# FISHING FOR POLLOCK
## IN A SEA OF CHANGE

A Historical Analysis of the Bering Sea Pollock Fishery

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—*James Strong and Keith R. Criddl*e

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—*James Strong*

# Chapter 1. Origins of the Pollock Fishery—Foreign Development Era

In the rough waters of the eastern Bering Sea, best known for the crab fisheries dramatized on reality TV, there is an even bigger fishery, the fishery for Alaska pollock (*Theragra chalcogramma*). Alaska pollock, which could be considered unattractive—even for a fish—is a member of the family *Gadidae*. Its better known cousins include Atlantic cod (*Gadus morhua*), Pacific cod (*G. macrocephalus*), Pacific whiting (*Merluccius productus)*, and haddock (*Melanogrammus aeglefinus*). Alaska pollock inhabit waters above the continental shelf and continental slope. They are distributed in an arc across the North Pacific Ocean from the Pacific Northwest to northern Japan and are particularly abundant in the Sea of Okhotsk and Bering Sea. Alaska pollock support one of the largest fisheries in the world—the largest fishery where catches are used for human consumption. The pollock fishery off Alaska is the largest U.S. fishery in terms of tonnage, with the eastern Bering Sea and the Aleutian Islands (BSAI) region yielding an annual average (1980-2009) harvest of over 1.2 million metric tons, or nearly 2.6 billion pounds (NMFS 2009).

For many, the lack of familiarity with pollock may be that it is rarely served as fish of the day at a local restaurant. Instead, pollock fillets are often used in frozen breaded fish sticks and as a mainstay in fast food restaurants, where breaded portions are served in sandwiches, such as the McDonald's Filet-O-Fish®. Alaska pollock is also a preferred base for surimi, a protein paste used for a variety of final products. The highest quality surimi is sold to Japan, where it is a food staple. Outside of Japan, surimi is often processed into imitation crab served in salads or other dishes such as California sushi rolls. Alaska pollock roe, or fish eggs, is a popular treat in Japan. Full skeins (intact ovaries) are given as gifts during the holiday season. Salted and spiced roe is used as a condiment. Byproducts include fishmeal, fish oil, and bone meal. Buoyed by large domestic and international demand, the U.S. share of the Alaska pollock fishery averaged $1.1 billion in annual wholesale revenues between 1999 and 2010 (NMFS 2011d,e).

**Pollock sorter at Unisea plant, Unalaska, July 2009. Keith Criddle**

Despite its high value and abundance, the Alaska pollock fishery is one of the youngest major marine fisheries. Atlantic cod was harvested and traded internationally by the Vikings as far back as 800 AD. Similarly, Alaska Natives have subsisted on fisheries for thousands of years but have focused their fishing effort on Pacific salmon (*Oncorhynchus* spp.), Pacific herring (*Clupea pallasii*), Pacific halibut (*Hippoglossus stenolepis*), rockfish (*Sebastes* spp.), Pacific cod, eulachon (*Thaleichthys pacificus*), and miscellaneous other nearshore fish and shellfish species (NMFS 2002).

In contrast, the first documented fishing for Alaska pollock occurred off the coast of Asia in the late eighteenth century, but it never developed into a large-scale fishery (Bailey et al. 1999). Japan sent a fishing trawler into the eastern Bering Sea to prospect for pollock, yellowfin sole (*Pleuronectes asper*), and other fish resources in 1929 and again in 1931. From 1933 through 1937, Japan sponsored commercial ventures for eastern Bering Sea pollock with a mothership, three to five conventional catcher-trawlers, and as many as eight bull (paired) trawlers. The catcher vessels generally fished within a few miles of the mothership. After they filled their nets, they delivered the full codends (the closed end of the trawl net) to the mothership. The mothership, a ship built for processing fish at sea, accepted the nets and processed the pollock into fishmeal and fish oil. Finished products were sold into Europe and other

international markets to generate foreign currency needed to purchase military supplies (Alverson et al. 1964).

In 1940, after a three-year hiatus that coincided with commencement of the second Sino-Japanese war, Japan resumed pollock fishing in the eastern Bering Sea—but this time they did so to bolster domestic food supplies. Japan again sent one mothership and a fleet of nine to twelve catcher-vessels each year, but instead of processing pollock into fishmeal and fish oil, the mothership prepared the fish for human consumption, froze it, and shipped it back to Japan. Although the fishery was not profitable for the participating companies, it continued with government support through 1941. Open warfare with the U.S. and Allied Forces from 7 December 1941 through 14 August 1945 put a stop to Japanese fishing in the eastern Bering Sea. While most of the Japanese catches from 1933-1937 and 1940-1941 were composed of Alaska pollock, yellowfin sole also constituted a large portion of the pre–World War II catches (Alverson et al. 1964).

## Post–World War II Pollock Fishery

Although Japan had limited commercial success with its pre–World War II pollock operations, the landscape for distant-water marine fisheries such as pollock changed in the post-war era.[1] The war had devastated Japan's infrastructure, food distribution networks, and productive capacity; the Japanese were hard-pressed to meet basic food needs (Alverson et al. 1964). U.S. General Douglas MacArthur realized that Japan's post-war food production system could not support her population of 80 million people. With the U.S. not utilizing Bering Sea or Gulf of Alaska pollock resources, MacArthur encouraged the Japanese to return to the Bering Sea to fish for pollock to feed their country. However, it was 1954 before fishing resumed. Japan and other countries began to expand fishing operations globally to support their industry and provide food supplies, with the eastern Bering Sea as a popular destination (Tillion 2003).

For the Japanese and eastern European states emerging from World War II, development of distant-water fishing fleets provided a natural opportunity for increased jobs and industry as well as food. The viability of their fleets was aided by technological advancements made during World War II. For example, wartime advancements in sonar aided in the detection of fish schools. Wartime innovations in electronic navigation gave vessels better ability to navigate the high seas. Increased

1 Attention given here to the post-war development of distant water fisheries could lead to a false impression that such fleets lack historic precedent. In fact, there is a long history of fishermen venturing great distances to capture abundant fish. For example, Basque fleets of dories and motherships fished cod off New England as early as the late twelfth century. Early nineteenth century whalers roamed every ocean and sea from their homeports in Europe and New England. What set post-war distant water fleets apart was their power, technology, and the range of species they could pursue.

engine power allowed vessels to travel more quickly and harvest more efficiently. Surplused military supply vessels and merchant marine vessels were available for retrofitting as motherships, tenders, and trawlers. New technologies also improved refrigeration on processing and cargo vessels. The increased freezing capacity allowed vessels to fish longer and increased the quality and options for processed fish (Hornnes 2006).

