GAO

United States General Accounting Office

Report to the Honorable
Les AuCoin, House of Representatives

March 1991

FISHERIES

Commerce Needs to Improve Fisheries Management in the North Pacific

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GAO

United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-242994

March 28, 1991

The Honorable Les AuCoin
House of Representatives

Dear Mr. AuCoin:

This report responds to your request to review certain aspects of the management of the groundfish fishery in the Bering Sea and the Gulf of Alaska by the North Pacific Fishery Management Council and the Department of Commerce. Specifically, the report addresses the management of the groundfish fishery in the Bering Sea, the system for calculating domestic processing capability, and the system for releasing surplus allocations to joint-venture fishermen.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time we will send copies to the Secretary of Commerce; the Director, Office of Management and Budget; and other interested parties. We will also make copies available to others upon request.

Our work was conducted under the direction of John M. Ols, Jr., Director, Housing and Community Development Issues, (202) 275-5525. Other major contributors are listed in appendix III.

Sincerely yours,

J. Dexter Peach
Assistant Comptroller General

Executive Summary

Purpose

Alaska's North Pacific fishery is the largest in the nation, accounting for about 50 percent of the U.S. harvest each year. Much of the harvest consists of groundfish, such as pollock, flounder, and cod, which live near or at the bottom of the sea. A cap is placed on the quantity of groundfish that can be harvested in the fishery each year. American fishermen who sell to domestic processors are given first preference to harvest the groundfish up to the limit of the cap. If any fish remain, second preference is given to joint-venture fishermen (American fishermen who sell to foreign at-sea processors), and lastly, foreign fishermen may harvest any balance left under the cap.

Concerned that joint-venture fishermen were not being treated equitably, Representative Les AuCoin asked GAO to examine whether (1) the annual fishing cap of 2 million metric tons in the Bering Sea is based on the best available scientific information and on sound principles of fisheries management, (2) the estimates used for determining U.S. processors' needs for fish are accurate, and (3) the current system for allocating groundfish between U.S. processors and joint ventures needs to be restructured. He asked that GAO's examination of the latter two areas cover both the Bering Sea and the Gulf of Alaska.

Background

U.S. fisheries are administered under the Magnuson Act of 1976, as amended (16 U.S.C. 1801 et seq.). The act establishes a set of national standards for fisheries conservation and management, which, in part, require the prevention of overfishing while achieving, on a continuing basis, the optimum yield from each fishery. The act also has other objectives, including Americanizing the fishery, and conservation. The North Pacific Fishery Management Council, established under the act, prepares a management plan for groundfish that identifies methods to help conserve fish stocks, establishes an optimum harvest yield, and sets caps for the maximum annual catch in the Bering Sea and the Gulf of Alaska. To allocate the fish among domestic processors, joint ventures, and foreign fishermen, the Department of Commerce's National Marine Fisheries Service (NMFS) surveys domestic processing needs and provides the survey results to the Council, which determines the initial allocation of groundfish among the various users.

Results in Brief

Recent estimates of fish stocks suggest that the 2-million metric ton cap for groundfish in the Bering Sea could be increased. The Council acknowledges the improved accuracy of the biological data, but has consistently decided not to increase the cap in order to (1) Americanize the

fishery, (2) protect markets for groundfish, and (3) sustain the ecological balance. In view of the Magnuson Act's multiple objectives and the issues involved in achieving them, the Council has decided to maintain a conservative cap.

The 1980s saw a pronounced Americanization of the groundfish industry in the North Pacific fishery. In 1981 foreign fishermen caught nearly all the groundfish, but by 1986 the joint ventures took a higher proportion of the total catch. Between 1984 and 1990 domestic processors increased their catch by about 3,100 percent, so that by 1991 domestic processors were allocated all groundfish and joint-venture and foreign fishermen were eliminated from the fishery.

NMFS' system for determining domestic processors' needs for fish has not produced accurate estimates. Domestic processors have consistently inflated the quantity of groundfish they will actually process, and NMFS has only partially succeeded in adjusting these estimates to make them accurate. Over the last 7 years, domestic processors have actually used only 57 percent of the groundfish included in their processing estimates.

Initial allocations, which the Council has based largely on the processors' inflated estimates, have overstated the domestic processors' actual needs and thereby adversely affected joint-venture fishermen. NMFS can reallocate groundfish during the fishing season on the basis of the actual amount of fish harvested. However, in some cases NMFS did not reallocate fish that domestic processors were not taking, and in some cases reallocations occurred too late in the season to be useful.

Principal Findings

Views Differ on Appropriateness of the Bering Sea Fishing Cap

When the Bering Sea fishing cap was implemented in 1984, the biological information available for estimating existing fish stocks was limited and incomplete. Because of these data limitations, the Council set a conservative groundfish cap of 2 million metric tons. However, by 1987 new information, based on more current, detailed, and accurate data, showed larger stocks of available fish than NMFS had estimated in 1984. Studies indicate that 3 million metric tons of groundfish could have been harvested in 1990. On the basis of these estimates, NMFS biologists concluded that the cap could be increased.

The Council has rejected proposed increases in the cap each year since 1984. Factors other than the amount of available fish are considered in setting the cap. The Magnuson Act requires the Council to balance several sometimes competing objectives—such as preventing overfishing, achieving optimum yield, and Americanizing the fishery—when making decisions about the fishery.

Inaccurate Estimates of Domestic Fish Processing Needs

From 1984 through 1990, domestic processors provided NMFS with preseason estimates that were 43 percent higher than actual use. In 1987, because previous estimates had greatly exceeded actual amounts processed, NMFS began adjusting the estimates. Despite some improvement, the estimates continue to overstate actual usage. For example, in 1989 processors estimated a need for 2.3 million metric tons of groundfish in the Bering Sea. NMFS reduced the estimate to 1.8 million metric tons, but only about 1.2 million metric tons were processed.

NMFS officials and domestic processing company representatives told GAO that the estimates were inflated primarily to limit or eliminate allocations to joint-venture and foreign fishermen. They said that overestimates also resulted from problems in getting vessels or processing equipment on-line as planned. GAO found that NMFS does not require processors to report changes in their operating plans that might prevent them from attaining previously estimated processing levels. In addition, although NMFS has the authority to assess penalties against processors for knowingly providing false estimates, it has never used this authority.

System for Allocating Groundfish Has Adversely Affected Joint-Venture and Foreign Fishermen

The current system for allocating groundfish between the domestic and other processors has often given the domestic processors larger initial allocations than they needed and thus reduced the allocations to joint-venture and foreign fishermen. Reallocations during the fishing season sometimes did not occur or occurred too late in the season to be of much use to the joint-venture fishermen. For example, joint ventures must often make plans early in the year with their foreign partners whose processing vessels may plan to remain only a short time in the fishery if the initial allocation is small, or may pass over the harvest altogether.

Furthermore, in the Gulf of Alaska, the Council's initial allocations to domestic processors during five of the past seven fishing seasons exceeded the inflated estimates submitted by the processors. NMFS and some Council members said that these high allocations were made to

protect the fledgling domestic processing industry from competition with joint ventures and foreign fishermen. By 1990 all allocations of groundfish in the Gulf of Alaska went to domestic processors, and by 1991 all groundfish allocated in the Bering Sea were allocated to domestic processors. Thus, joint-venture and foreign fishing in the North Pacific fishery have been eliminated.

Recommendations

GAO recommends that the Secretary of Commerce direct NMFS to

- require processors to report changes in their needs to NMFS as they occur so that any reallocations necessary can be made and
- establish a system for determining and enforcing penalties against processors who knowingly submit false estimates, as authorized in the Magnuson Act.

Agency Comments

GAO discussed its findings with NMFS and the Council and included their comments where appropriate. However, as requested, GAO did not obtain written comments on this report.

The Council does not want to increase the cap because it wants to keep the fishery in good condition. The Assistant Administrator for Fisheries told GAO that he agreed with the Council's decision not to increase the conservative Bering Sea cap. Furthermore, the Assistant Administrator said that the NMFS system for estimating need or allocating fish between domestic and other processors is no longer of any practical significance because joint-venture and foreign fishermen have been eliminated from the fishery. GAO believes that it is premature to assert that a system for reallocating fish among the various user groups is no longer needed because initial allocations for domestic processors have generally exceeded their actual use.

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Abbreviations

GAO	General Accounting Office
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPFMC	North Pacific Fisheries Management Council

Chapter 1

Introduction

According to a May 1990 National Marine Fisheries Service (NMFS) report, commercial fish harvests unloaded in U.S. ports in 1989 totalled 3.8 million metric tons. In addition, harvests by U.S. fishermen unloaded in foreign ports or on foreign at-sea processing vessels amounted to an additional 994,000 metric tons. Alaska's North Pacific fishery is the largest in the nation, accounting for about 50 percent of the fish harvested each year.

