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INDIVIUDAL FISHING QUOTAS

Economic Effects on Processors and Methods Available to Protect Communities

Statement of Anu K. Mittal, Director
Natural Resources and Environment





Highlights of [GAO-04-487T](#), testimony before the Committee on Commerce, Science, and Transportation, United States Senate

Why GAO Did This Study

To address overfishing, the National Marine Fisheries Service started using individual fishing quotas (IFQ) as a fishery conservation and management tool in 1990. Under an IFQ program, a regional fishery management council sets a total allowable catch and allocates the privilege to harvest a certain portion of the catch in the form of quota to individual vessels, fishermen, or other eligible recipients.

IFQ programs have achieved many of the desired conservation and management benefits, such as helping to stabilize fisheries, reducing excessive investment in fishing capacity, and improving safety. However, concerns have been raised about the economic effects of IFQ programs on fish processors and fishing communities, among others.

This testimony is based on two GAO reports on issues related to the use of IFQs (*Individual Fishing Quotas: Better Information Could Improve Program Management*, GAO-03-159, Dec. 11, 2002, and *Individual Fishing Quotas: Methods for Community Protection and New Entry Require Periodic Evaluation*, GAO-04-277, Feb. 24, 2004).

Specifically, GAO addressed the (1) economic effects of the Alaskan halibut IFQ program on processors and (2) the methods available for protecting communities under an IFQ program.

www.gao.gov/cgi-bin/getrpt?GAO-04-487T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Anu Mittal at (202) 512-3841 or mittala@gao.gov.

INDIVIDUAL FISHING QUOTAS

Economic Effects on Processors and Methods Available to Protect Communities

What GAO Found

The Alaskan halibut IFQ program has had varied economic effects on processors. The program extended the halibut fishing season to 8 months, allowing more halibut to be processed and sold as a fresh product. This shift to fresh product led to the emergence of the buyer broker, an increased competition for fish, and higher halibut ex-vessel prices (prices paid to fishermen for raw product). In addition, a net decrease of 12 shore-based plants that processed halibut occurred between 1995, when the IFQ program was implemented, and 2001, as well as a reallocation of market share. For the 28 companies that processed halibut in both 1995 and 2001, 15 lost market share and 13 gained market share.

Factors other than the implementation of the IFQ program, such as the diversity and value of species processed, could also have impacted the well-being of Alaskan halibut processors. For example, halibut represented a relatively small portion of the fish processed by shore-based plants in Alaska and of total plant value. Specifically, from 1994 to 2001, halibut represented, on average, 2 percent to 4.1 percent of all fish processed at a plant and accounted for 4.4 percent of total plant value in 1994 and 7.9 percent in 2001. The only estimate of the program's economic effects on processors is a 2002 study commissioned by the state of Alaska. This study estimated that halibut processors experienced a 56-percent loss in gross operating margins. However, GAO's analysis, as well as the analyses of others, identified concerns about the study's assumptions, representativeness, and potential for participant bias that raise questions about the reliability of its estimates.

Several methods are available for protecting the economic viability of fishing communities under an IFQ program. The easiest and most direct way is to allow communities to hold harvesting quota and decide how this quota is to be used. In addition, fishery managers can help ensure the economic viability of communities by adopting quota management rules aimed at protecting certain groups of fishery participants. However, protecting the economic viability of communities is a social objective, and realizing such an objective may undermine economic efficiency and raise questions of equity. For example, rules that allow communities to hold harvesting quota may result in allocations to communities that do not have the knowledge and skills to manage the quota effectively and thus increase costs and/or decrease revenues. Similarly, rules that appear to favor one group of fishermen over another may result in fairness and equity challenges. Fishery managers also face a number of challenges associated with the methods available to protect communities. The resolution of these issues ultimately will depend on the specific circumstances within a fishery and the overall program objectives.

Mr. Chairman and Members of the Committee:

We are pleased to be here today to discuss the economic effects of individual fishing quotas (IFQ) on processors and methods available for protecting communities under an IFQ program.

Overfishing is a problem with far-reaching ecological and economic consequences. About one-third of the fish stocks assessed by the Department of Commerce's National Marine Fisheries Service (NMFS) are overfished or will become overfished if conditions do not change. When a fishery—composed of one or more fish stocks within a geographic area—cannot be sustained, the marine ecosystem can be transformed, thus threatening the livelihood of fishermen and the way of life in many communities.