These technological advancements led to the construction of the first modern vessels intended to combine trawling and processing, which in turn accelerated expansion of distant-water fleets. The first factory trawler, the *Fairtry,* was launched in Scotland in 1954, by Christian Salvesen Ltd., a Scottish whaling company. The size of the vessel was impressive for its time. It was 280 feet long and it weighed 2600 gross tons.[2] More importantly it included a stern ramp, which allowed the *Fairtry* crew to pull the trawl net onto the deck via a ramp on the vessel's stern. Although this technique had been used in whaling, it had not been used previously in conjunction with trawling. Stern ramps proved to be much safer than traditional methods that brought fish aboard over the vessel's side. In addition to improved harvesting capability, the factory trawler included fish processing facilities, a refrigeration system to freeze processed fish and hold them in frozen storage, and the ability to process waste products into fishmeal. The *Fairtry*'s factory had an area under the trawl deck where fish were gutted and filleted, using machinery manufactured in West Germany for land-based processing facilities but never before used at sea. The *Fairtry*'s refrigeration system was the newest and lightest system built by Clarence Birdseye in the United States (Hornnes 2006). This combination of harvesting and processing technologies made the *Fairtry* a success.

The Soviet Union, Japan, and other countries quickly recognized the factory trawlers' potential to increase the profitability of fishing for high-volume low-value species, such as pollock. Less than a year after the *Fairtry*'s introduction, the Soviets commissioned their first factory trawler, the *Pushkin*, from a West German shipyard. By 1956, the Soviets had ordered 23 more factory trawlers (Hornnes 2006).

Even before commissioning these factory trawlers, the Soviets had launched the development of a sophisticated system of motherships and support vessels. Each distant-water fleet typically included a cluster of motherships, each escorted by a pair of 120 to 180 foot long trawlers. The trawlers delivered codends of fish to the mothership for processing. Processed fish was often transferred to refrigeration vessels for freezing and temporary storage. Frozen product was then transferred to cargo

2 The *Fairtry* was patterned after the processing motherships used by Scottish, Norwegian, and Russian whalers in the Southern Ocean. Each mothership was supported by a fleet of catcher boats able to keep the processing works supplied for round-the-clock operation rendering oil and preparing ground meat products (e.g., Robertson 1954).

and provisioning vessels. Through capital investment of over 10 billion rubles between 1956 and 1975, the Soviets built the largest distant-water fleet in the world. By 1975, their distant-water fleet included nearly 5,400 vessels and accounted for nearly half of the world's gross tonnage of such vessels. The Soviets dispatched this fleet across the world's seas, including the eastern Bering Sea, which they began to fish in the late 1950s (Alverson et al. 1964; NMFS 2002; Hornnes 2006).

Japan also rebuilt its fishing fleet after World War II. Although the Japanese continued to fish with motherships and trawlers, they launched their first factory trawler less than two years after the debut of the *Fairtry*, and a second ship two years later (Hornnes 2006). When the Japanese recommenced fishing in the eastern Bering Sea in 1954, they targeted a wide array of fish and invertebrates, including yellowfin sole, Pacific ocean perch (*Sebastes alutus*), and king crab (*Paralithodes* sp.). Yellowfin sole was of particular interest as a target species, because in 1960 Japanese scientists developed a technique to transform white-fleshed fish into surimi. Surimi, the generic name for the processed white protein paste, can be made from a variety of fish and used in a variety of consumer products. To produce surimi, fish are first filleted and the flesh is minced. Fat, blood, pigments, and odorous substances are removed through repeated washing and dewatering. Fueled by this discovery, Japanese catches of the flatfish in the eastern Bering Sea reached a peak in 1962 when overfishing led to a decline of the stock. The reduction in catches of yellowfin sole from the Bering Sea coincided with a decline in the harvests of croaker (*Atrobucca nibe*, *Argyrosomus argenteus*, and *Pseudoscianena polytis*), a group of whitefish species native to coastal of Japan that had also been used for surimi. This left the Japanese to seek a new fishmeal and surimi source (Natural Resources Consultants 1981; Park 2005; NMFS 2009).

The Japanese switched from yellowfin sole to pollock since it was abundant and, when promptly processed, it provided a high-quality surimi. The demand for pollock surimi in Japan grew so fast that by 1979 there were 150 land-based surimi processing facilities and well over 3,000 secondary processors that transformed surimi into value-added products, including fish cakes such as chikuwa and kamaboko (Natural Resources Consultants 1981). Economies of scale provided by the large factory trawlers allowed the Japanese to profit from pollock harvests and stimulated expansion of the Japanese factory trawler fleet. The Japanese fleet grew from four factory trawlers in 1964 to 42 in 1972. This fleet of factory trawlers and motherships quickly propelled the Japanese into dominance in the eastern Bering Sea pollock fishery (Park 2005).

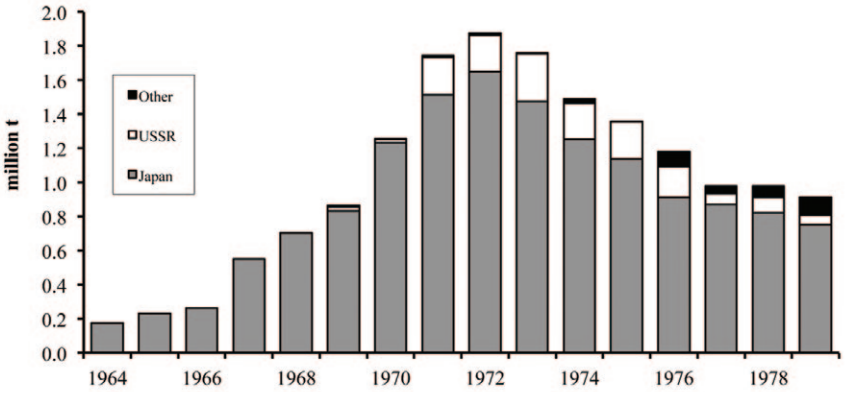


**Figure 1.1. Foreign harvests of pollock in the eastern Bering Sea (million metric tons). Source: Natural Resource Consultants 1981.**

## Rising Pollock Catches

The demand for pollock surimi in Japan, as well as the expansion of distant-water fleets, fueled a rapid increase in pollock harvests from the eastern Bering Sea, where catches of pollock grew from 174,792 t in 1964 to a peak of 1.87 million metric tons in 1972 (Figure 1.1). During the same era, worldwide harvests of pollock peaked at nearly 3 million metric tons. Japanese vessels were the only pollock harvesters off Alaska until 1968, when a small fleet of South Korean vessels entered the fishery. Russian vessels joined the eastern Bering Sea pollock fishery in 1969. Nevertheless, Japan dominated the fishery, taking over 88% of the total catch between 1964 and 1979. Russian catches averaged about 10% of the annual total—their peak catch was 16% of the 1975 total. South Korea harvests over this time period represented about 1% of the total catches (Natural Resources Consultants 1981).