The Magnuson Act

The Magnuson Fishery Conservation and Management Act of 1976, as amended (16 U.S.C. 1801 et seq.), sets the nation's policy for managing offshore fisheries. The act designated the area 3 miles to 200 miles off the U.S. coast as an "exclusive economic zone." The United States exercises sovereign rights and exclusive fishery management authority over all fish within the exclusive economic zone. The Magnuson Act established a set of national standards for fishery conservation and management in the zone. The standards call for conservation and management measures in fisheries that are based on the best scientific information available and (1) prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery;[1] and (2) promote, where practical, efficiency in the utilization of the fishery. The act also includes other objectives, including Americanization of the fishery. There is a delicate balance among the act's multiple objectives of Americanization, prevention of overfishing, and achieving optimum yield and efficient use of the fishery.

Overfishing is the level of fishing that jeopardizes the capacity of a fish stock to recover to a level at which it can produce maximum yield on a long-term basis. A 1986 fish management study done by the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) pointed out that overfishing is a relative term that cannot be defined apart from its biological, economic, social, or ecological consequences. Thus, determining the allowable level of fishing depends on the conditions of the fishery and the amount of risk associated with different fishing levels.

The Magnuson Act assigns general responsibility for the fisheries to the Secretary of Commerce. The Secretary, acting through Commerce's NMFS, is to ensure that fish stocks are adequately conserved and managed under eight regional councils created by the act. These councils

[1]Optimum yield is the amount of fish that can be harvested to provide the greatest benefit to the nation.

develop management plans to conserve fish stocks and establish optimum yield. Established in 1970 as an agency within NOAA, NMFS is responsible for the day-to-day management of the fisheries.

Within the exclusive economic zone, the act gives the councils authority to set an annual fishing level in each fishery. The act requires that U.S. fishermen who sell to U.S. fish processors get first priority in the allocation of fish.[2] Any unallocated fish then go to joint-venture fishermen—U.S. fishermen who sell their catch to foreign processors operating at sea. Finally, remaining fish are allocated to foreign fishermen. The priority approach was established to encourage the fullest utilization by the U.S. fishing industry of the fishing resources within the United States' 200-mile fishing jurisdiction.

Management of the North Pacific Fishery

The North Pacific Fishery Management Council, located in Anchorage, Alaska, has 11 voting members, including representatives from federal and state governments and the private sector. (See app. I for information on the Council members and their subcommittees.) The Council prepares a fishery management plan for each fishery within its geographic area of authority, and it reviews and revises, as appropriate, assessments and specifications in each plan for the optimum yield of the fishery and the portion of that yield to be allocated to domestic, joint-venture, and foreign fishermen.

NMFS' Alaska regional office, located in Juneau, Alaska, manages the day-to-day operations of the North Pacific fishery. To help ensure that fish are allocated in keeping with the Magnuson Act, regional officials send a questionnaire to potential domestic fish-processing companies before the beginning of each fishing season. The fishing season coincides with the calendar year. This questionnaire asks processors to indicate, on a species-by-species basis, the quantity of fish they expect to process during the coming season. NMFS officials review the processors' estimates and adjust them on the basis of the processors' past performance and other factors. To help ensure that processors provide accurate information, the Congress amended the Magnuson Act in 1986 to include a penalty provision for processors who knowingly provide false information. A 1990 amendment to the act increased the maximum penalty from $25,000 to $100,000. The system for determining domestic processors' needs is discussed in chapter 3.

[2]Processing generally refers to heading, gutting, filleting, or freezing fish or turning fish into secondary products.

Before the fishing season begins, the aggregate total from all domestic processors is submitted to the Council to allow it to determine what portion of the groundfish should initially be allocated to domestic processors, joint ventures, and foreign fishermen.[3] As the fishing season progresses, NMFS gathers additional information from certain processors to update its estimates and analyzes the level of harvest. On the basis of this information, NMFS may reallocate fish during the fishing season to the different users. The allocation system is discussed in chapter 4.

NMFS is also responsible for performing scientific research that will assist in the management of the fishery. Much of this research is conducted by the Alaska Fishery Science Center in Seattle. The center surveys groundfish and studies fish species in the Bering Sea/Aleutian Island area and in the Gulf of Alaska, and it prepares reports for the Council's use in assessing stock and evaluating fisheries.

The North Pacific Fishery

The North Pacific fishery, located off the coast of Alaska, includes the Bering Sea/Aleutian Island area and the Gulf of Alaska. About 50 percent of the U.S. fish harvest comes from the North Pacific fishery. Groundfish are a primary product of the fishery; other products include crab, halibut, and salmon.

The 1980s saw a pronounced Americanization of the groundfish industry in the North Pacific fishery. In 1981, as figure 1.1 shows, foreign vessels took nearly all of the catch. By 1986 joint ventures took the highest portion of the catch. Joint ventures continued to increase their share until 1987 when the domestic catch began to rise sharply. By 1989 the domestic catch represented the largest portion of the harvest, and the foreign catch had been eliminated entirely. For 1991 all groundfish in the Bering Sea are allocated to domestic processors.

[3]Groundfish live at or near the bottom of the sea. The main types of groundfish are Atka mackeral, cod, flounder, pollock, rockfish, and sablefish.

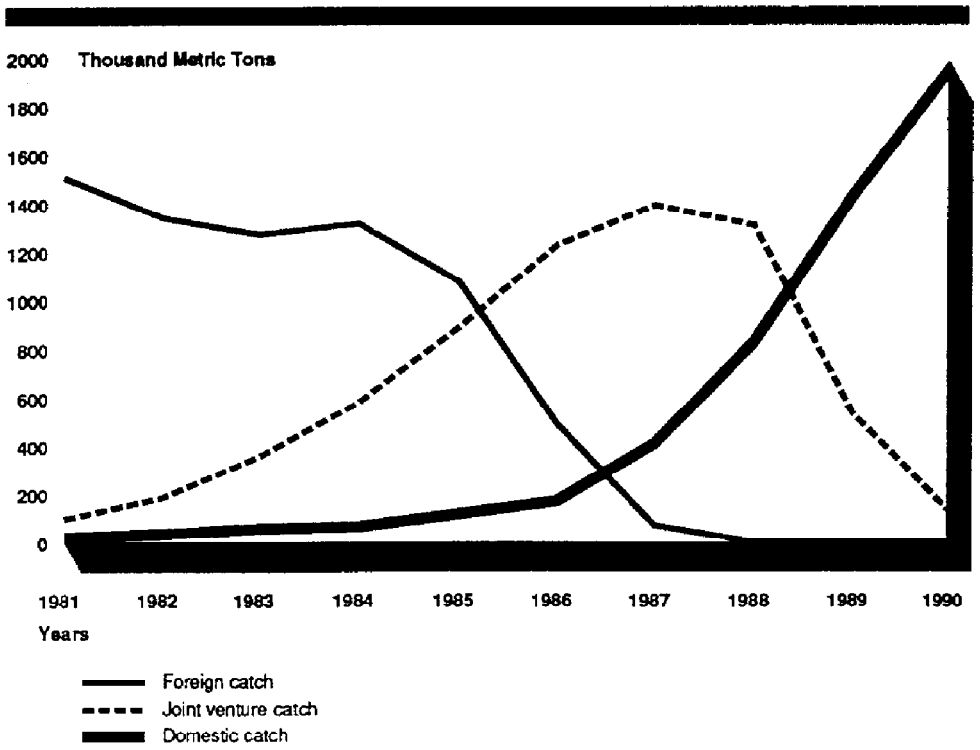


Figure 1.1: Transition From Foreign to Domestic Fishing for the Bering Sea and Gulf of Alaska (1981-1990)

Source: Data for 1981 to 1987 are from the Pacific Coast Fisheries Information Network data base. Data for 1988 to 1990 are from NMFS. Catch data for 1990 are as of November 24, 1990.

Objectives, Scope, and Methodology

Representative Les AuCoin asked GAO to examine the management of the groundfish fishery in the Bering Sea and Gulf of Alaska. More specifically, he asked the following questions:

- Are the groundfish fisheries of the Bering Sea being managed on the basis of the best available scientific information and sound principles of fisheries management under the Magnuson Act, particularly with respect to the 2-million metric ton fishing cap?
- Is the system for calculating domestic processing capacity reliable, and, if not, what changes could be made to improve it?
- Should the current system for releasing surplus unused allocations to joint-venture fishermen be restructured so that these fishermen may be able to effectively harvest the amounts released?