Fishery management practices in U.S. waters are developed primarily by regional fishery management councils established under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).¹ Fishery councils, under the direction of NMFS, have used several types of controls to maintain the health of U.S. fisheries. In 1990, NMFS started using IFQs as a conservation and management tool. Under an IFQ program, a regional fishery management council sets a maximum, or total allowable catch, and allocates the privilege to harvest a certain portion of the catch in the form of quota to individual vessels, fishermen, or other eligible recipients.

IFQ programs have achieved many of the desired conservation and management benefits, such as helping to stabilize fisheries, reducing excessive investment in fishing capacity, and improving safety. However, concerns have been raised about the economic effects of IFQ programs on fish processors and fishing communities, among others.

Our testimony is based on two reports we prepared at the request of this Committee's Subcommittee on Oceans, Fisheries, and Coast Guard.² The first report focused on the consolidation and foreign holdings of quota and

¹Pub. L. No. 94-265 (1976) (codified as amended at 16 U.S.C. §§ 1801-1883).

²*Individual Fishing Quotas: Better Information Could Improve Program Management*, [GAO-03-159](#) (Washington, D.C.: Dec. 11, 2002) and *Individual Fishing Quotas: Methods for Community Protection and New Entry Require Periodic Evaluation*, [GAO-04-277](#) (Washington, D.C.: Feb. 24, 2004).

the economic effects on processors. The second report addressed the methods available to protect the economic viability of communities and facilitate new entry into IFQ fisheries. For our study of the economic effects on processors, we focused on the Alaskan halibut IFQ program, which began in 1995. We interviewed fishery participants, visited processing plants in Alaska, analyzed public data, and reviewed the only study that attempted to quantify the economic effects of the program on processors. For our study of community protection methods available under an IFQ program, we visited domestic and foreign fishing communities in Alaska, Maine, Iceland, Scotland, and New Zealand. In these communities and elsewhere, we spoke with fishery managers, participants, and researchers; reviewed literature on domestic and foreign quota-based programs; and reviewed key regulations and studies. Our testimony today discusses the (1) economic effects of the Alaskan halibut IFQ program on processors and (2) the methods available for protecting communities under an IFQ program.

In summary, we found the following:

- The Alaskan halibut IFQ program had varied economic effects on processors—some processors were adversely affected while others benefited. First, the program extended the halibut fishing season to 8 months, thus allowing more halibut to be processed and sold as a higher-value fresh product than as a lower-value frozen product. Second, this shift to fresh product led to the emergence of the buyer broker, generally a one-person operation with lower overhead costs, which resulted in increased competition for fish and contributed to higher ex-vessel prices (prices paid to fishermen for raw product) for halibut. Third, there was a net decrease of 12 shore-based plants that processed halibut between 1995 and 2001—68 plants stopped processing halibut and 56 started. Over three-quarters of the plants that stopped or started processing processed less than 100,000 pounds of halibut annually. Finally, there was a reallocation of market share. Of the 28 companies that processed halibut in both 1995 and 2001, 15 lost market share and 13 gained market share.
- The economic well-being of processors may also have been impacted by factors other than the implementation of the IFQ program, such as the diversity and value of species processed. Our analysis indicates that halibut represented a relatively small portion of the fish processed by shore-based plants in Alaska. Specifically, from 1994 to 2001, halibut represented, on average, 2 percent to 4.1 percent of all fish processed at a plant and accounted for 4.4 percent of total plant product value in 1994 and 7.9 percent in 2001.

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- We identified only one study that estimated the economic effects of the IFQ program on halibut processors. This study, commissioned by the state of Alaska, concluded that halibut processors experienced a 56-percent (\$8.7 million) loss in gross operating profits, primarily because of the IFQ. However, our analysis, as well as the analyses of others, identified concerns about the study's assumptions, representativeness, and potential participant bias, that raise questions about the reliability of the study's estimates.
 - Several methods are available to help protect the economic viability of fishing communities under an IFQ program. The easiest and most direct way is to allow the communities themselves to hold harvesting quota and decide how this quota is to be used. In addition, fishery managers can help ensure the economic viability of communities by adopting quota management rules aimed at protecting certain groups of fishery participants. However, it is important to recognize that protecting the economic viability of communities is a social objective, and realizing such an objective may undermine economic efficiency and raise questions of equity. For example, rules that allow communities to hold harvesting quota may result in allocations to communities that do not have the knowledge and skills to manage the quota effectively and thus increase costs and/or reduce revenues. Similarly, rules that appear to favor one group of fishermen over another may result in fairness and equity challenges. Fishery managers also face a number of challenges associated with the methods available to protect communities. The resolution of these issues ultimately will depend on the specific circumstances within a fishery and the overall program objectives.

