

June 1999

FISHERY MANAGEMENT

Market Impacts of the American Fisheries Act on the Production of Pollock Fillets



**Resources, Community, and
Economic Development Division**

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Congressional Committees and Requesters

The Alaska pollock fishery is the world's largest, single-species groundfish¹ fishery, and nowhere are more pollock caught than in the Bering Sea off the coasts of Russia and Alaska. As the supply of better-known groundfish has dwindled, the demand for pollock, which is a valued source of fillets, surimi,² and other products, has increased. This increased demand has led to a virtual "race for fish" in the U.S.-controlled portion of the fishery. Each fishing season, vessels compete to catch as many fish as possible before the overall catch limit is attained and the season is closed. Vessels that catch the most fish before the catch limit is reached make the most money. Over the years, as more and more vessels joined this race, the pollock fishery became overcrowded with too many vessels chasing a set amount of fish. To address this situation, in 1998, the Congress passed the American Fisheries Act (P.L. 105-277, Division C, Title II). The act eliminated certain vessels from the fishery, changed the way the annual allowable pollock catch was distributed among the various sectors of the fishing industry, and set up a structure for the formation of fishing cooperatives.

During the debate on the act, concerns were raised that the banning of certain vessels and the redistribution of the annual allowable pollock catch would result in restaurants and seafood companies being unable to obtain enough fillets to supply their markets. As a result, section 213(e) of the act required us to report by June 1, 2000, on whether the act had negatively affected the market for pollock fillets, including any reduction in their supply. We are responding to that requirement with this interim report, which will be followed with a final report by the required date. This interim report provides information on the production of pollock fillets and the actions that affected production for the first and largest of the three 1999 pollock fishing seasons, which ran from January through late March 1999. It also includes a historical perspective on the pollock fishery and discusses some factors that could affect future production.

Results in Brief

For the January to late March 1999 fishing season, the U.S. production of Bering Sea pollock fillets increased 13 percent, from 33.9 million pounds

¹A general term that refers to fish that live on or near the seafloor, including cod, haddock, pollock, and ocean perch.

²Surimi is a fish paste that is converted to imitation crab, lobster, and other products.

during the comparable 1998-fishing season to 38.2 million pounds in 1999. The increase is attributable to three main factors. First, demand for the fillets increased as worldwide groundfish supplies and Russian production of pollock fillets declined. Second, reflecting this increased demand, pollock fillet prices increased by as much as 74 percent in the past year, providing an incentive to produce more fillets. Finally, the formation of a fishing cooperative, provided for in the act, guaranteed the cooperative's members a certain amount of fish and effectively ended their race for fish. With the end of the race for fish, cooperative members were able to shift production from surimi, which is faster to produce, to the slower but more profitable production of fillets. Although demand for pollock fillets continues to be high, several other factors, such as where pollock fishing will be allowed in the two remaining 1999 pollock fishing seasons, could affect future production and prices. Despite a recent decline in pollock, the fishery is considered to be healthy and in no immediate danger of being overfished.

Background

The worldwide catch of Bering Sea pollock was about 3 million metric tons³ in 1997 with over one-third of it caught in American-controlled waters. Alaska pollock remains the largest U.S. fishery by landed weight, about 1.1 million metric tons. Just two decades ago, however, the American fishing industry's interest in pollock was slight. According to an industry official, pollock was considered a low-valued fish, and Americans preferred to fish for the higher-valued salmon, crab, herring, and halibut. However, increased market demand for Alaska pollock fillets as a substitute for declining supplies of traditional groundfish species caused a number of American fishermen to switch to pollock fishing.

The growth of the American Bering Sea pollock fishery was made possible by the Fishery Conservation and Management Act of 1976,⁴ later amended and now known as the Magnuson-Stevens Fishery Conservation and Management Act. This act established a fishery conservation zone that extended federal jurisdiction for fishery resources in coastal waters beyond state boundaries to 200 miles from the U.S. coastline and gave priority to domestic enterprises to fish within this zone. The Secretary of Commerce has final authority to administer the Bering Sea pollock fishery. The Secretary manages the fishery through the National Marine Fisheries Service, an agency within the Department of Commerce's National Oceanic and Atmospheric Administration, and through the North Pacific

³A metric ton equals 2,205 pounds.

⁴16 U.S.C. 1801 *et seq.*

Fishery Management Council (Council).⁵ The Council acts as an advisory board and recommends fishery management actions to the Secretary of Commerce.