The rapid increase in pollock catches—to a level that may have been unsustainable—was consistent with standard operating procedures for distant-water fleets. These fleets, equipped with efficient factory trawlers and mothership groups, opened access to marine resources across the globe. Distant-water fleets need large catches to sustain their operations and typically focused on a fishing ground until local stocks were fished down to unprofitable levels. They then moved onto new grounds that contained the next best species (Hornnes 2006). This pattern of serial depletion was repeated across the globe. Examples from off the coast of Alaska include the eastern Bering Sea fishery for yellowfin sole and the Gulf of Alaska fishery for Pacific Ocean perch. The Japanese fleet

switched from yellowfin sole to pollock in 1962 after eastern Bering Sea stocks of yellowfin sole had been overfished to the extent that fishing for yellowfin sole ceased to be profitable. Similarly, beginning in 1964, the Soviet distant-water fleet focused on Pacific ocean perch stocks in the Gulf of Alaska. As soon as that stock was decimated the Soviet fleet moved on to other species in waters off Oregon and Washington (NMFS 2002).

## Global Movement toward Increased Marine Rights

Serial depletion of fisheries by roving bands of fishing vessels was both a cause of changes in international law and a consequence of those anticipated changes. After World War II, a movement to extend rights over marine coastal waters stirred among several countries. This was a challenge to the international convention of freedom of the high seas, which had been recognized since the early seventeenth century. The conventional view of the high seas was predicated on three assumptions: first, it was argued that the high seas themselves were not amenable to physical occupation; second, conventional wisdom argued that the resources of the seas were inexhaustible; and third, the seas were so vast that no one use of the seas could impose external costs on other uses (NMFS 2002). Under conventional views, countries could not exercise authority over waters more than three miles off their coasts (cannon range). The rise of distant-water fleets threatened local fisheries that depended on healthy fish stocks near to port, albeit more than three miles offshore. Unlike the distant-water fleets, local fishing fleets and the communities that depended on them could not simply switch to another fishery. Nations fumed as distant-water fleets decimated regional fisheries.

The United States, foreshadowing changes to come, laid the groundwork for extended coastal rights when President Harry Truman claimed jurisdiction over resources on and underneath the seabed on the U.S. continental shelf (Executive Order September 28, 1945). The Truman Proclamation asserted rights to offshore minerals and claimed authority to establish conservation zones in the high seas off the U.S. coast. The United States did not enforce the Proclamation, but it created a basis for future action. Other countries took even bolder steps. In 1946, Argentina and Panama asserted exclusive rights to fishery zones up to 200 nautical miles off their coastlines to lay claim to productive tuna (*Thunnus* spp.) fisheries. Peru and Chile followed suit in 1947 to claim control of the anchovetta (*Engraulis ringens*) resource. Between 1958 and 1975, Iceland gradually expanded its maritime claims to 200 miles, which progressively forced British fishermen off cod grounds, a conflict that came to be known as the Cod Wars. Pressure from and competition

with distant-water fleets spurred unilateral declarations of extended jurisdiction and prompted the United Nations Convention on the Law of the Sea, which would not solidify these new expectations until 1982.

The trend toward increased claims to extended jurisdictions had enormous implications for the newly formed distant-water fleets. The shallow, nutrient-rich continental shelves, where most fleets operated, compose only 9% of the world's oceans yet make up nearly 96% of the world's fisheries. With the extension of 200 mile zones, distant-water fleets risked losing access to these productive grounds. Japan, for instance, obtained nearly half its catches from fisheries within other countries' 200-mile zones. Nearly 90% of those catches came from the North Pacific (Hornnes 2006). Warner (1983) speculated that factory trawlers, not fish, were headed for extinction, believing that distant-water fleets would not be able to survive under the low quotas assigned to them by coastal countries under the new extended boundaries. With little prospect of long-term access to desired fishing grounds, distant-water fleets had no incentive to harvest at sustainable rates. Instead, the fleets fished until fish were so scarce that fishing ceased to be profitable (and fish biomass was driven to dangerously low levels) before moving on to the next species or area. As pollock catches soared in the early 1970s, it appeared the eastern Bering Sea pollock stock was next in line for decimation by distant-water fleets.

## Fishery Management

The decline in various fish stocks off the U.S. coasts was related to the lack of regulatory oversight that limited catches. With the exception of international agreements over some species of groundfish in the northwest Atlantic, and salmon in the North Pacific and Bering Sea, fish beyond the 3-mile boundary were open to distant-water fleets. Although U.S. fishermen and U.S. fishery scientists were increasingly concerned about the effects of unregulated fishing in waters beyond the 3-mile limit, the United States had not extended its boundaries, and therefore lacked the legal authority to control the large distant-water fleets that fished the Bering Sea and other waters bordering the nation (Cushing 1988). Efforts by U.S. fishery scientists to gather harvest data for North Pacific fisheries were mostly ignored: Japan offered limited information on catches and the Soviet Union offered even less. In an attempt to increase oversight and management of nearshore fisheries, the United States extended its exclusive fishery zone to 12 nautical miles beginning 4 October 1966 (P.L. 89-658). This legislation gave the United States authority to enter into bilateral agreements to manage catches between 3 and 12 miles offshore. With the exception of U.S. and Canadian agreements managing north Pacific halibut, these were the

first attempts at fishery management in the eastern Bering Sea (NMFS 2002; NPFMC 2006).