As the Representative requested, we addressed the establishment and maintenance of the fishing cap in the Bering Sea only. In addressing the

other two questions, we examined the situations in both the Bering Sea and the Gulf of Alaska.

In addition to addressing these three primary questions, we agreed to provide information on the organization of the North Pacific Fishery Management Council and its advisory committees.

To answer these questions, we visited NMFS headquarters in Silver Spring, Maryland, and the Alaska regional office in Juneau, Alaska. We also conducted work at the Alaska Fishery Science Center in Seattle, Washington, and at the North Pacific Fishery Management Council in Anchorage, Alaska. At each location, we reviewed policies and procedures for groundfish management.

To examine the management of the Bering Sea fishing cap, we reviewed the Alaska Fishery Science Center's operations to determine the type and extent of research performed to estimate the number of fish available for harvesting. We reviewed the science center's recommendations to the Council, including fish assessment documents. To evaluate the systems for calculating domestic processing use and for releasing surplus allocations during the fishing season to joint ventures, we reviewed the NMFS Alaska regional office's procedures.

We met with Council members and their staffs to discuss fishery management issues and the problems involved in setting fishing caps, allocating fish, and amending fishery management plans. We attended Council meetings; analyzed Council correspondence, testimony, and other records; and reviewed management plans and plan amendments.

In addition, we reviewed applicable legislation, regulations, procedure manuals, and other materials relevant to managing the groundfish fishery.

We performed our review between November 1989 and December 1990 in accordance with generally accepted government auditing standards. We discussed our findings with NMFS region and headquarters officials and members of the Council and have included their comments where appropriate. However, in keeping with the requester's wishes, we did not obtain written comments on this report.

Views Differ on the Appropriateness of the Bering Sea Fishing Cap

The Bering Sea fishing cap of 2 million metric tons has not been changed since it was first implemented in 1984.[1] Since that time, the quantity and quality of information about fish stocks in the Bering Sea have improved considerably, and, according to NMFS scientists and the Council's advisory committees, the information supports the conclusion that the cap could be increased without adversely affecting fish stocks. Although agreeing that current information is substantially better than earlier data, the Council has nevertheless expressed some concerns about the data, such as the lack of information about the effect on fishery stocks of foreign fishing directly outside of the fishery. In addition, the Council has not raised the cap because of (1) its implementation of the act's objective to Americanize the fishery and (2) various economic and ecological factors. NMFS agrees with the Council's decision not to raise the cap and stated that not maintaining a conservative cap would contribute to the collapse of the fishery.

Establishment of Fishing Cap

The optimum yield and the fishing cap for a fishery are based primarily on biological information, such as the numbers of fish and their age, size, and weight. However, the act does authorize the Council to use relevant economic and ecological factors to help establish or modify the cap. The Council sets a cap for the overall harvest of groundfish in the Bering Sea. This cap includes more than 10 species considered to be commercially important, as well as many other species of groundfish. The total catch for an individual species of groundfish can be adjusted at any time during the fishing season, as long as the total catch of all species does not exceed the overall cap.

Each year, the Council recommends a maximum harvest, called the total allowable catch, which is equal to or less than the cap. A lower harvest may be necessary, for example, if fish supply estimates decline. In 1984 the Council set the groundfish cap for the Bering Sea at 2 million metric tons. This cap was based on biological data that indicated an optimum yield between 1.4 million and 2 million metric tons. The total allowable catch has been set at the 2-million metric ton cap every year since 1984.

[1] A metric ton is equal to 2,205 pounds.

Biological Information Has Improved Significantly Since 1984

The biological information used to set the cap in 1984 was limited and incomplete but had improved significantly by 1987 and has continued to improve since then. NMFS biologists told us that the current data are comprehensive and indicate that sufficient groundfish exist to raise the fishing cap.

Biological Information in 1984 Was Inadequate

The Council has acknowledged that the biological information it used to set the Bering Sea cap at 2 million metric tons in 1984, was limited and incomplete for many species of groundfish, such as arrowtooth flounder, Atka mackeral, Greenland turbot, Pacific Ocean perch, and sablefish. Also, according to NMFS and the Council, information reported by foreign vessels on the amount of their Bering Sea groundfish catch, used by NMFS as a tool in developing the amount of available fish, was either not reported or was understated. Further, information available on fish size, age, and weight was not sufficiently detailed to accurately assess the condition of fish stocks.

To be conservative, the Council established an optimum yield range at 85 percent of the range it probably would have established if the biological information had been adequate. The Council concluded that the lower optimum yield and cap were acceptable from a socioeconomic perspective. The fishery management plan noted that the proposed optimum yield (1) was at a conservatively safe level for the groundfish fishery, (2) would not have a significant detrimental effect on the industry, and (3) would allow the foreign fleet to harvest near-historic catches yet offer considerable opportunity for domestic fisheries to expand.

Biological Information Had Improved Significantly by 1987

Compared with the data available when the cap was set in 1984, the biological information on groundfish in the Bering Sea had improved substantially by 1987, according to NMFS biologists.

- For foreign vessels, catch data were more reliable in 1987 than in 1984 because more observers accompanied these vessels on their fishing trips. By 1986, these vessels had observers for about 94 percent of their fishing days in the Bering Sea.
- Additional information about individual groundfish species was available. According to an NMFS biologist, the new data were based on new

techniques, including hydroacoustic methods of estimating fish stocks,[2] systematic sampling of fish stocks by scientists, and commercial sample and catch data reported by observers. Various fish samples collected by observers were being used to determine the age, size, and weight of fish.

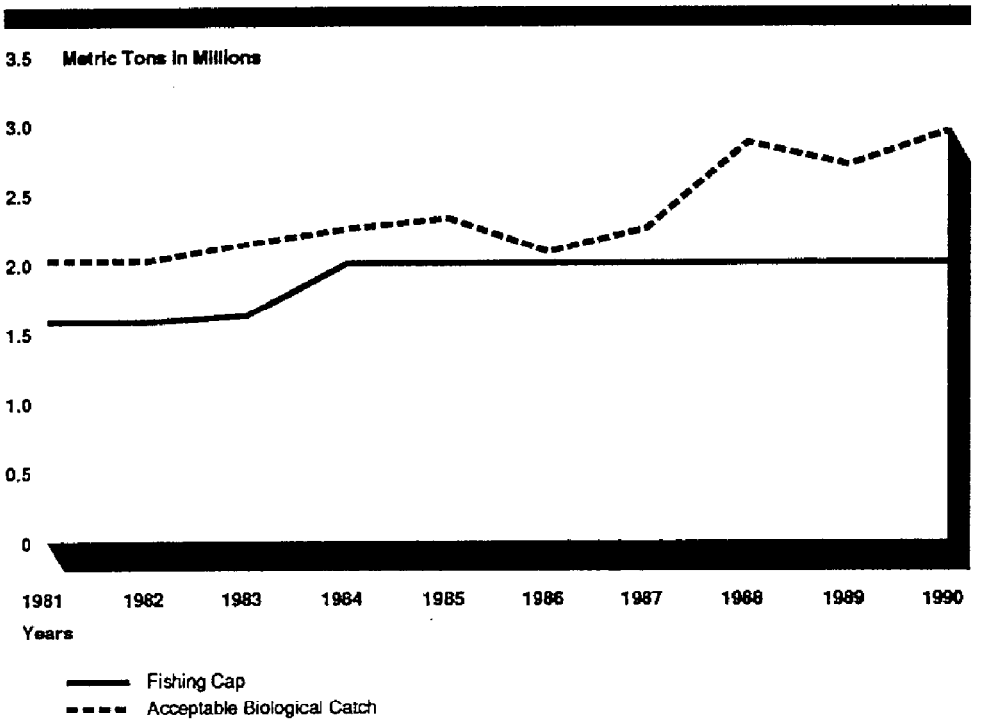
The improved and expanded data resulted in more reliable estimates of the groundfish stocks, according to NMFS biologists. They said that the additional data on fish stocks and the more sophisticated analytical techniques would permit more scientifically defensible determinations of optimum yields and fishing caps in the future.

Current Biological Information Supports Increasing the Cap

The additional biological information and more sophisticated techniques introduced over the last 6 years show that fish stocks in the Bering Sea are significantly higher now than they were estimated to be in 1984. Each year, the Council adopts species-by-species estimates of how much fish can be harvested. These estimates are called the acceptable biological catch. The total of the acceptable biological catches for all species, as shown in figure 2.1, rose from 2.25 million metric tons in 1984 to 2.86 million metric tons in 1988 and 2.94 million metric tons in 1990. The 1990 figure represents an increase of 30.7 percent over the 1984 figure. Such data led NMFS to conclude prior to the 1991 fishing season that groundfish in the North Pacific fishery were abundant and that the fishery was in stable condition.