Although at first content to catch and deliver pollock to foreign processing ships, Americans soon started investing in vessels capable of both catching and processing pollock at sea. After these catcher/processor vessels proved that pollock could be harvested profitably, companies (primarily Japanese) began constructing processing plants on land. However, by 1990, the catcher/processor vessels were catching an estimated 80 percent of the total allowable annual catch, and controversy developed over how the annual pollock catch should be distributed. To protect and expand their investment in processing plants built onshore, these companies and their U.S. trade association petitioned the Council to divide the allowable annual catch of Bering Sea pollock between the offshore segment of the industry and the “inshore” sector—those catching pollock and processing it either in shore-based plants or in processors near the shore. In 1991, the Council approved such an allocation formula. From the annual total allowable pollock catch, an amount was first set aside as a contingency reserve,⁶ half of which was allocated to western Alaskan native communities in what is termed a Community Development Quota. These communities do not, for the most part, actually catch or process pollock but instead sell their allocation to the highest bidder in either the offshore or inshore sector. After this initial deduction, the rest of the total allowable catch was distributed as follows:

- 65 percent to the offshore sector. This sector consists of three types of vessels: (1) catcher/processor vessels capable of both catching the pollock and processing it into fillets, surimi, and other products; (2) motherships that process pollock but do not catch it; and (3) catcher vessels that catch pollock and deliver them to the motherships and catcher/processors for processing.
- 35 percent to the inshore sector. The inshore sector consists of plants located on or near the shore, along with catcher vessels that catch the pollock and deliver it to the processing plants.

Although this allocation formula set limits on how much pollock each sector could harvest, it did not limit how much pollock individual vessels

⁵The Magnuson-Stevens Act established eight regional councils and required them to prepare fishery management plans for each fishery within their jurisdiction that they determined required active federal management and to review and revise these plans as necessary.

⁶This reserve was used to adjust for changed stock conditions and operational problems in the fishery.

within each sector could catch. While the two sectors no longer had to race each other for fish, within each sector the race for fish remained. Each fishing season, vessels raced to catch as many pollock as possible until the allocation was reached and the season closed. Vessels that caught the most fish made the most money. As more vessels joined this race, the pollock fishery became more and more crowded.

The Council's allocation formula also did not end the controversy over how the annual allowable catch should be divided between the offshore and inshore sectors. The formula had initially been approved by the Secretary of Commerce as an interim measure until a more comprehensive program for the fishery could be developed. In 1994, because the new management program had not been completed, the Council decided to extend the interim allocation formula into 1998. However, in 1997, a coalition representing the inshore sector petitioned the Council to double the inshore allocation to 70 percent.

To address issues such as the allocation between the offshore and inshore sectors, overcrowding, foreign investment, and the race for fish, the Congress enacted the American Fisheries Act in 1998. The act changed the American Bering Sea pollock fishery in many ways. First, it eliminated nine, predominantly foreign-owned, catcher/processor vessels from the offshore sector. Second, it increased the allocation for the Community Development Quota program and then divided the remainder equally between the inshore and offshore sectors.⁷ The offshore sector's 50 percent was further split with the catcher/processors and their catcher vessels receiving 40 percent and the catcher vessels supplying the motherships the remaining 10 percent.

The American Fisheries Act also provided the framework for the formation of fishing cooperatives. These cooperatives were designed to eliminate the race for fish by assigning a specific amount of fish to each member of the cooperative. Members could then catch their fish allocation at their own pace. Catcher/processors formed a cooperative before the start of the 1999 season. The act does not allow the motherships or the inshore sector to operate as cooperatives until January 1, 2000.

⁷An additional amount was subtracted from the total allowable catch to allow for the incidental taking of pollock by vessels harvesting other groundfish species. This is called a bycatch allowance.

U.S. Fillet Production Rose by 13 Percent Despite Factors Indicating a Potential Decline

U.S. production of pollock fillets for the first fishing season in 1999 increased 13 percent over 1998 despite a number of factors that could have resulted in a significant decline. This increase occurred in both the inshore and offshore sectors (see table 1).

Table 1: Total Fillet Production by Sector, 1998 and 1999 First Season

Sector	1998 first season		1999 first season		Percent increase in pounds, 1998-99
	Pounds	Percent of total	Pounds	Percent of total	
Offshore catcher/processors	24.0	71	26.5	69	10
Offshore motherships	0		0		
Inshore producers	9.9	29	11.7	31	18
Total	33.9	100	38.2	100	13

Note: Production figures include the Community Development Quota, the majority of which was purchased by the offshore sector.

Source: National Marine Fisheries Service.