Negotiations over bilateral agreements were initiated in 1967, with Japan and the USSR. The first agreement over the harvest of groundfish was with the Soviet Union in 1967, with further agreements negotiated in 1972-73 and 1973-74. The 1973-74 bilateral agreements were probably the most important, because they imposed catch quotas on harvests of pollock and other species. The catch quotas limited the amount of fish each country was allowed to harvest, based on the previous three or four years' average catch. At this point, fishery managers were simply attempting to cap harvests until the different fish stocks were evaluated to determine what the actual harvest should be. Final bilateral negotiations with Japan took place in 1974 and with the Soviet Union in 1975. Although setting catch quotas through bilateral agreements was a progressive move, the effect was limited. With the exception of onboard observers, there was little accountability since each country monitored its own catches and there was no authority over fisheries beyond 12 nm (NMFS 2002).

# Chapter 2. Americanization of the Pollock Fishery

In the 1970s, pressure mounted for the United States to assert extended maritime boundaries. With little ability to control foreign fleets, there was concern that the resources in the Pacific would be depleted. U.S. Senator Ted Stevens of Alaska remarked:

> In January of 1970, I went to Kodiak and asked the Navy to fly me to the Pribilofs. There was an amphibious plane there, an Albatross, and we flew from Kodiak to the Pribilofs at fairly low level. I counted more than 90 foreign fishing vessels anchored there just off our state. And they had a bunch of little catcher boats going out from them. It really bothered me a great deal. (King 2009)

Following that experience, Stevens proposed legislation to extend America's jurisdiction from 12 to 200 miles offshore; however, because he was a junior senator his bill went nowhere (King 2009). Never one to give up easily (Senator Stevens later would be known for wearing an Incredible Hulk tie whenever he headed into a serious political fight), Stevens partnered with Washington state's senior senator, Warren Magnuson. Magnuson was interested because many Washington-based fishermen were in favor of the 200 mile boundary. The number of boats in the Alaska crab fishery, a majority of which were based out of Washington, had skyrocketed and the industry feared that additional growth could not be sustained. Fisherman such as John Sjong (future owner of the first domestic factory trawler in the Bering Sea) realized that they would soon need to look for other species to harvest:

> There was a tremendous amount of boats joining the fishery. There was no way it could hold up. The writing was on the wall. We started to look elsewhere; what else could we fish? (Sjong 2003)

With foreign fleets harvesting billions of pounds of fish yearly in the eastern Bering Sea, it was natural for domestic fisherman to advocate

for the expanded boundaries and fishing opportunities. "The groundfish resource was huge," stated Wally Pereyra, a leader in the development of the domestic pollock fleet. With new opportunities in mind, Seattle fishermen appealed to Congress under the mantra of "Americanization" (Pereyra 2003; King 2009). Of Senator Magnuson's push for a 200-mile exclusive zone, Clem Tillion, a longtime Alaska fisherman and fishery activist, remarked:

> It wasn't that Magnuson knew that much about fish, it's just that his friends were in the business, and as such, he was going to defend them. And he did a beautiful job. (Tillion 2003)

Extended maritime boundaries also had support of the oil industry, which hoped to gain enormously from protection from competition for petroleum resources off the U.S. coast. The oil industry was happy to let fishermen take the lead in public while it lobbied in the background. That way, the public image of the campaign to extend maritime boundaries was that of a weathered, wind-reddened fisherman rather than that of a sharply dressed oil executive (Tillion 2003).

There was plenty of opposition to the extended maritime boundaries. Some members of Congress were concerned that if the U.S. extended its maritime boundaries and other nations followed suit, navigation rights might be impeded to the detriment of commerce and defense. The U.S. Navy opposed extended maritime jurisdiction out of concern that the right to navigate through strategic coastal areas could be impeded. The U.S. Air Force worried that a 200-mile limit might eventually apply to overlying airspace. The State Department considered fishing access to be a bargaining chip for winning international concessions on "important" matters. Another State Department concern was that the U.S. unilateral action would anger the Soviets and slow the already long-delayed international Law of the Sea negotiations, begun in 1958. Under the third round of the Law of the Sea negotiations, in 1973 there was movement toward international agreement on extended maritime boundaries with preservation of navigation rights. Even some members of Alaska's congressional delegation opposed taking action outside the Law of the Sea negotiations, making passage of Senator Magnuson's and Senator Stevens' bill difficult (Tillion 2003; Hornnes 2006; King 2009).

In the end, Magnuson and Stevens were able to persuade Congress to pass the legislation. The Fishery Conservation and Management Act (FCMA) passed on 13 April 1976, with two primary functions: first, to create a new standard of conservation and management within the 200-mile fishery conservation zone and second, to promote the Americanization of marine fisheries. Stevens said to the Senate:

> The concept is, shall the living resources of the sea have a chance to survive? The major fishery within our shores is, in fact, the Alaska pollock, where the [foreign fleets] have taken 2.3 billion pounds in one year. That pollock is the basic food chain for the Bering Sea and North Pacific and if this [overfishing] continues even another [two or three years], it will go the way of the California herring. It will disappear from the ocean. (King 2009)

The FCMA established protection for marine fisheries and provided the framework to manage them (NMFS 2002; King 2009). In a report to Congress, Niblock (1977) stated that "one of the purposes of the FCMA of 1976 is to encourage the revitalization of the U.S. fishing industry." The FCMA formally recognized the importance and value of the resources off the U.S. coast, and established pretense for domestic fishermen to utilize the supply. "Foreign fishing off our coasts cannot be allowed to continue," President Gerald Ford said as he signed the bill (King 2009).

The 200-mile fishery conservation zone, later renamed the Exclusive Economic Zone (EEZ), covers almost the entire productive area of the U.S continental shelf in the eastern Bering Sea (Figure 2.1; Hornnes 2006; Wolff and Hauge 2008). The law gave the United States the right to regulate all natural resources, such as fish, oil, and minerals, to a distance of 200 miles off the coast. After FCMA's implementation on 1 March 1977, foreign fishing could only be conducted under treaty or a governing international fishery agreement (NMFS 2002).