[2]A method for assessing fish populations using vessels equipped with underwater electronic sensors.

Figure 2.1: Acceptable Biological Catch Compared to the Fishing Cap in the Bering Sea (1981-1990)



Source: North Pacific Fishery Management Council.

According to NMFS, the acceptable biological catch has increased not only because estimating techniques have improved and more biological information is available but also because the numbers of some fish species have grown between 1984 and 1990.

According to NMFS biologists, many species of groundfish have not been fully utilized. For example, in 1989 about 93 percent of the acceptable biological catch of pollock—the most economically valuable groundfish—was allocated for harvest. Domestic processors, who have first preference, used almost all the pollock harvested. In contrast, some of the groundfish, especially those generally sought only by the joint-venture operations, were not as fully utilized. For example, only about 76 percent of the acceptable biological catch of yellowfin sole and about 48 percent of the other flatfish species were allocated for harvest. In 1989 the Council did not allocate for harvest 700,700 metric tons of the acceptable biological catch for all groundfish species, and in 1990 it did not allocate 938,500 metric tons.

Council Advisory Groups Said the Cap Could Be Raised

Several advisory groups, which included some NMFS biologists, assisted the Council in its deliberations. In 1988 three of these groups—the Plan Team Group, the Scientific and Statistical Committee, and the Advisory Panel—determined that the cap could be increased. (See app. I for an organizational breakdown of these groups.)

The Council appoints a plan team for each major fishery under its management. Team members are selected from agencies and organizations having a role in researching or managing the fishery resources. The team's duties include preparing and reviewing fishery plans and amendments and evaluating data concerning the biological and economic conditions of the fishery. In 1988 the Council's Plan Team Group noted that since the cap was implemented in 1984, fish stocks had risen. Most fish stocks, the team said, were abundant and relatively stable. The team concluded that as long as total allowable catches do not substantially exceed acceptable biological catches for each species, no biological harm is anticipated. For the 1989 fishing season, the team estimated that allowable catches would be about 2.6 million metric tons, or about 600,000 metric tons over the current cap.

The Scientific and Statistical Committee is composed of federal, state, and private experts in biology, statistics, economics, sociology, and other disciplines. The committee assists the Council in developing, collecting, and evaluating statistical, biological, economic, and other scientific information relevant to planning fishery management.

In 1988 the committee concluded that the status and condition of fish stocks had changed since the cap was originally set. It suggested that the cap be increased by an unspecified amount. The committee did note that if the 1984 approach to setting the optimum yield were used in 1988—reducing the proposed biologically based yield by 15 percent—the new optimum yield range would be between 2.2 and 2.9 million metric tons.

The Advisory Panel is composed of 20 members from the fishing industry and related fields. Its members include fishermen, processing plant executives, and fishing association members. It advises the Council on specifications in the fishery's management plans, especially the capacity of U.S. vessels to harvest resources, the socioeconomic effect of fishery plans, and potential conflicts between user groups. In June 1988 the panel recommended that the cap be raised by 5 percent annually until it reached 2.205 million metric tons.

The Council Has Rejected Six Proposals to Increase the Cap

Under Council procedures, the public may annually submit proposals for changing the cap. If the Council selects a proposal for further review, it analyzes the proposal's biological, economic, and ecological impact and submits the proposal for public comment. If the Council approves an amendment, the amendment is forwarded to the Secretary of Commerce for approval.

Since the Bering Sea cap was implemented in 1984, six proposals, mainly from fishing associations and foreign interests, have been made to increase the cap. (See app. II for further information on each proposal.) The Council decided to reject three of the six proposals without further study; for the remaining three, it conducted formal studies before making a decision.[3] In all instances, the Council voted to reject the proposed amendment.

Council's Reasons for Rejecting Increases in the Cap

In its 1988 decision, the Council stated its reasons for rejecting an increase in the cap—its aim to eliminate foreign and joint-venture fishing, concerns about the adequacy of the biological information, and economic and ecological reasons. The Council subsequently rejected two proposals without study—in 1989 on the grounds that issues raised in its 1988 decision had not been sufficiently resolved, and in 1990 because it did not have enough staff time to restudy the matter. The 1988 decision responded to a proposal, submitted by seven fishery associations and the NMFS regional director, to increase the cap. The Council's Plan Team Group prepared a draft supplemental environmental impact statement listing several alternatives to maintaining the existing cap. Depending on the alternative selected (other than the status quo of 2 million metric tons), the cap would have risen to between 2.2 million metric tons and 3.4 million metric tons by 1990. The Council's reasons for not raising the cap are discussed below.

Eliminating Foreign and Joint-Venture Fishing

Because one of the Magnuson Act's objectives is to Americanize the fishery, the act gives preference for groundfish to domestic harvesters who sell to domestic processors. According to a Council official, in 1984, in keeping with the act, the Council approved a policy of eliminating foreign and joint-venture fishing. The policy states that the Council will use the Magnuson Act's authority to allocate fish among the various users to increase American participation in underutilized fisheries, and

[3]To study these proposals, the Council prepared a document that functions as both a supplemental environmental impact statement and a regulatory impact review. For convenience, we refer to this document as a supplemental environmental impact statement.

joint ventures will only be considered for groundfish not harvested and processed totally by U.S. industry. The policy also states

"As fully-U.S. harvested and processed fisheries expand, foreign and then joint ventures will be decreased toward the total elimination of foreign fishing and processing."

Council members cited this policy of eliminating joint-venture and foreign fishing as a reason for not increasing the cap. They said the additional fish available under the higher cap would go to joint ventures or foreign fishermen because the domestic industry had not yet expanded enough to process the full amount. The foreign and joint-venture harvest would cause potential price competition for the domestic catch. In its summary of arguments for keeping the cap at 2 million metric tons, the Council's supplemental environmental impact statement cited the need to protect the emerging domestic processing sector from competition with joint-venture and foreign fishing.

Concerns About Adequacy of Biological Information

In 1988 the Council said that although the amount and quality of biological information had improved significantly, it still had several concerns about the adequacy of the improved information. The Council's main concerns included the following:

- A comparison of the newer data with the older studies indicated apparent decreases in reported quantities of some species of groundfish.
- Little information was available about foreign fishing directly outside the boundaries established for the Bering Sea fishery. Council members said that not enough was known about the size of the foreign catch in this international area or about the extent of illegal fishing by foreign vessels that might be taking place just inside the Bering Sea fishery.
- NMFS did not have an observer program for domestic fishing vessels, such as it required for foreign vessels, resulting in little observer research data. In 1990 such an observer program was implemented on domestic vessels that caught over 80 percent of the groundfish.

Economic and Other Reasons

Council members said several economic and ecological factors also entered into their decision to retain the fishing cap at its present level. The cap would

- sustain the market price for certain species, like Pacific cod, which could be harvested at a higher rate but whose increased harvest would conceivably lower the price;

- ensure that the number of fishing vessels in the fishery would not increase, for, in their opinion, too many vessels were already in the fishery;
- prevent increases in the coincidental taking of a species, such as crab and halibut (called bycatch), while fishing for groundfish and avoid adversely affecting fishermen harvesting these species; and
- protect certain marine mammals, particularly stellar sea lions, which feed on pollock and on which the effects of increased fishing are unknown.

NMFS Concurs With the Council's Decision to Retain the Current Cap

In commenting on the results of our review, the Council chairman said that the fishery is in good shape and that retaining the cap will keep it that way. NOAA's Assistant Administrator for Fisheries said that although the sum of acceptable biological catches for groundfish in the Bering Sea exceeds the current cap by almost 50 percent, it is prudent to maintain a groundfish harvest limit at somewhat below that sum because allowable biological catches are point estimates, some of which are less reliable than others. Furthermore, he said that he is concerned about raising the cap because of uncertainties in (1) the rate of removal of pollock from waters immediately outside of the fishery; (2) the amount of pollock and other groundfish species necessary to support stellar sea lions, other marine mammals, and sea birds; (3) the amount of bycatch; and (4) the reliability of current scientific methodologies for determining allowable biological catches.

Therefore, he believes that the Council is correct in retaining a conservative fishing cap. He said that not maintaining a conservative cap would contribute to the collapse of the groundfish fishery and entail substantial economic and social consequences.

Conclusion

Since the cap was implemented in 1984, NMFS biologists and a number of Council advisory groups have said, at one time or another, that there are sufficient biological data to support an increase in the cap. However, the Magnuson Act also requires the Council and NMFS to consider applicable economic and ecological factors and balance several sometimes competing objectives, such as Americanization of the fishery, conservation, and achieving the optimum yield, in determining the size of the fishing cap. The Council has weighed the various factors involved and decided to maintain a conservative cap.