This 13 percent increase occurred despite several factors that signaled the potential for a substantial drop in fillet production. Some factors were part of the American Fisheries Act itself, while others were not. Specifically:

- The act reduced, from 65 percent to 50 percent, the allocation of pollock to the offshore sector, which historically accounted for most of the fillets produced, and increased the allocation to the inshore processors, a sector that had historically produced relatively few fillets. Furthermore, industry officials stated that the nine catcher/processors the act banned from the fishery had been the main producers of fillets for the offshore sector.
- One inshore fillet processor sustained major fire damage and was unable to produce fillets during the first season in 1999. Many of the remaining inshore processors had historically concentrated on surimi.

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- To protect declining pollock stocks and the Steller sea lion,⁸ which eat pollock, the Council reduced the total allowable pollock catch by almost 11 percent between 1998 and 1999. Furthermore, it reduced the percentage of the harvest that could be taken during the first season. Taken together with an increase in the Community Development Quota, the subtraction of the bycatch allowance, and the change in the allocation formula, the total allowable catch available to the catcher/processors of the offshore sector during the first season dropped by almost 50 percent between 1998 and 1999. These same factors resulted in about a 4-percent increase in the amount of pollock allocated to the inshore sector.

Even with an almost 50 percent decrease in the catcher/processor's total allowable catch, the vessels managed to increase their total fillet production by 10 percent between the first seasons in 1998 and 1999. Catcher/processors also managed to maintain their overall share of total fillets, producing 71 percent of all fillets in the first season of 1998 and 69 percent of the fillets in the first season of 1999. During this same period, the inshore sector managed an 18-percent increase in the production of pollock fillets, although there was very little increase in allowable catch.

Price Increase and Fishing Cooperative Spurred Production Increase

Pollock fillet production for the first 1999 season increased, despite the negative factors discussed above, for three main reasons. First, concerns over falling Russian pollock fillet production and the declining worldwide supply of groundfish increased the demand for American pollock fillets. Second, average prices for pollock fillets increased by as much as 74 percent. Third, because the American Fisheries Act allowed the catcher/processors of the offshore sector to form a cooperative and end their race for fish, this sector was able to respond to increased demand and rising fillet prices by increasing fillet production while decreasing surimi production.

According to some industry officials, pollock fillet prices increased this year principally because of the severe decline in the amount available from Russia. Russia has historically produced a large portion of the total pollock fillets available, but its production has dropped drastically recently, with over-fishing cited as the reason for the decline. Although we could not obtain actual figures, we were told that the Russian catch might be down by as much as 50 percent.

⁸The Steller sea lion is protected by the Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 et seq.

Many industry officials we talked to agreed that the severe decline in Russian production, coupled with an overall decline in worldwide groundfish stocks, increased the demand for American Bering Sea pollock and spurred an increase in prices for pollock fillets. From the first season in 1998 to the first season in 1999, average pollock fillet prices increased 41 to 74 percent, depending on the type of fillet. Although most types of pollock fillets are similarly priced, deep-skin fillets are priced higher and are preferred by many Americans because the fat layer has been removed. Table 2 compares the average prices paid between 1998 and 1999 for deep-skin fillets and the other fillet types.

Table 2: Average Price Per Pound of Pollock, 1998 and 1999 First Seasons

Product	1998 first season	1999 first season	Percent of increase
Deep-skin fillets	\$1.28	\$1.81	41
Other fillets	\$.91	\$1.58	74

Source: Fisheries Market News Report.

The American Fisheries Act allowed the catcher/processors to respond to the increased market demand and prices in a way that would have been difficult to do previously. The race for fish induced processors to emphasize surimi production because it is the fastest way to process large quantities of fish caught at one time. Because the act provided the framework for the formation of a cooperative by the catcher/processors of the offshore sector, this segment of the industry was able to end its race for fish and produce products with higher value. In addition, because the cooperative guaranteed each member a certain amount of fish, members could invest in machinery capable of producing the higher-valued fillets and could slow down by fishing only when their fillet-processing machines needed additional fish.

We spoke to representatives for six of the nine members of the offshore catcher/processor cooperative, and they were universal in their praise of how well the cooperative has worked and how it has improved overall operations. They stated that the elimination of the fish race had other benefits as well. For example, they stated that their yield rates were up as much as 25 percent because, with the race for fish over, they could now afford the time to make less valuable products like oil and fishmeal and store them until they could be brought to shore. Previously, any part of the fish not used for fillets or surimi was often tossed overboard. Companies could not afford to waste storage space on low-valued products when the

same space could be used to store fillets and surimi. They also could not afford the time to travel to a port and unload low-valued products; they had to stay in the race. We were also told that the cooperative has led to savings in fuel consumption, increased safety because vessels no longer have to fish during extreme weather conditions, and more time to search for the size of fish most conducive to the products processors want to produce.