Agreements to allow fishing in the Bering Sea and Aleutian Islands (BSAI) EEZ were reached with Taiwan and the U.S.S.R. in 1976. Pacts were reached with Japan, Korea, Poland, Bulgaria, West Germany, and China over the next few years. While the agreements allowed these countries to continue fishing in the U.S. EEZ, fishing had to conform to the Preliminary Fishery Management Plans (PMP) that were instituted as a result of the act and only applied to the foreign fisheries. The PMP that affected the pollock fishery—Trawl Fisheries and Herring Gillnet Fishery of Eastern Bering Sea and Northeast Pacific—was posted in the Federal Register in February 1977. The initial PMP set restrictions on pollock harvests to control the foreign fleet, but the fundamental principles of the PMP are embodied in the Fishery Management Plans (FMP) that currently govern fishing in the BSAI and Gulf of Alaska. The two primary objectives of the original PMP and continued in the FMP were to establish overall limits on the harvest of various marine species, and to limit bycatch of species of interest to the then extant domestic fisheries. For instance, there was concern that foreign fishing vessels, ostensibly fishing for pollock and other groundfish, were in fact surreptitiously targeting higher-valued salmon and crab as "bycatch," which affected the quantity of those stocks available for domestic fishermen (NMFS 2002).

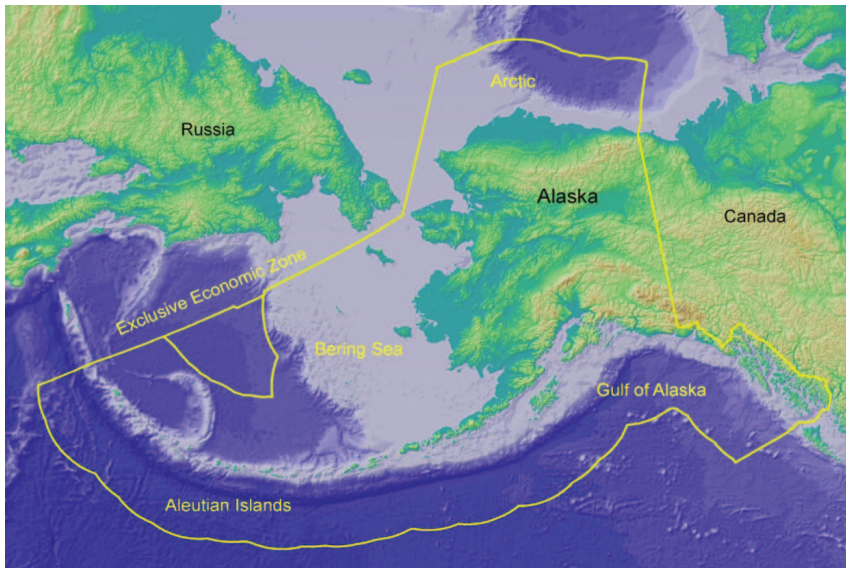


**Figure 2.1. U.S. EEZ off Alaska.**

The PMP and FMP were established under the fishery management structure laid out by the FCMA. The Act established eight regional fishery councils, which together with the National Marine Fisheries Service (NMFS) manage all U.S. EEZ fisheries. The regional councils are responsible for making policy decisions related to fisheries located within their jurisdiction, subject to a set of articulated national standards. The new system was designed to allow autonomy in each region; decisions were to be made by fishery stakeholders. The other unique feature of this system is its transparency. The proceedings are open and invite public testimony in front of the council and its supporting committees: the Science and Statistical Committee and the Advisory Panel. The Advisory Panel is made up of fishermen and other stakeholders; it is designed to provide the council with advice on the desirability of proposed actions. The Science and Statistical Committee is a science panel that sets upper bounds on total allowable catch (TAC) for each managed species and species group and advises the council on the adequacy of analytical documents prepared to help the council and public weigh the consequences of alternative actions. The Advisory Panel and Science and Statistical Committee provide reports to the council before the council takes action. The council also depends on staff and NMFS to research

and develop reports on the impacts of potential rule changes before it makes decisions.

The regional council that governs federal fisheries off Alaska—and thus the pollock fishery—is the North Pacific Fishery Management Council (NPFMC). It is composed of 15 members: 11 voting and four nonvoting. The four nonvoting members represent the U.S. Coast Guard, the U.S. Fish and Wildlife Service, the Pacific States Marine Fisheries Commission, and the State Department. These nonvoting members provide informal consultation on the implications of potential regulations from the perspective of their organizations. Seven of the 11 voting members are appointed by the Secretary of Commerce based on the recommendations of the governors of Alaska and Washington, five of the seven are nominated by the governor of Alaska, and two are nominated by the governor of Washington. The governors typically nominate candidates who reflect diverse interests within the fishing industry in their individual states. Appointments are for a maximum of three consecutive three-year terms. The remaining four voting members include the NMFS Alaska Region Office director and the principal state officials with marine-fishery responsibility for Alaska, Washington, and Oregon (NMFS 2002).

Once the NPFMC (Council) passes a proposed management measure, it is forwarded to the NMFS Alaska Region Office. NMFS has the responsibility to review proposed management measures for legality, consistency with national standards, and compatibility with existing regulations, and to develop an implementation plan. If NMFS determines that one or more parts of a proposed management measure are either impossible to implement or would violate the standards set forth in the Magnuson-Stevens Fishery Conservation and Management Act[3], the proposed management measure is remanded to the Council, which can make appropriate changes. Otherwise, it is forwarded to the Secretary of Commerce for final approval before being published in the Federal Register (NMFS 2002).

Decisions made by the NPFMC and implemented by NMFS must comply with ten (originally seven) national standards set forth in the MSFCMA. These standards provide the groundwork for fishery management in the U.S. EEZ. One of the most important standards, implicit in FCMA (1976) and subsequent reauthorizations and made explicit in MSFCMA (2007), is the requirement that the total allowable catch and optimum yield be set at or below the allowable biological catch (ABC) and overfishing limits determined by the Science and Statistical Committee. The concepts of ABC and overfishing limits are explicitly incorporated into each FMP. The ABC is the maximum allowable catch for a species that is believed to be sustainable over time. The overfish-

3 The FCMA was renamed the Magnuson Fishery Conservation and Management Act (MFCMA) in 1980 and the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) in 1996.

ing limit is the level of catch that, if exceeded during any year, will result in a shutdown of directed fishing for the remainder of that year, while optimum yield is defined by the MSFCMA as:

> … the amount of fish which—(A) will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems; (B) is prescribed as such on the basis of the maximum sustainable yield from the fishery, as reduced by any relevant economic, social, or ecological factor; and (C) in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the maximum sustainable yield in such fishery. (MSFCMA 2007)

That is, optimum yield is essentially the ABC adjusted downward to account for stakeholder concerns. The optimum yield involves a balancing of various objectives or criteria. For example, neither maximizing catch nor maximizing economic return would necessarily optimize the fishery. Optimum yield should be the best balance of conservation, economic benefit, equity, and flexibility (Niblock 1977). Under the mandate in the MSFCMA for conservation, this would also imply that the optimum yield should never be set at a level above the ABC—since this would be unsustainable.