NMFS System for Determining Domestic Processor Needs Results in Inaccurate Estimates

The NMFS system for determining the domestic processors' needs does not produce accurate estimates because the processors often overestimate how much groundfish they expect to process. NMFS has adjusted these estimates to improve their accuracy, but the estimates still overstate actual usage. Some processors said, among other things, that they inflated their estimates in order to reduce or eliminate foreign and joint-venture competition. NMFS procedures for managing the system do not ensure accurate estimates. NMFS does not require processors to notify it of changes in their processing estimates, and it has not effectively used its authority to penalize processors for knowingly providing false estimates.

Domestic Processors Overestimate Their Processing Needs

The Magnuson Act requires NMFS to estimate how much fish U.S. processors will process each year. Therefore, NMFS requires domestic groundfish processors operating in the Bering Sea or the Gulf of Alaska to specify the quantity of fish they expect to process. Each year, before the fishing season begins (usually in October), NMFS sends a questionnaire to domestic processing companies asking them to estimate the amount of groundfish they will process, by species, for each quarter of the fishing year. NMFS also asks processors to indicate the type of processing equipment they will use in their operations. NMFS and the Council use this information to arrive at the initial allocations for domestic processors, joint-venture operations, and foreign fishermen. NMFS encourages, but does not require, processors to update their estimates during the fishing season; however, NMFS does contact some processors to keep abreast of their needs as the season progresses.

The domestic processing industry has grown significantly since 1984—with the actual groundfish catch in the North Pacific fishery used by domestic processors increasing 3,100 percent from 1984 through 1990. The Magnuson Act goal of Americanizing the fishery has been successfully met in this fishery.

From 1984 through 1990, except for 1985, domestic processors continually provided NMFS with high estimates of how much groundfish they expected to process even though they increased their use by 31 times over that period. Table 3.1 compares the processors' preseason and in-season estimates with the actual amounts of fish caught. For the period from 1984 through 1990, processors estimated that they would need 8.7 million metric tons of groundfish in the Bering Sea and the Gulf of Alaska, but they actually used only 4.9 million metric tons. Thus, they overstated their actual usage by 43 percent over the period.

As the table shows, the processors' preseason estimates have substantially exceeded the actual catch, but their in-season estimates have come closer to the actual catch. According to an NMFS official, NMFS did not conduct a 1990 in-season survey because it was clear that the domestic processors would use almost all of the groundfish allowable under the cap. In 1988 and 1989, NMFS adjusted the estimates in August after much of the total allowable catch had already been taken. Estimating total usage late in the season should produce significantly more reliable figures than preseason estimates.

Table 3.1: Domestic Processor Estimates and Final Catch (1984-90)

Amounts in thousands of metric tons

Estimates and catch	1984	1985	1986	1987	1988	1989	1990
Bering Sea							
Preseason	133	81	331	398	938	2,258	3,441
In-season	76	153	205	329	845[a]	1,145[a]	[b]
Actual catch	48	81	106	296	677	1,245	1,690[c]
Gulf of Alaska							
Preseason	25	37	198	130	250	199	309
In-season	33	93	101	93	185[a]	174[a]	[b]
Actual catch	15	33	61	111	147	180	243[c]

[a]In 1988 and 1989, processors made more than one set of in-season estimates. The totals shown are the final set of estimates.

[b]NMFS did not make an in-season estimate during 1990.

[c]Catch data for 1990 are through November 24, 1990.

Source: NMFS.

Reasons for Processors' Inaccurate Estimates

NMFS officials, representatives of processing companies,[1] and a work group appointed by the Council agree that the primary reasons for the processors' inaccurate estimates were attempts to eliminate competition and optimism about processing capabilities. NMFS and some processor officials said that estimates were inflated to increase the initial allocation of groundfish to the domestic processors so as to help eliminate foreign and joint-venture fishing.

NMFS officials said that they have often received inaccurate estimates from processors with at-sea processing vessels under construction. In these circumstances, there are no historical catch data to review, and the actual start-up date is unknown. These officials did not know to

[1]These processing company officials represented 3 shoreside processing plants and 16 at-sea processors.

what degree processors' overestimates are attributable to deliberate inflation rather than to optimism and lack of knowledge concerning current market conditions. In addition, some processors cited two other reasons for inflated estimates: (1) reductions in the amount actually processed when the fishing season was closed early as a result of bycatch restrictions and (2) prolonged breakdowns in processing equipment.

In December 1985 the Council appointed a domestic processing estimation group to work with and advise NMFS on improving estimating methodology. The Council appointed this group because it recognized that the actual fish catches had been considerably lower than the processors' estimates. In 1986 the work group reported the following reasons for inflated processor estimates:

- When making preseason production estimates processors are often optimistic because they anticipate favorable market prices and exchange rates and the availability of product and markets. During the fishing season, however, these conditions may not materialize.
- The current methodology for determining domestic processing needs encourages processors to exhibit "strategic biasing" behavior—that is, when domestic processors perceive that their estimates will influence the allocation of groundfish resources, they act on their belief that it is in their best interests to "exaggerate" their estimates.

On the basis of this study, NMFS began in mid-1987 to adjust the estimates it received from the domestic processors.

Since late 1987 NMFS has encouraged, but not required, domestic processors to send an updated questionnaire to NMFS whenever they anticipate significant changes in their processing operations. Several of the processors we talked to said that they did not notify NMFS of changes in their processing needs. They told us that they believed NMFS was keeping track of changes in their processing levels by monitoring the catch reports they submit to NMFS.

Processors' Estimates Inaccurate After NMFS Adjustments

Before 1987 NMFS did not adjust the processors' estimates, except for obvious errors, according to a 1986 NMFS study. Instead, NMFS would total the questionnaire responses to determine the domestic processing need and present that estimate to the Council. According to an NMFS official, in 1987 NOAA's Alaska regional office's general counsel requested, in response to complaints of inaccuracies from foreign fishermen and the

Council's Scientific and Statistical Subcommittee, that adjustments be made to the estimates. As shown in table 3.2, NMFS began adjusting processors' preseason estimates for the 1988 fishing season on the basis of information about the capacity of installed equipment, past performance, and other information about the processors' operations. Although these adjustments resulted in more accurate preseason estimates, especially in the Gulf of Alaska, the estimates for the Bering Sea continue to overestimate actual usage.

Table 3.2: Comparison of Processor Preseason Estimates and NMFS Preseason Adjustments With Actual Usage (1988-90)

Amounts in thousands of metric tons

Preseason estimates and actual usage	1988	1989	1990
Bering Sea			
Processor estimate	938	2,258	3,441
NMFS adjusted estimate	777	1,760	2,155
Actual usage	677	1,245	1,690[a]
Gulf of Alaska			
Processor estimate	250	199	309
NMFS adjusted estimate	190	180	213
Actual usage	147	180	243[a]

[a]Usage data for 1990 are as of November 24,1990.

Source: NMFS.

Processors Not Alerted to Penalties for Supplying False Data

The Magnuson Act authorizes penalties for knowingly making false claims about domestic processing capacity and needs. Violators are now subject to a civil penalty of not more than $100,000 for each violation. However, NMFS has not levied such a penalty and, in fact, has not notified processors of the penalty provision.

An association representing many joint-venture fishermen requested NMFS to include a penalty notice on processing questionnaires. NOAA's regional counsel said that a penalty warning statement was not legally required to appear on the questionnaire. The counsel told NMFS that it was responsible for deciding whether to put the warning statement on the questionnaire. NMFS decided against including the warning because it would be "adversarial." It also said a processor's intent to give false information would be hard to prove. Officials from six processing companies said that they were not aware of the penalty provision and officials of seven companies said that NMFS should have made this provision known to the processors when NMFS requested processing estimates.

NMFS Stated That the Estimating System Is No Longer Needed

In commenting on the results of our review, NOAA's Assistant Administrator for Fisheries said that our findings concerning the system for estimating domestic processors' needs has no practical significance for the current or future management of groundfish. He noted that even after adjustments by NMFS, domestic processors' estimates exceed the fishing cap and therefore estimating those needs will no longer be necessary.

Conclusions

Since 1984 domestic processing estimates in the North Pacific fishery have been overstated because (1) processors wanted to eliminate joint-venture and foreign fishing; (2) NMFS originally made no adjustments to the processors' estimates, and, when it did, the results were often still inaccurate; (3) NMFS does not require processors to update their needs if they significantly change during the fishing season; and (4) NMFS did not inform processors that they could be penalized for knowingly providing false information.

