

Fujita, R. M., and **L. Zevos.** 1996. *Innovative Approaches for Fostering Conservation in Marine Fisheries.* Oakland, CA: Environmental Defense Fund.

General Accounting Office. 2000. *Fishery Management: Problems Remain with National Marine Fisheries Service's Implementation of the Magnuson-Stevens Act*. Washington, DC: General Accounting Office.

H. John Heinz III Center for Science, Economics and the Environment. 2000. *Improving Federal Fisheries Management*. Pittsburgh, PA: Heinz Center.

National Academy of Public Administration. 2002. *Courts, Congress, and Constituencies: Managing Fisheries by Default*. Washington, DC: National Academy of Public Administration.

Pew Oceans Commission. 2003. *America's Living Oceans: Charting a Course for Sea Change.* Arlington, VA: Pew Oceans Commission.

APPENDIX — SUMMARY OF SURVEY RESPONSES

M – Mandatory member
A – Appointed member
NV – Non-voting member

1. Do you have formal education in fisheries science or a related field?

PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
YES			NO			YES			NO			YES		NO		YES		NO	
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
4	3	2	1	4	0	1	3	3	1	0	0	3	5	0	3		2		3
	9			5			7			1			8		3				

2. Do you believe that different Council members represent different constituencies?

PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
YES			NO			YES			NO			YES		NO		YES		NO	
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
4	7	2	1	0	0	2	3	3	0	0	0	3	7	0	1		4		1
	13			1			8			0			10		1				

3. How often do you find the scientific information you receive on a fishery to be sufficient for effective and well-informed Council decision-making?

PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
ALWAYS			SOMETIMES NEVER			ALWAYS			SOMETIMES NEVER			ALWAYS		SOMETIMES NEVER		ALWAYS		SOMETIMES NEVER	
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
0	1	0	5	6	2	2	3	2	0	0	1	0	0	3	8		5		0
	1			13			7			1			0		11				

4. Do you believe that you have been provided with adequate training and other resources to evaluate the scientific information you receive?

PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
ALWAYS			SOMETIMES NEVER			ALWAYS			SOMETIMES NEVER			ALWAYS		SOMETIMES NEVER		ALWAYS		SOMETIMES NEVER	
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
5	4	2	0	3	0	2	3	2	0	0	1	3	3	0	4		3		1
	11			3			7			1			6		4				

5. How often do you find the economic information you receive on a fishery to be sufficient for Council decision-making?

PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
ALWAYS			SOMETIMES NEVER			ALWAYS			SOMETIMES NEVER			ALWAYS		SOMETIMES NEVER		ALWAYS		SOMETIMES NEVER	
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
0	1	0	5	6	2	0	2	0	2	1	3	0	0	3	8		0		5
	1			13			2			6			0		11				

6. Do you believe that you have been provided with adequate training and other resources to evaluate the economic information you receive?

PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
YES			NO			YES			NO			YES		NO		YES		NO	
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
4	6	0	1	1	2	1	3	2	1	0	1	1	5	2	3		2		2
	10			4			6			2			6		5				

7. Compared with existing opportunities for public input, do you believe that there should be more opportunity for public input, less opportunity for public input, or that existing opportunities for public input are adequate (status quo, or SQ)?

PACIFIC									NEW ENGLAND								
MORE			LESS			SQ			MORE		LESS		SQ				
M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A			
1	0	0	0	0	0	4	6	2	0	2	1	0	2	6			
	1			0			12			2		1		8			

NORTH PACIFIC									GULF OF MEXICO								
MORE			LESS			SQ			MORE			LESS			SQ		
M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	NV
0	0	0	0	0	0	2	3	3	0	0	0	0	0	0	1	2	2
	0			0			8			0			0			5	

8. Do you believe that the public takes full advantage of the existing opportunities to comment on Council activities?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	0	3	0	5	3	2	0	1	1	2	2	2	1	1	2	6				
		3			**10**			**2**			**6**			**2**		**8**		**1**		**4**

9. How important are each of the following factors in helping to formulate your decisions on fishery management issues? (1 = most important, 9 = least important.)

Factor Rank

____ Comments from fishermen
____ Comments from other members of the public
____ Scientific recommendations
____ Economic impact assessments
____ Comments from environmental groups
____ Opinions of other Council members (specify)
____ Personal experience/knowledge

10. Do you believe that the media coverage of your Council's fishery management decisions has been fair to the Council?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	5	4	1	0	0	0	1	3	3	0	0	0	1	4	2	3				
		10			**0**			**7**			**0**			**5**		**5**		**4**		**0**

11. Do you believe that the fishing community is sufficiently aware of Council activities? If not, what should be done to increase awareness?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	3	5	0	2	1	2	2	1	3	0	2	0	2	5	1	3				
		8			**5**			**6**			**2**			**7**		**4**		**4**		**1**

12. Do you believe that the general public is sufficiently aware of Council activities?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	0	4	0	5	3	2	2	1	2	0	2	1	1	1	2	7				
		4			**10**			**5**			**3**			**2**		**9**		**2**		**3**

13. Have you ever felt that it was unfair for another Council member to participate in certain Council deliberations because he or she had a conflict of interest?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	1	1	1	4	5	1	0	0	3	2	3	0	0	4	3	3				
		3			**10**			**3**			**5**			**4**		**6**		**2**		**2**

14. Have you ever felt that it was unfair for another Council member to participate in certain Council deliberations because his or her friends, neighbors or clients had an interest in the deliberations?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	0	1	1	5	6	1	0	0	3	2	3	0	0	4	3	2				
		2			**12**			**3**			**5**			**4**		**5**		**2**		**2**

15. Have you ever considered recusing yourself from Council deliberations regarding a fishery in which you were active?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND						GULF OF MEXICO					
	YES		NO		DON'T FISH		YES		NO		DON'T FISH		YES		NO		DON'T FISH		YES		NO		DON'T FISH	
	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A
	0	3	4	3	1	1	0	3	0	0	2	0	1	2	1	5	3	1	0	1	0	1	1	0
		3		**7**		**2**		**3**		**0**		**2**		**3**		**6**		**4**		**1**		**1**		**1**

16. Have you ever considered recusing yourself from Council deliberations regarding fisheries in which your friends, neighbors or clients were active?

	PACIFIC						NORTH PACIFIC						NEW ENGLAND				GULF OF MEXICO			
	YES			NO			YES			NO			YES		NO		YES		NO	
	M	A	NV	M	A	NV	M	A	NV	M	A	NV	M	A	M	A	M	A	M	A
	1	0	N/A	4	7	N/A	0	2	N/A	2	1	N/A	0	2	3	5				
		1			**11**			**2**			**3**			**2**		**8**		**2**		**2**

This appendix summarizes responses to those survey questions that require discrete rather than narrative answers.

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Josh Eagle is director of the Stanford Fisheries Policy Project and lecturer in law at Stanford Law School. His research focuses on institutions and their role in the sustainable use of natural resources. Mr. Eagle has published articles on the economics of endangered species protection, the economic and ecological relationships between aquaculture and commercial fisheries, and problems and solutions in the regulation of marine fisheries. Prior to coming to Stanford, Mr. Eagle worked as an attorney for both the U.S. Department of Justice and the National Audubon Society. In addition to his law degree, he holds an M.S. degree in forest sciences.

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