According to the FCMA, it is important to manage fisheries in a manner that produces "the greatest overall benefit to the nation." National Standard 4 states:

> Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be
>
> (A) fair and equitable to all such fishermen;
>
> (B) reasonably calculated to promote conservation; and
>
> (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges. (FCMA 1976)

That is, fisheries in the EEZ are to be run in a way that considers the impacts to the nation. So when decisions are made for fisheries off Alaska's coasts, fishermen, communities, and stakeholders based outside of Alaska are considered on par with those based inside Alaska. Once all of these factors have been considered, the total allowable catch (TAC; now called the annual catch limit) is derived from the optimum

yield, and is simply the total amount of fish that is allowed to be harvested for a given time period.

In the case of pollock off Alaska, NMFS scientists use complex models and survey data to determine pollock biomass and to recommend an ABC and overfishing limit for the coming year. The proposed ABC and overfishing limit are reviewed by NPFMC appointed committees called Plan Teams. The models, recommendations, and Plan Team opinions are reviewed by the Science and Statistical Committee, which provides the Council with specific recommendations for ABC and overfishing limit. Based, in part, on input from the Advisory Panel, the Council specifies the TAC. In addition to the general guidelines detailed in the MSFCMA, the BSAI groundfish FMP (NPFMC 2009) established an aggregate annual cap of 2 million metric tons of groundfish harvests in the BSAI. The council must factor this into their decision as they determine the TAC for each species covered under the FMP. In addition to setting the TAC, the Council establishes limits for target and incidental catches of each species.

With the fishery management structure in place, policies that implement the FCMA (1976) goal of Americanization of U.S. EEZ fisheries began. In 1976, at the time of passage of the FCMA, nearly 1.2 million metric tons of pollock were taken from the BSAI by foreign fleets, with 76% of that amount harvested by Japan, 15% by Russia, 7% by South Korea, and 2% by other nations. By giving domestic fishermen first priority for fish, the FCMA was intended to encourage development of a domestic fleet to harvest species such as pollock, with the goal of phasing out the foreign fleets. It turned out that this was to take longer than expected. Indeed, by 1979—three years after the implementation of the Act—only 1% of the TAC of BSAI groundfish was harvested by domestic fishermen, and there were no significant domestic processing operations. Over the same time, the makeup of foreign harvests shifted somewhat, with the Japanese harvest share increasing to 82%, at the expense of Soviet harvests which decreased to 6%. The Soviets were eventually squeezed out of the U.S. EEZ pollock fishery as the allocation of foreign fishing permits was used to reward Japan and other U.S. allies (Natural Resources Consultants 1981).

## Fish and Chips Policy

The initial slow pace of Americanization of BSAI groundfish fisheries has been attributed to subsidies that were available to the foreign fleets and to the lack of similar subsidies for domestic fishermen, as well as Japanese trade barriers. While construction of factory trawlers and motherships (such as those used by foreign fleets) required substantial financial resources, similarly large investments were made in the construction of vessels for use in the booming king crab fishery.

Instead of switching to pollock and other low-value species with unfamiliar international markets, domestic fishermen focused their effort on crab and other high-value fisheries with well-established domestic markets. Trawling, the harvesting method used for pollock and most other groundfish species in the BSAI, was unfamiliar to many domestic fishermen; moreover, some crab vessels required modifications before they were able to trawl and crab harvests were reaching an all-time high (NPSC 1990; NMFS 2002; W. Pereyra, personal communication; J. Gruver, personal communication).

To encourage expansion of domestic fisheries in the BSAI and elsewhere throughout the U.S. EEZ, Congress directed NMFS to introduce a "fish and chips" policy. The policy linked future access of foreign nations to U.S. EEZ fisheries to their efforts to assist in the development of the U.S. seafood industry, through purchases of fish harvested by U.S.-flagged vessels and through investment in shore-based processing facilities. Congress and NMFS instituted a variety of additional programs from the late 1970s through the 1980s to encourage Americanization of pollock and other EEZ fisheries. One of the first such programs was approval of joint-venture operations: arrangements where U.S.-flagged catcher boats delivered their harvests to foreign processing vessels. In February 1978, NMFS announced a policy that would allow joint ventures if domestic processors had neither the "capacity" nor the "intent" to buy the fish that were to be processed by the foreign processors. This ruling was overturned when NOAA general counsel determined that the Secretary of Commerce did not have authority, under the FCMA, to deny foreign processors permits to buy U.S.-harvested fish—regardless of whether the United States also had the capacity and intent to utilize the resource (NOAA 1978).

In 1978, Congress overcame this ruling by passing the Processor Preference Amendment (Processor Preference Amendment 1978), which gave domestic fishermen and processors prioritized access to EEZ fish through formation of a three tier system. Highest priority was given to Domestic Annual Processing (DAP), which was reserved for U.S.-flagged fishing vessels that sold fish to domestic processors and to domestic fishermen who harvested and processed their own catch. Annual estimates of DAP were based on the expected level of domestic production, with any remaining amount between the TAC and the DAP set aside to the next-level priority: Joint Venture Processing (JVP). This level was reserved for U.S. flagged catcher vessels that delivered their catch to foreign-flagged motherships and factory trawlers. Any portion of the TAC remaining after DAP and JVP allocations were determined was to be made available to foreign catcher boats and catcher/processors as the Total Allowable Level of Foreign Fishing (TALFF).

Before passage of the Processor Preference Amendment, the entire pollock TAC qualified as TALFF. In 1978, there was no JVP or DAP allo-

cation; foreign fleets harvested all the pollock in the BSAI. Japan alone had six pollock motherships, along with 62 pair trawlers, 23 large trawlers, and 103 medium trawlers that operated in the BSAI to catch 779,049 metric tons of pollock (NMFS 1983, 2002). It was the goal of Congress to have all fish allocated to the JVP and DAP sectors, and with this amendment it was hoped that there would be some domestic development.