However, we believe that NMFS needs to recognize the system's problems and correct them if the system is used again. It could be used again if the cap is raised in the future above domestic processors' needs. Moreover, a similar system for estimating needs for competing interests for groundfish or other species may be necessary in the North Pacific fishery or other fisheries.

Recommendations

We recommend that the Secretary of Commerce direct the NMFS Alaska regional office to improve the NMFS system and methods for estimating domestic processors' needs by

- requiring that the processors report changes in processing needs during the fishing season to NMFS as they occur so that any reallocation necessary can be made, and
- establishing a system for determining and enforcing penalties against processors who knowingly submit false estimates, as authorized in the Magnuson Act.

NMFS Groundfish Allocation System Not Effective

The current system for allocating groundfish between the domestic processors and other processors has often given the domestic processors higher initial allocations than they needed, resulting in lower allocations to joint ventures and foreign fishermen. Reallocations during the fishing season sometimes did not occur or occurred too late in the fishing season to be of much use to the joint ventures. Consequently, NMFS may not be achieving optimum use of the fishery.

The Allocation System

The NMFS allocation system depends on domestic processors' estimates of how much groundfish they expect to process each year. These estimates form the basis for the NMFS recommendation on how much groundfish should be allocated among domestic processors, joint ventures, and foreign fishermen.

At its last meeting of the year (usually in December), the Council uses NMFS' recommendation and other factors, such as the status of fishery stocks, to arrive at initial allocations of fish to the various users. For the Bering Sea, the Council keeps 15 percent of the total allocation in reserve for reallocation at a later date. The Bering Sea fishery management plan states that the reserve is to be used for (1) unexpected expansion of the domestic processing capability; (2) providing full and efficient utilization of the groundfish resource; and (3) adjustments of individual species' total allowable catch, according to the conditions of the stocks during the fishing year. For the Gulf of Alaska, the Council maintained a 20-percent reserve until 1987. Since 1987 it has not withheld a reserve in the Gulf because it allocated all fish to domestic processors at the beginning of the fishing season. Initial allocations for the various user groups have changed markedly in recent years. For example, before the rapid increase in the capacity of U.S. processors in the late 1980s, initial domestic allocations were small, and substantial allocations went to joint-venture and foreign fishermen. However, foreign fishermen have not received any allocations in the Gulf of Alaska since 1986 or in the Bering Sea since 1987. Joint-venture fishermen received no allocation in the Gulf of Alaska in 1990 or 1991. Joint ventures were allocated 258,000 metric tons in the Bering Sea in 1990 but received no allocation for the 1991 fishing season. Thus, joint-venture and foreign fishing in the North Pacific groundfish fishery have been eliminated.

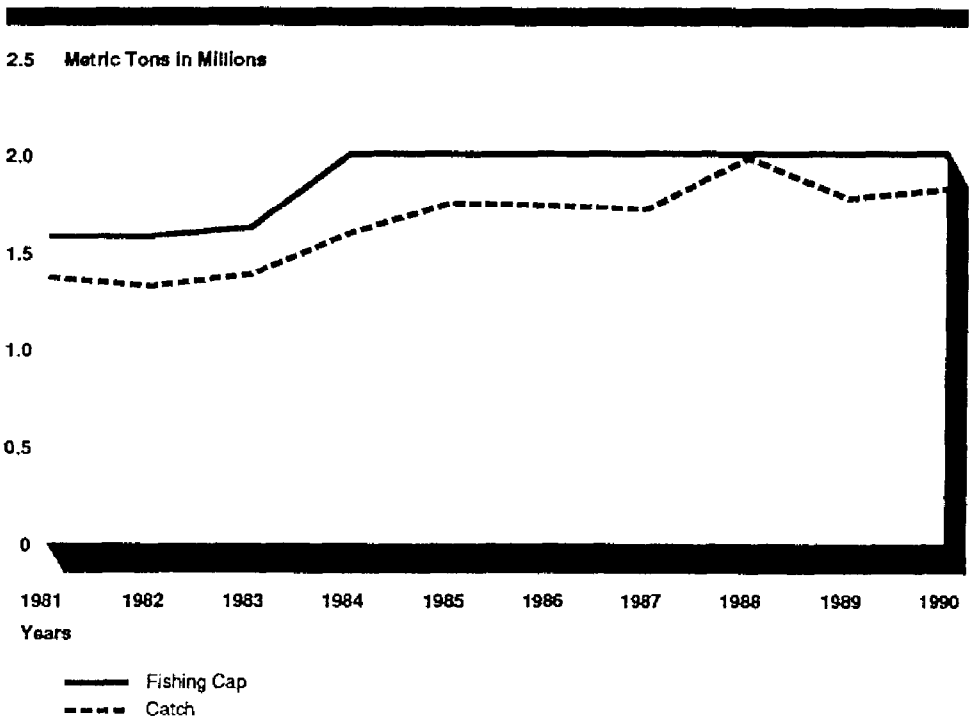
NMFS may change allocation levels during the fishing season. Reallocations depend primarily on catch data. For example, if in-season data for the Bering Sea indicate that domestic processors are not using pollock at

the expected rate, NMFS could reallocate a larger amount to joint ventures by either reducing the amount allocated to domestic processors or by allocating part of the 15 percent reserve, or by both.

Allocation System Is an Important Reason Why Harvests Are Below the Cap

Initial allocations to domestic processors have generally exceeded the amounts they actually processed, and in-season allocations have resulted in only partial utilization of the remaining available fish. For the Bering Sea and the Gulf of Alaska, the groundfish catch has remained below the cap. Figure 4.1 compares the total actual Bering Sea catch from 1981 to 1990 with the 2-million metric ton cap. As shown, particularly from 1984 to 1987, the actual catch was substantially below the cap. However, in recent years, as the domestic industry's processing capacity has increased, the actual catch has risen closer to the cap.

Figure 4.1: Bering Sea Fishing Catch Compared to Cap (1981-1990)

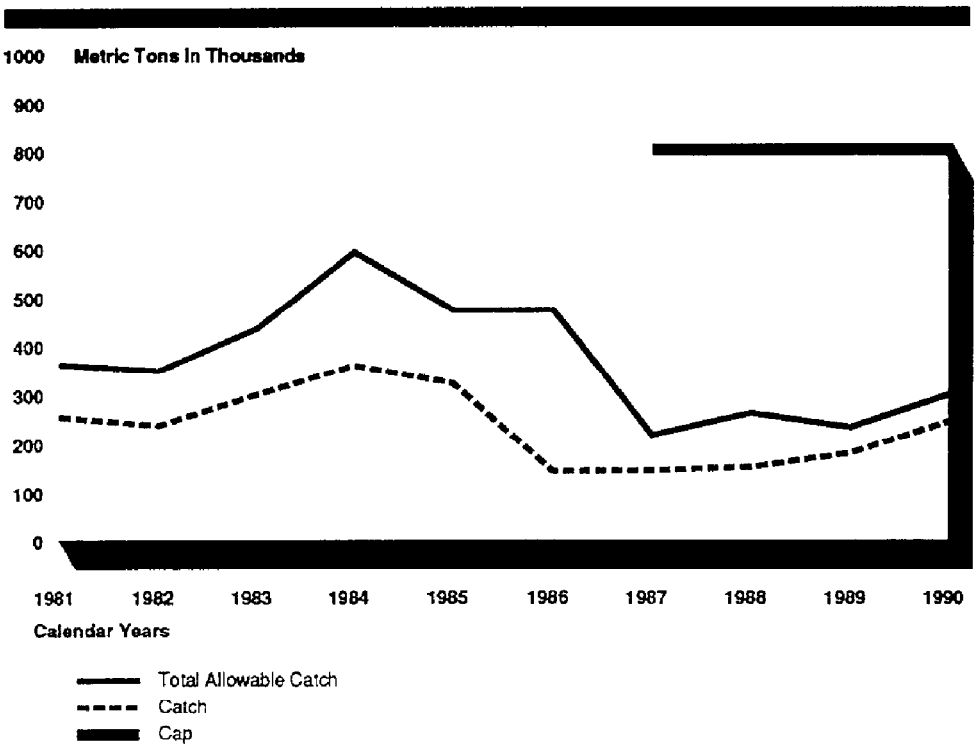


Source: Catch statistics for 1981 to 1987 are from the Pacific Coast Fishery Information Network reports. Catch statistics for 1988 to 1990 are from NMFS. Catch data for 1990 are as of November 24, 1990.

The situation has been much the same in the Gulf of Alaska. As figure 4.2 shows, the actual catch each year has remained below the total

allowable catch and significantly below the 800,000 metric tons established by the Council.