Background

The Magnuson-Stevens Act granted responsibility for managing marine resources to the Secretary of Commerce. The Secretary delegated this responsibility to NMFS, which is part of Commerce's National Oceanic and Atmospheric Administration. The act established eight regional fishery management councils, each with responsibility for making recommendations to the Secretary of Commerce about management plans for fisheries in federal waters.

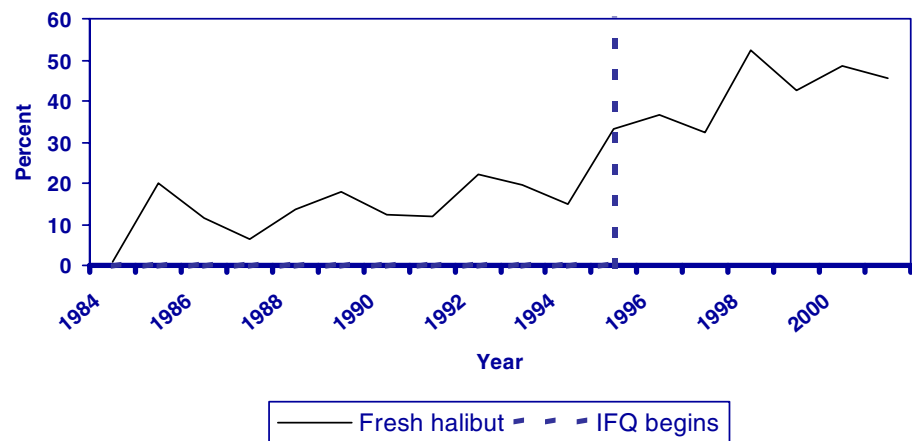
The Magnuson-Stevens Act also established national standards for fishery conservation and management. These standards, among other things, require the fishery management councils to consider the importance of fishery resources to fishing communities. The act defines a fishing community as one that is substantially dependent on, or engaged in, harvesting or processing fishery resources to meet social and economic needs. The definition includes fishing vessel owners, operators, and crew,

and fish processors based in the community. NMFS guidance further defines fishing community to mean a social or economic group whose members reside in a specific location.³

Alaskan Halibut IFQ Program Resulted in Changes That Harmed Some Processors and Benefited Others

The Alaskan halibut IFQ program changed the environment in which traditional shore-based processors operated by extending the halibut fishing season from several days to 8 months. Before the IFQ program was implemented, fishermen had just a few days to fish the total allowable catch for the year. Consequently, they provided processors with large amounts of fish in a very short period of time, and processors organized their operations to process under these conditions. With the implementation of the IFQ program, the “race for fish” was eliminated because fishermen had more flexibility in choosing when to fish. As a result, processors received halibut in smaller quantities over a longer period of time. This extended fishing season enabled more halibut to be processed and sold as a fresh product. Consequently, the fresh halibut market, as figure 1 shows, increased from 15 percent of the total halibut market in 1994 to 46 percent in 2001.

Figure 1: Fresh Halibut as a Percentage of Total Halibut Production, 1984 through 2001



Source: GAO analysis of Alaska Department of Fish and Game, Commercial Operators Annual Report data.

³50 C.F.R. § 600.345(b)(3).

However, to take advantage of the fresh market and its potential for higher wholesale prices, processors needed ready access to highways and air transportation. As a result, processors with access to transportation systems may have been competitively advantaged, while those who were in more remote locations may have been competitively disadvantaged because transportation costs were higher for them. For example, one processor estimated that the costs of transporting fresh product from Kodiak Island, Alaska, to Seattle, Washington, was about 20 cents a pound higher than from Seward or Homer, Alaska, which has ready access to a major road system to Seattle. Also, processors located near providers of fuel, ice, stores, and entertainment, said that fishermen were more willing to deliver fish to them than if these providers were not available.