The next major "fish and chips" regulation was the American Fisheries Promotion Act (American Fisheries Promotion Act 1980), which Congress passed in 1980. The AFPA codified the "fish and chips" policy by putting into law four new criteria to be considered in the apportionment of TALFF allocations. The first criterion considered the degree to which a foreign nation imposed onerous trade barriers against U.S. fishery products; Japan was particularly reprobate in this regard, and it was hoped that AFPA would help open Japan's market to U.S. fishermen. The second criterion favorably recognized foreign purchases of fish products from U.S. vessels and processors, which reinforced a shift from TALFF to JVP. The third criterion penalized nations that reexported processed catches from the U.S. EEZ back into the U.S. market. The fourth criterion favorably recognized foreign investment in the U.S. seafood industry. The AFPA also gave regional fishery management councils authority to phase out TALFF allocations. Although this rule was never used, it emphasized that if foreign countries did not participate in the development of the U.S. fishing industry, their allocation of fish would be tenuous at best (NPSC 1990).

In addition, NMFS implemented a 100% observer coverage requirement for all foreign fishing vessels that operated in the U.S. EEZ. Foreign vessels were required to have a NMFS-approved observer on board their vessels at all times, to monitor the catch and the processing of fish. This ensured that foreign fleets were not overharvesting and misreporting catches, and it allowed for better monitoring of bycatch. Costs of the observer program were recovered through increased permit fees to all foreign vessels (National Research Council 1999b).

The early 1980s also witnessed the first significant dispute between the offshore (factory trawlers, motherships, and aligned catcher boats) and the inshore (shore-based processors and aligned catcher boats) sectors. The dispute started in 1982, over whether to create a fishery development zone near Unalaska in which only domestic fishermen could operate (NPFMC 1982a). This was designed to address concerns that foreign factory trawlers fishing in nearshore fishing grounds adversely affected fishing vessels that delivered to inshore processors. The fishery development zone would have aided catcher vessels that delivered to Dutch Harbor and favored development of the inshore sector (NPSC 1990).

The Regulatory Impact Review that accompanied the proposed amendment noted that there is

> … ample, though conflicting, testimony about the existence of the gear conflict problem. American fishermen have maintained that there is a significant problem, while foreign fishery interests argue there is no problem. (NPFMC 1983a)

After analyzing the number of foreign factory trawlers, the Regulatory Impact Review determined that

> … clearly, given the mobility of these trawlers and their efforts on localized concentrations of pollock (they have been likened to gigantic vacuum cleaners), these represent high densities of foreign trawlers which could effectively preclude domestic interest in utilizing the area. (NPFMC 1983a)

In September 1982, the NPFMC passed the amendment, but it was subsequently overturned by NMFS due to procedural issues. Not wanting to create any problems that could affect their portion of TALFF, foreign fleets voluntarily refrained from trawling in the fishery development zone area. Thus the fishery development zone became a de facto domestic-fishing area (NPSC 1990).

## Joint Venture Era

Because there was no domestic processing of pollock during the early "fish and chips" era, and because JVP received priority over TALFF, the number of joint venture operations grew quickly. Fishermen who participated in the joint venture fishery recount that U.S. government representatives "suggested" that TALFF applicants support development of joint venture operations. By "suggestion," it was implied that TALFF would only be forthcoming for nations that supported development of the joint venture sector. Indeed, in 1980 U.S. officials withheld Japan's share of TALFF until its fleet agreed to purchase more fish from U.S.-flagged catcher boats. To support fishermen and their foreign counterparts, the Alaska Pacific Seafood Industry Coalition was formed in 1983. Founded by a group of U.S. harvesters and processors operating in the North Pacific, it allowed "industry-to-industry" agreements with their Japanese counterparts. In exchange for a Japanese agreement to buy U.S.-harvested fish, the Alaska Pacific Seafood Industry Coalition delegation supported the full and timely release of TALFF allocations to Japan.

"Fish and chips" policies were not the only reason joint ventures flourished; the misfortunes of another prominent fishery contributed to the rise of the domestic pollock fleet. The eastern Bering Sea king


**F/V *Arcturus* and F/V *Aldebaran*, Unalaska, July 2009. Keith Criddle**

crab fishery was very lucrative throughout the 1960s and 1970s, and consequently it attracted ever-increasing numbers of vessels. Much of this growth was attributable to Seattle-based first-generation Norwegian immigrants, who by the late 1970s owned about 50% of the crab fleet. This same group subsequently played a key role in the Americanization of the at-sea sector in the pollock fishery. The 1980-81 season marked the peak of the king crab fishery (Tillion 2003; Hornnes 2006; J. Gruver, personal communication).

Crab fishermen returned the following year to greatly reduced catches: the king crab stock had collapsed. Out-of-work crab boats lined the wharves of Seattle, so fishermen looked for new opportunities. Many house-forward crab boats had stern ramps and the ability to haul nets onto their decks. Using government-backed loans, they were able to upgrade their engine horsepower enough to be suitable for use as "catcher vessels" in the groundfish trawl fisheries where they delivered to inshore processors or participated in joint ventures with foreign motherships and catcher/processors (Tillion 2003; J. Gruver, personal communication). Newer crab vessels, built with the idea of that they could be converted to trawlers, were able to smoothly make the transition to pollock (W. Pereyra, personal communication).

This period of rapid growth for joint ventures was exciting for those involved. Many ex-crabbers had no trawling experience and underwent a steep learning curve before becoming proficient. The first issue many

vessels faced was the operation of the nets—they had to learn how to keep the mouth of the net open at the proper depth, and where and how to avoid snags on the ocean floor. Fishermen also had to learn how to find the fish and to determine how many fish had entered their net. Experience, more than any other factor, taught fishermen where to tow and how long to tow. During the learning process, fishermen traded the risk and expense of hauling in half-empty nets against the risk of overfilled nets, which split and spilled their catch while being hauled aboard. Knowledge spread through the fleet as skilled crewmembers were hired away from the vessels where they had gained experience (J. Gruver, personal communication).