Figure 4.2: Gulf of Alaska Fishing Catch Compared to Total Allowable Catch (1981-1990)



Source: Catch statistics for 1981 to 1987 are from Pacific Coast Fishery Information Network reports. Catch statistics for 1988 to 1990 are from NMFS. Catch data for 1990 are as of November 24, 1990.

According to NMFS, a number of factors have contributed to the harvest's being considerably lower than the cap, including the imposition of bycatch limitations and subsequent closing of the fishery before the end of the fishing season, the lack of a market for certain allocated species, and delays in bringing processors' equipment or vessels on-line. NMFS's allocation system has also contributed to the harvest's remaining below the cap because NMFS has relied on inflated estimates to make initial allocations and has, at times, been slow to reallocate fish during the fishing season.

Initial Allocations to Domestic Processors Are Higher Than Amounts Actually Processed

As discussed in chapter 3, domestic processors' estimates for groundfish have consistently exceeded the amounts they have actually processed. Table 4.1 shows that inflated estimates have resulted in initial allocations that have also exceeded the amount processed.

Table 4.1: Domestic Processor Estimates, Initial Allocations, and Final Catch (1984-1990)

Amounts in thousands of metric tons

Estimates, allocations, and catch	1984	1985	1986	1987	1988	1989	1990
Bering Sea							
Preseason estimate	133	81	331	398	938	2,258	3,441
Initial allocation	133	139	323	416	793	1,410	1,495
Actual catch	48	81	106	296	677	1,245	1,690[a]
Gulf of Alaska							
Preseason estimate	25	37	198	130	250	199	309
Initial allocation	27	154	317	193	241	222	298
Actual catch	15	33	61	111	147	180	243[a]

[a]Catch data for 1990 are through November 24, 1990.
Source: NMFS.

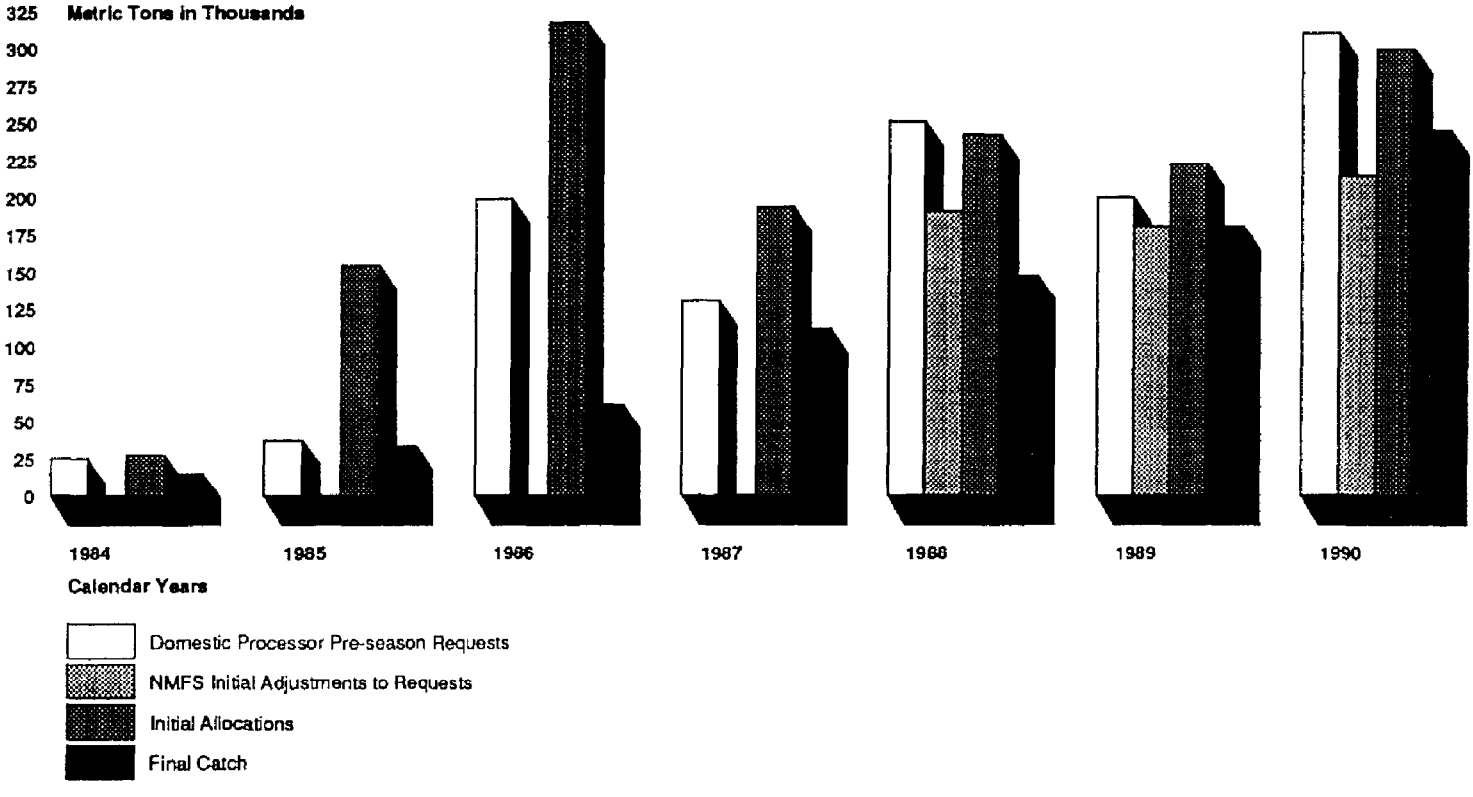
Such high initial allocations to domestic processors and the resulting smaller allocations to joint ventures have reduced the amount of fish caught. Joint-venture operators said that allocations made to them late in the fishing season cause problems because plans to supply foreign processing boats must be made early in the year and safety hazards increase with the potential for severe winter storms.

The effect of these initial allocations is particularly evident in the Gulf of Alaska. For every year between 1984 and 1990, except 1988 and 1990, as figure 4.3 shows, the Council's initial allocation of fish to domestic processors actually exceeded the domestic processors' estimates of what they would need and even further exceeded the amount caught and processed. For example, in 1985, domestic processors estimated that they would utilize 37,000 metric tons of groundfish, but the Council allocated 154,000 metric tons to them. The domestic catch for the year amounted to 33,000 metric tons, or 79 percent less than the Council initially allocated and NMFS approved.

For all years between 1984 and 1989, domestic processors' initial allocations exceeded the amounts they requested by 324,000 metric tons and exceeded the amounts processed by domestic processors by 608,000 metric tons. For 1990 the initial allocation to domestic processors in the

Gulf of Alaska was lower than they had requested but exceeded the catch, as of November 24, 1990, by 54,000 metric tons.

Figure 4.3: Domestic Processor Estimates, NMFS Adjusted Estimates, Initial Allocations, and Catch for the Gulf of Alaska (1984-1990)



Source: Domestic processor requests and NMFS adjustments are from NMFS. Catch data for 1984 to 1987 are from the Pacific Coast Fishery Information Network data base. Catch data for 1988 to 1990 are from NMFS. Catch data for 1990 are as of November 24, 1990.

Council members said that the aim to eliminate users outside the domestic industry was a reason for the Council's acting to increase allocations to domestic processors beyond their estimates. An NMFS official acknowledged that the domestic industry did not have the capacity to process all the groundfish allocated. NMFS officials agreed with the Council members that excess fish were allocated because the Council was attempting to Americanize the fishery. Foreign fishermen received their last allocation in the Gulf of Alaska in 1986; joint ventures received their last allocation in 1988.

Problems in Reallocating Fish Hinder Optimal Use of the Fishery

In most years since 1984, groundfish have been reallocated from domestic processors to joint-venture operations. However, in-season allocations have been of little value in helping to ensure optimum use of the fishery, as the Magnuson Act requires. According to joint-venture fishermen, one of the problems with the reallocation process is that reallocations are often received too late in the year to be fully utilized.

For example, joint ventures in the Bering Sea received an initial allocation of 290,000 metric tons in January 1989 and a supplemental allocation of 5,000 metric tons that same month. They were allocated no more fish until September 1989, or 9 months after the start of the fishing season, when NMFS released an additional 307,000 metric tons. Joint-venture fishermen said that they were not able to make full use of this and subsequent reallocations, including one in December 1989, because the allocations occurred late in the fishing year. One joint-venture operator told us that his foreign processing partners had left the fishing grounds. He said that his partners do not have flexible schedules and thus can not readily show up when NMFS releases fish to the joint ventures. In total, the joint ventures had an uncaught allocation of over 126,000 metric tons at the end of 1989. Another joint-venture fisherman told us that he placed his vessels in the shipyards because the reallocations before September were so small that the joint ventures had given up fishing for the remainder of the fishing season. Operators told us that safety is a significant consideration for them late in the fishing season, given the potential for severe winter storms in the Bering Sea.