The shift toward fresh product in the halibut market led to the emergence of the buyer-broker, an intermediary who buys fish at a port and ships it fresh to market. Processors told us that the emergence of buyer-brokers, generally one-person operations with lower overhead costs, increased competition for fish and contributed to the increase in ex-vessel halibut prices. As table 1 shows, the percentage of halibut purchased by buyer-brokers increased from 3.7 in 1995 to 17.4 in 1999.

Table 1: Halibut Buyers, by Category, 1995 and 1999

Category	Percentage of halibut purchased 1999 ^b	
	1995 ^a	1999 ^b
Buyer-broker	3.7	17.4
Shore-based processors	84.9	73.8
Other	11.4	8.8
Total	100.0	100.0

Source: NMFS.

^a1995 was the earliest year for which NMFS data were available.

^b1999 was the most recent year we could analyze because, starting in 2000, buyers could identify themselves in multiple categories.

Along with an increase in buyer-broker halibut purchases, there was a net decrease in the number of individual shore-based plants that processed halibut. While some plants stopped processing halibut, others decided it was beneficial to start. Between 1995, when the IFQ program was implemented, and 2001, 68 plants stopped processing halibut and 56 started, resulting in a net decrease of 12 plants. Most of the shore-based plants that stopped and started processing were relatively small in comparison to other processors. About 80 percent of the shore-based

plants that stopped processing halibut and 75 percent of those that started purchased less than 100,000 pounds of halibut annually.

The IFQ program alone did not necessarily cause a plant to stop processing halibut. For example, one processor with a freezing operation bought halibut, but its primary business was buying salmon from trollers and then selling it. When the supply of farmed salmon increased, contributing to price decreases, the owners decided to sell the plant. According to industry and government officials, other plants stopped processing halibut because plant management made poor business decisions that were unrelated to the IFQ program, the plant burned down, or the plant was closed for personal reasons.

In addition to changes in the number of plants processing halibut, companies experienced some change in their market share.⁴ Some processing companies lost market share, while others gained market share. Comparing market shares for 1995 and 2001, we found that of 28 companies that processed halibut in both years, 15 experienced a decrease in market share and 13 experienced an increase.

Factors other than the IFQ program's implementation could also have contributed to changes in the economic well-being of processors. For example, according to NMFS officials and industry experts, most processors handled other species of fish in addition to halibut, and the relative proportion and value of these species will affect the economic condition of processors. According to our analysis of data from the Alaska Commercial Operators Annual Report, halibut represented a relatively small portion of the fish processed by shore-based plants. Specifically, from 1994 to 2001, halibut represented, on average, 2.0 percent to 4.1 percent of all fish processed at a plant. In terms of value, as shown in table 2, halibut was 4.4 percent of total plant product value in 1994 and 7.9 percent in 2001. (These ranges are averages for all plants processing halibut and a particular plant may process a higher percentage of these fish.) In these circumstances the drop in salmon prices most likely had a larger effect on economic well-being of processors than the halibut IFQ program.

⁴The market share of a company is the amount of halibut purchased by that processing company as a percentage of total halibut purchased by all processing companies. Processing companies, in this context, are those companies that own one or more of the individual shore-based plants that process halibut.

Table 2: Average Product Value Percentage, by Species, for Plants Processing Halibut and Sablefish, 1994 and 2001

Species	Percentage of product value	
	1994	2001
Halibut	4.4	7.9
Sablefish	4.7	5.3
Cod	5.7	9.5
Pollock	12.6	27.6
Salmon	46.7	35.1
Other species ^a	25.9	14.6
Total	100.0	100.0

Source: GAO analysis of Alaska Department of Fish and Game, Commercial Operators Annual Report data.

^aOther species include crab, flounder, greenling, herring, lingcod, octopus, perch, prowlfish, rockfish, shrimp, skate, sole, and turbot.

To determine the IFQ program's effect on processors, Alaska's Department of Fish and Game commissioned a study to examine how halibut and sablefish processors were affected economically.⁵ This was the only study we could find that attempted to quantify the economic effect the IFQ program had on halibut processors. Using a sample of halibut processors, the study assessed the change in processors' gross operating margins (revenues minus variable costs of processing). The study used the periods 1992-1993 for pre-IFQ margins and 1999-2000 for post-IFQ margins. According to the study's principal author, these years were chosen because they provided the longest possible length of time between the pre- and post-IFQ years for which data were available. The study estimated that halibut processors suffered a 56 percent, or \$8.7 million, loss in gross operating margins because the IFQ program caused halibut prices to increase and processors' market shares to change.⁶

While we could not validate or replicate the study's results because the proprietary data used in the study were confidential, we identified a

⁵Matulich, Scott C., and Michael Clark, *Efficiency and Equity Choices in Fishery Rationalization Policy Design: An Examination of the North Pacific Halibut and Sablefish IFQ Policy Impacts on Processors*, Washington State University, January 2002.