Various Factors Could Affect Future Seasons

Pollock fillet production increased during the first season in 1999 because the factors discussed above acted together to encourage that result. If these conditions change in the future, the results may differ. For example, if the Russians increase fillet production and fillet prices fall, American processors might return to emphasizing surimi production. This could result in American restaurants and seafood companies having to find new sources of supply. In the near term, however, industry officials do not expect much change. Officials representing both the inshore and offshore sectors expect the outlook for pollock fillet production to remain strong if declines continue in the worldwide supply of Russian pollock and other groundfish, such as cod, hake, and whiting. If the demand and price for pollock fillets remain high, several processors in both sectors said that they plan to invest in additional fillet production equipment and produce more fillets in the two remaining 1999 seasons, which start in August and September.

Another factor that could affect supply is the closure of areas deemed critical for the survival of the protected Steller sea lion. Some industry officials expressed concern that even with additional equipment, fillet production in the two remaining 1999 pollock seasons could be limited by the long distances fishermen may have to travel to avoid fishing in closed areas. Pollock caught in these more remote areas may be too small to be used for fillets or may need to be processed into surimi because they cannot be transported to inshore processors fast enough to be made into fillets.

Still another factor that could affect production is the formation of an inshore cooperative. We talked to five of the seven inshore processors, and four were in favor of a cooperative similar to the offshore one if it would eliminate the race for fish. As with the offshore cooperative, such an agreement could potentially provide the inshore sector the opportunity to switch to producing more fillets.

Agency Comments

We provided the Department of Commerce with a draft of this report for review and comment. While the Department did not indicate whether it agreed with the overall message of our report, it did provide technical comments that we incorporated as appropriate.

Scope and Methodology

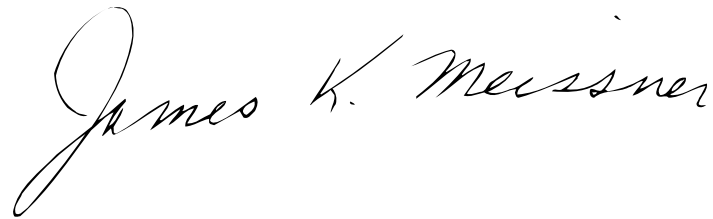
To obtain background data and make preliminary observations, we reviewed volume data on the production of pollock products, which we obtained from the National Marine Fisheries Service. We obtained and reviewed price data from industry market reports, the processors, and their customers. We did not perform reliability tests on either the volume or price data. We also reviewed the act itself; its legislative history; and various industry publications, market reports, and Federal Register notices concerning the act. We also attended meetings of the North Pacific Fishery Management Council to hear initial reactions to the act's implementation and discussions of regulations for the remaining 1999 seasons.

To learn about the history of the pollock fishery, the development of the American Fisheries Act, and the experiences during the initial fishing season, we interviewed representatives for six of the nine members of the offshore catcher/processor cooperative and five of the seven inshore processors. We also talked to companies identified by both the offshore and inshore sectors as their major customers. The processors and seafood companies we contacted are listed in appendix I. Finally, we talked to officials from the National Marine Fisheries Service and associations representing the fishing industry.

We conducted our review from December 1998 through June 1999 in accordance with generally accepted government auditing standards.

A copy of this report is being sent to the Honorable William M. Daley, Secretary of Commerce; Dr. James Bake, Director, the National Oceanic and Atmospheric Administration; Penny Dalton, Director, the National Marine Fisheries Service; Richard Lauber, the Chairman of the North Pacific Fishery Management Council; and other interested parties. We will also make copies available to others upon request.

If you have any questions about this report, please contact me or Jill Berman at (206) 287-4800. Other key contributors to this report were Jerry Aiken and Bill Wolter.

A handwritten signature in black ink that reads "James K. Meissner". The signature is written in a cursive style with a large, looping initial "J".

James K. Meissner
Associate Director, Energy,
Resources and Science Issues

List of Committees and Requesters

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United States Senate

The Honorable Mitch McConnell
United States Senate

The Honorable Frank Murkowski
United States Senate

The Honorable Ted Stevens
United States Senate

The Honorable Patty Murray
United States Senate

Companies and Associations Contacted

Catcher/Processors

American Seafoods Company

Tyson Seafoods Group

Arctic Storm, Inc.

Glacier Fish Company

F/T Highland Light

F/T Starbound

Motherships

Supreme Alaska Seafoods

Golden Alaska Seafoods, Inc.

Inshore Processors

Unisea Seafood Corporation

Tyson Seafood Group

Peter Pan Seafoods, Inc.

Trident Seafoods Corporation

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Seafood Companies

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Industry Associations

At-Sea Processors Association

Pacific Seafood Processors Association

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