In some instances, only part of the unused domestic processor allotment was reallocated to other users. For example, in the 1985 groundfish allocation for the Gulf of Alaska, domestic processors received an initial allocation of 154,000 metric tons but harvested only 33,000 metric tons. However, only 10,000 metric tons of the unused allocation were reallocated, notwithstanding the demonstrated capacity of joint-venture and foreign fishermen to harvest and process many more fish. NMFS also did not allocate all of the groundfish it put in reserve at the beginning of a fishing season. From 1984 through 1989, about 137,000 metric tons of fish held in reserve for either the Bering Sea or the Gulf of Alaska were not allocated by the end of the season. In addition, for the same period and locations, about 794,000 metric tons of groundfish allocated to, but not used by, domestic processors were not reallocated to joint ventures. NMFS's decision not to reallocate the available fish hinders the achievement of the Magnuson Act's goal of making optimal use of the fishery resource.

NMFS Stated That the Allocation System Is No Longer Significant

In commenting on the results of our review, NOAA's Assistant Administrator for Fisheries said that our findings concerning the NMFS system for allocating fish among the users have no practical significance for the current and future management of groundfish because, for the 1991 fishing season, all groundfish in the Bering Sea and the Gulf of Alaska have been allocated to domestic processors.

Conclusions

The Council's and NMFS' allocation decisions, particularly in the Gulf of Alaska, have resulted in underutilization of the fishery. When the domestic processors' estimates overstate their needs, the initial allocation will also be overstated. Unless reallocations come relatively early during the fishing season, they offer only limited opportunity to help correct the allocation problem. Improvements in the estimation system, as outlined in chapter 3, will help ensure that initial estimates more closely approximate actual usage.

In our view, it is premature to assert, as NOAA has done, that a system for reallocating fish among the various user groups is no longer needed because initial allocations for domestic processors have generally exceeded their actual use. If this pattern continues during the 1991 fishing season and actual use is lower than the cap, NMFS could reallocate some of this excess groundfish to the joint ventures. Also, the fishing cap may be increased in the future above the domestic processors' estimates so that the allocation of fish to joint ventures could again be required.

North Pacific Fishery Management Council: Organization and Membership as of April 1990

The Magnuson Act established eight regional fishery management councils, including the North Pacific Fishery Management Council for the states of Alaska, Oregon, and Washington. It also required councils to establish, maintain, and appoint the members of a scientific and statistical committee to assist in the development, collection, and evaluation of data relevant to such councils' development and amendment of any fishery management plan. In addition, each council was to establish other advisory panels as necessary or appropriate to carry out its functions.

The North Pacific Fishery Management Council has created the following standing and ad hoc committees:

- Scientific and Statistical Committee
- Advisory Panel
- Advisory Panel Nominating Committee,
- Data Gathering Committee,
- Finance Committee,
- Fishery Planning Committee,
- Habitat Committee,
- Interaction Action Committee,
- Magnuson Reauthorization Committee,
- Permit Review Committee,
- Plan Amendment Advisory Group,
- Plan Team Group for Bering Sea and Gulf of Alaska, and
- Technical Data Workgroup.

NPFMC Members

Table I.1 indicates the name, business affiliation, and state each Council member represents.

Table I.1: Composition of North Pacific Fishery Management Council as of April 1990

Member	Business Affiliation	State
Voting Member		
Robert D. Alverson (Vice Chairman)	Fishing Vessel Owners' Association	Washington
Joseph R. Blum	Department of Fisheries	Washington
Don W. Collinsworth (Chairman)	Alaska Department of Fish and Game	Alaska
Larry Cotter	Pacific Associates	Alaska
Oscar Dyson	All Alaska Seafood Company	Alaska
Randy Fishe, or Robert Mace (Alternate)	Department of Fish and Wildlife	Oregon
Ronald E. Hegge	Alaska Longline Fishermen's Association	Alaska
Rickard B. Lauber	Pacific Seafood Processors' Association	Alaska
Henry Mitchell	Bering Sea Fishermen's Association	Alaska
Steve Pennoyer	National Marine Fisheries Service	
Walter T. Pereyra	Pro-Fish International, Inc.	Washington
Non-voting Member[a]		
David E. Ciancaglini	U.S. Coast Guard 17th C.G. District	
A. George Herrfurth	Department of State	
Walter O. Stieglitz	U.S. Fish and Wildlife Service	
Guy Thornburgh	Pacific States Marine Fisheries Commission	
Scientific and Statistical Committee		
Dr. William Aron	Northwest and Alaska Fisheries Center	
John Burns		Alaska
Dr. William Clark	International Pacific Halibut Commission	
Dr. Douglas Eggers (Vice Chairman)	Department of Fish and Game	Alaska
Larry Hreha	Department of Fish and Wildlife	Oregon
Dan Huppert	Institute of Marine Studies	Washington
Gordon Kruse	Department of Fish and Game	Alaska
Dr. Richard Marasco (Chairman)	Northwest and Alaska Fisheries Center	Washington
Terrance Quinn II	Juneau Center for Ocean Studies	Alaska
Donald H. Rosenberg		Washington
Jack Tagert	Department of Fisheries	Washington
Advisory Panel		
George Anderson	Fishing Company of Alaska	Washington
Alvin Burch	Alaska Draggers' Association	Alaska
Phil Chitwood	Arctic Alaska Fisheries Corporation	Washington

(continued)

Member	Business Affiliation	State
Paul Clampitt		Washington
Lamar Cotton	Southwest Municipal Conference	Alaska
David Fraser	Vessel Owner	Washington
Edwin Fuglvog	Commercial longline fisherman	Alaska
Vic Horgan, Jr.	Ocean Beauty Seafoods	Washington
M.E. Pete Isleib	Commercial fisherman	Alaska
Kevin Kaldestad	Kaldestad Fisheries	Washington
David Little	Clipper Seafoods, Ltd.	Washington
Pete R. Maloney		Alaska
Nancy R. Munro (Chairperson)	Saltwater, Inc.	Alaska
Daniel J. O'Hara	Commercial fisherman	Alaska
Jay Skordahl		Alaska
Harold Sparck	Consultant	Alaska
Dave Woodruff	Alaska Fresh Seafoods	Alaska
John Woodruff (Vice Chairman)	Icicle Seafoods	Alaska
Robert Wurm	Longline Fishing Vessel Owners' Association	Alaska
Lyle Yeck	Vessel owner	Oregon

[a]Does not represent states.

Source: North Pacific Fishery Management Council.

Efforts to Increase the Fishing Cap

1. In February 1985 the Japanese Fisheries' Association proposed that the Bering Sea cap be increased to 2.5 million metric tons. The Council voted 8 to 3 not to change the cap. Some Council members did not want to raise the cap because the Council might be pressured in the future to keep a higher cap, regardless of changes in fish stocks.

2. In January 1986 the Japan Deep Sea Trawlers and Hokuten Trawlers' Association proposed that the Bering Sea cap be increased to 2.4 million metric tons. The Council voted 11 to 0 not to further develop a proposal or analysis.

3. In October 1986 the Mid-Water Trawlers' Cooperative proposed that the Bering Sea cap be increased to 2.4 million metric tons. The Council voted 6 to 5 to retain the cap. Several Council members noted the flexibility that would result from raising the optimum yield but were concerned about the effects of large groundfish harvests immediately outside the fishery.

4. In 1987 seven fishery associations and the NMFS regional director proposed an increase in the cap. Their proposal was based on improved biological information, and they requested that the cap be equal to the allowable biological catch. However, the Council voted 9 to 2 to retain cap. The Council's reasons for not increasing the cap included the lack of an observer program, uncertainty about the size of the bycatch and the amount of groundfish being caught immediately outside of the fishery, and uncertainty about the effect of an increase in the cap on marine mammals.

5. In September 1988 the American High Seas Fisheries' Association proposed that the cap be equal to the sum of all fish species' annual allowable biological catches. An NMFS official said that NMFS did not prepare any analysis or amendment because the Council voted 11 to 0 to not consider the proposal. A Council member said it was too soon to address the issue again.

6. In August 1990 Long John Silver, Inc. proposed that the cap be equal to the sum of all fish species' annual allowable biological catch. NMFS officials and the Plan Amendment Advisory Group gave a low priority to a study of the proposal. The Council declined to consider the proposal in view of higher priority work.

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