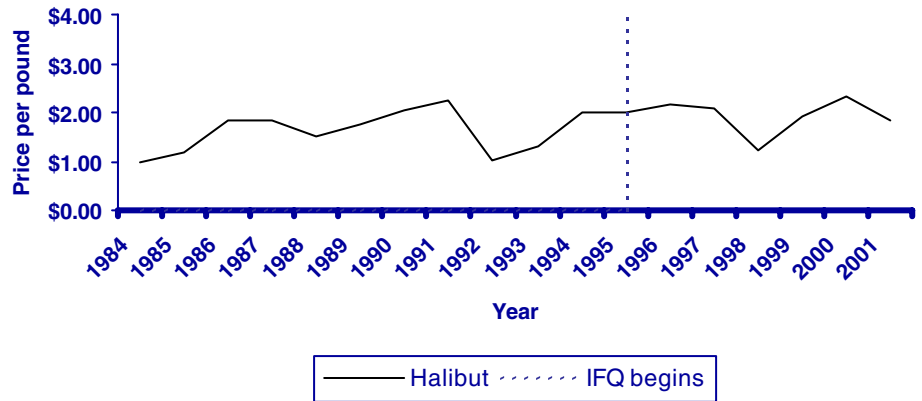
⁶The study also estimated that gross operating margins for sablefish processors decreased by 75 percent, on average. However, we did not review the sablefish estimates because the methodology and adjustments used in the study were not clear to NMFS economists or us.

number of concerns with the study's assumptions, representiveness, and potential for participant bias that brings into question the reliability of the study's estimates. First, we identified several issues of concern about the assumptions used in the study. For example, the study assumes that all costs, except labor and material inputs, remained fixed from 1992 through 2000. However, as pointed out in a critique of the study,⁷ this assumption would not be appropriate for a period as short as a year, and is clearly unjustified for the 7-year period evaluated, because the longer the time period assessed, the more likely costs will change.

Even if the study's assumption about costs were valid, the pre- and post-IFQ periods examined identify a greater negative change in gross operating margins than might have been identified if different or longer periods had been used. The changes in gross operating margins and the estimated economic effects are influenced by the fact that ex-vessel halibut prices dipped in the period 1992-1993 and were near their peak in 1999-2000. (See fig. 2.) Ex-vessel halibut prices in 1999-2000 were 44.5 percent higher than they were in 1992-1993. However, when different base years, such as 1991-1992, are compared with 1999-2000, the price increase is 22.7 percent. If these different periods had been used in the study, the estimated loss in processor gross operating margins would have likely been much less.

⁷Halvorsen, Robert, *Comments on the Matulich and Clark Report, "Efficiency and Equity Choices in Fishery Rationalization Policy Design,"* University of Washington, April 2002.

Figure 2: Ex-Vessel Halibut Prices, 1984 through 2001



Source: GAO analysis of Alaska Department of Fish and Game, Commercial Operators Annual Report data.

Note: Ex-vessel halibut prices were adjusted to 1996 dollars using the Bureau of Economic Analysis's Gross Domestic Product implicit price deflator.

The influence of the choice of base years and the corresponding ex-vessel prices can also be demonstrated by looking at the difference between the price a processor pays for raw fish and the price a processor receives for the processed fish—the processor's price margin. We calculated a simplified version of the price margin to demonstrate the sensitivity of the margin to the choice of the time period examined. As table 3 shows, comparing the study's pre- and post-IFQ price margins of 47.3 percent and 24.1 percent, respectively, shows a 23.2 percentage point decrease in margins. However, comparing the price margins for 1991-1992 with 1999-2000 shows a 13.0 percentage point decrease and comparing 1993-1994 with 1998-1999 shows a 1.1 percentage point increase. Again, the Alaskan study's estimated loss in processor gross operating margins would have likely been less if different time periods had been used.

Table 3: Price Margins in Selected Pre- and Post-IFQ Years

Pre-IFQ		Post-IFQ	
Years	Price margin ^a	Years	Price margin ^a
1991-1992	37.1	1998-1999	31.4
1992-1993 ^b	47.3	1999-2000 ^b	24.1
1993-1994	30.3	2000-2001	23.3

Source: GAO analysis of Alaska Department of Fish and Game, Commercial Operators Annual Report data.

^aThe price margin is the percentage by which real wholesale price exceeds real ex-vessel price, excluding other variable costs. We did not incorporate recovery rates (the amount of raw product required to produce the finished product) or product mix in price margin calculations.

^bYears used in the Alaska study.

Second, the study's results may not be representative of the industry as a whole. Responses were used from processors representing only 52 percent of all halibut purchased in the pre-IFQ years and 61 percent of all halibut in the post-IFQ years.⁸ The study does not provide the actual number of participants whose data were used. Without knowing the number of participants or the characteristics of the respondents whose data were used, we cannot determine whether the study's estimates are representative of the industry as a whole.

Third, the survey the study's authors used to request economic information from processors may have biased participant responses. In the preamble to the survey, participants were told, among other things, that the purpose of the study was to test the theory that a harvester-only quota allocation transfers wealth from processors to harvesters and that the survey's results would be used to assist in designing future IFQ or other fishery rationalization programs. Such statements leave little doubt as to how responses could benefit or harm processors with economic interests in other fisheries. According to standard economic research practice, these types of statements are to be avoided when designing a survey because they can influence the results.

⁸In total, 53 halibut processors, representing 88 percent of all halibut purchased in the study years, were asked to participate in the survey.

Several Methods Are Available for Protecting Communities

We identified several methods that could be used to protect communities. First, allowing communities to hold harvesting quota is the easiest and most direct way under an IFQ program to help protect fishing communities. According to fishery experts and participants, fishery managers can give each community control over how to use the quota in ways that protect the community's economic viability, such as selling or leasing quota to fishermen who reside in the community. Community quota could be held by municipalities, regional organizations, or other groups representing the community—unlike traditional individual fishing quota, which is generally held by individual boat owners, fishermen, or fishing firms.

Second, fishery managers can establish rules governing quota transfers—i.e., quota sales—to protect certain groups of fishery participants. We identified the following approaches used in foreign IFQ programs that were aimed at protecting communities:

- *Prohibiting quota sales.* Fishery managers in Norway prohibited all quota sales to protect fishing communities in certain locations.
- *Placing geographic restrictions on quota transfers.* Iceland and New Zealand fishery managers have set limits on where quota can be sold or leased to protect certain groups, such as local fishermen and the communities themselves. The Icelandic IFQ program, in which individuals own vessels with associated quota rather than the quota itself, adopted a “community right of first refusal” rule to provide communities the opportunity to buy vessels with their quota before the vessels are sold to anyone outside of the community. New Zealand’s Chatham Islands community trust has, in effect, used residence in the Chatham Islands as a requirement to lease its quota.

Finally, according to fishery managers and experts we spoke with, fishery managers can help protect fishing communities by (1) setting limits on the amount of quota an individual or entity can hold, (2) requiring quota holders to be on their vessels when fish are caught and brought into port, and (3) restricting the ports to which quota fish can be landed.

However, in designing and implementing community protection methods, fishery managers face multiple issues/challenges. How these issues/challenges are met depends on the fishery’s circumstances and the program’s objectives. First, fishery managers face an inherent tension between the economic goal of maximizing efficiency and the social goal of protecting communities. According to fishery experts we spoke with, this

tension occurs because a community often may not be the most efficient user of quota. For example, according to Icelandic fishery experts, some communities did not have the knowledge and skills to manage their quota effectively and eventually sold it, reducing the communities' economic base. Adopting rules that constrain the free trade of quota, such as those designed to protect communities, would likely limit the efficiency gains of the IFQ program. Therefore, fishery managers have to decide how much economic efficiency they are willing to sacrifice to protect communities.

Methods for protecting communities may also raise concerns about equity. In the United States, community quotas or rules aimed at protecting certain groups may not be approved because they are not allowed under the Magnuson-Stevens Act. For example, National Standard 4 of the Magnuson-Stevens Act prohibits differential treatment of states. A rule that proposes using residence in one state as a criterion for receiving quota may violate the requirements of National Standard 4. Furthermore, methods that propose allocating quota to communities can appear unfair to those who did not benefit and could result in legal challenges. Moreover, allowing communities to purchase quota may be considered unfair or inequitable because relatively wealthy communities would more readily have the funds needed to purchase quota, while relatively poor communities would not.

Second, fishery managers face several definitional issues in allowing communities to hold and trade quota, and communities must decide how to best use the quota.

- Fishery managers need to define the community. However, fishery managers and experts told us that communities can be defined geographically, such as island communities, and nongeographically, such as fishermen who use the same type of fishing gear (e.g., hook-and-line or nets) for a particular species.
- Once fishery managers define the community, they must then determine who represents it and thus who will decide how the quota is used. More than one organization (e.g., government entity, not-for-profit organization, private business, or cooperative group) may claim to represent the interests of the community as a whole. For example, rural coastal communities in Alaska, which are geographically distinct, could have several overlapping jurisdictions, including a local native corporation, a local municipality, and a local borough.

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- Fishery managers also need to define what constitutes economic viability, which is likely to differ by community because the fishery has different economic significance in each community. Some communities primarily rely on fishing and fishing-related businesses, while others may have a more diverse economic base. Moreover, the balance of industries making up a community's economy may change over time when the area becomes more modernized or a new industry enters.
 - Community representatives have to decide whether to keep their quota, sell it, or lease it to others. If they keep their quota, they also have to decide how to allocate it. Similarly, if they sell or lease their quota, they have to decide how to allocate the proceeds. Unless communities can decide how to allocate quota or the proceeds, the community quota may go unused and thus prevent the community from receiving its benefit. For example, the quota New Zealand's Maori people received from the government in 1992 has not been fully allocated to the Maori tribes, largely because the commission responsible for distributing the quota and the tribes could not agree on the allocation formula.⁹

Third, along with these definitional challenges, fishery managers and communities have to consider issues associated with quota transfers.

- Prohibiting quota sales may not allow fishing communities or businesses to change over time as the fishing industry changes. According to fishery experts we spoke with, rules that prevent change essentially freeze fishing communities at one point in time and may create "museum pieces." For example, prohibitions on quota sales prevent the fishery from restructuring, thus forcing less efficient quota holders and fishing businesses to remain in the fishery. Consequently, prohibitions on quota sales may actually undermine the economic viability of the fishing communities they were designed to protect.
- Geographic restrictions on quota transfers can be easily circumvented. For example, Icelandic officials told us that in their IFQ program, where individuals own vessels with associated quota rather than the quota itself, companies holding quota easily avoided the "community right of first refusal" rule by selling their companies as a whole to an outside company, rather than just selling their vessels and associated quota. As a result, communities could not use this rule to prevent the sale. Furthermore,

⁹In December 2003, legislation was introduced in the New Zealand Parliament that, among other things, sets out the allocation formula to be used to allocate quota to the Maori tribes.

communities that could benefit from such a rule may not have the money to purchase the quota, while those communities that can afford to purchase the quota may not need the rule's protection.

Finally, fishery managers also face challenges associated with (1) setting limits on the amount of quota an individual or entity can hold, (2) requiring quota holders to be on their vessels when fish are caught and brought into port, and (3) restricting the ports to which quota fish can be landed. Monitoring and enforcing quota accumulation limits can be extremely difficult when fishermen create subsidiaries and complicated business relationships that enable them to catch more than the quota limit for an individual quota holder. Requiring quota holders to be onboard their vessels can be impractical, especially for small businesses where the same person would have to be on board at all times. According to fishery experts we spoke with, an onboard rule would require so many exceptions, such as for emergencies and illness, that it would be meaningless. Requiring fishermen to bring their catch into ports in a particular geographic area may not be healthy for a community's economy in the long term. Such a requirement may subsidize inefficient local fish processors that cannot compete on the open market. With reduced competition, these processors may offer less money for the catch, thus reducing the fishermen's income and ultimately harming the community. According to Shetland Islands fishery managers we spoke with, had fishermen been required to land their catch in the Shetland Islands, they would have received a price far below the market value, and the processor would have had no incentive to restructure into the competitive business it is today.

Mr. Chairman, this completes my prepared statement. I would be pleased to respond to any questions that you or other Members of the Committee may have at this time.

Contacts and Staff Acknowledgments

For further information about this testimony, please contact me at (202) 512-9846. Keith Oleson, Susan Malone, Mark Metcalfe, and Tama Weinberg also made key contributions to this statement.

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Public Affairs

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