Domestic fishermen also learned from their Japan partners. Captains often turned to fishing masters aboard foreign processing vessels to learn more efficient trawling techniques. As might be expected, it was advantageous for processing vessels to assist their new partners. The quicker domestic fishermen learned the ins and outs of trawling, the less time the processor would spend waiting for deliveries. Split nets or difficulties transferring codends could lead to down time in the fish processing factory, and cost the processors. As a result, foreign partners, especially Japanese partners, were important to the development of the domestic trawl fleet; they purchased the catch and transferred knowledge needed by the young trawler fleet (J. Gruver, personal communication).

Over time, catcher vessels took advantage of new developments in technology. One reason they overfilled their net was they didn't know what was in them, and in spite of having experienced fishermen on the vessel, blowing out nets was common. New improvements in nets, such as the use of double twine for the nets, significantly reduced the problem of net tears. This allowed boats to take in more fish and worry less. Advancements in sonar proved invaluable as well. "One of the greatest advances was an improved (net) sonar, produced by Simrad, which allowed fishermen to see up and down. This allowed us to see what was going into the nets," said John Gruver, a pollock fisherman. Fishermen were also aided by the development of "eggs" (load sensors), attached to the codend, which allowed the captain to determine whether the net was full (W. Pereyra, personal communication). Catcher vessels could now determine the size of their catch, and when to stop fishing (with the assurance that the net was not empty or overfull).

Catcher vessels operated no farther than a one-hour run from their motherships, and delivered their codends on a regular cycle. With fuel and supplies delivered at sea, the four-man crews on catcher vessels could fish for nine to 11 months a year and annual earnings were high. The fishery attracted newcomers from far away. "We would go out fishing, and we would see new tugboats from Mexico that had just started fishing with no prior experience," said Gruver (NPSC 1990; J. Gruver,

personal communication). The number of groundfish joint venture vessels grew from 14 in 1980 to a peak of 127 in 1987 (Figure 2.2). Harvests of pollock from joint venture operations jumped from 58,000 metric tons to a peak of more than 1 million metric tons in 1987 (Berger et al. 1986; Figure 2.3).

## Initial Development in the Domestic Groundfish Processing Sector

While "fish and chips" policies successfully promoted joint ventures, there was little progress in the development of a domestic processing sector for pollock. From the 1880s on, there had been significant domestic investment in western Alaska for processing salmon, herring, and crab; however, domestic firms had yet to make meaningful investments in shore-based or at-sea processing of pollock and other groundfish from the Bering Sea. Unlike joint ventures, where there was an excess supply of vessels from the collapsed crab fishery, there was no surplus stock of factory trawlers or excess processing capacity looking for new opportunities. Furthermore, investment in a factory trawler or shore-based plant was an order of magnitude more expensive than investing in the retrofit of a catcher boat. Domestic processors had little to no experience with processing pollock into surimi products—the primary product of pollock at that time. In the early 1970s, when Icicle Seafoods Corporation tried an experimental processing plant in Petersburg, Alaska, it was unsuccessful and closed (NPSC 1990).

Development of shore-based processing facilities focused on groundfish. Trident Seafoods Corporation, Universal Seafoods, Inc., Johansen Sea-Pro, and Jangaard Fisheries all began processing groundfish, primarily Pacific cod, from shore-based processing facilities in Unalaska and Akutan. Trident alone processed 40 million pounds of groundfish in its first year, before the plant was destroyed by a fire in spring 1983 (Hilderbrand 1986a; NPSC 1990). During these early years, pollock was not often processed at Alaska shore-based facilities, since there was a limited domestic market for pollock fillets and U.S. processors lacked surimi technology (NPSC 1990; Onstot 2008). As a result, only 129 metric tons of pollock was reportedly processed by shore-based processors in 1982 (NPSC 1990).

At the same time that domestic shore-based processors began to venture into groundfish processing, there was also an initial effort to develop domestic at-sea processing. John Sjong and Konrad Uri, Seattle-based Norwegian-Americans who participated in joint ventures, saw Japan and other foreign countries use factory trawlers to harvest fish in the North Pacific. Sjong said, "I knew that in Norway there were some factory trawlers, and they were the only part of the fishing industry over there that wasn't subsidized by the government, and [I] knew

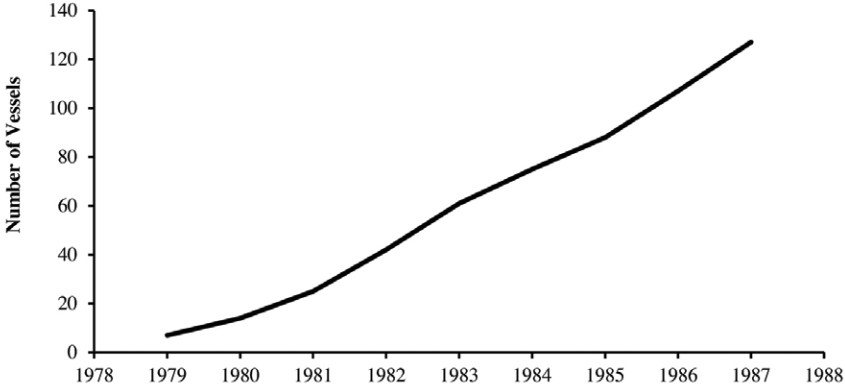


**Figure 2.2. Number of pollock joint venture fishery vessels. Source: NPSC 1990; NMFS 2002.**

they were making money. If they could do it, why couldn't we?" (Sjong 2003). With financial backing from Erik Breivik, a successful Norwegian factory trawler owner, Sjong and Uri purchased the factory trawler *Seafreeze Atlantic* for $6 million. The *Seafreeze Atlantic* had fished the Atlantic side of the United States, Greenland, and Norway for two years after its construction in 1968. It was not very successful, so in 1971 it was laid up on the East Coast. At the time the *Seafreeze Atlantic,* and its sister ship *Seafreeze Pacific,* were the largest U.S.-flagged fishing vessels. Renamed the *Arctic Trawler,* the vessel left Seattle on 14 May 1980 with Breivik acting as the "fishing skipper," since American rules did not allow a non-U.S. citizen to formally captain a U.S. vessel. The trawl bosun was Kjell Røkke, who later founded American Seafoods. The *Arctic Trawler* had little initial success. "[We] didn't catch anything for two months," Uri said. "It was sad and sadder. We were gone two months, and [then] we found a tremendous amount of fish" (Uri 2003). They had stumbled on dense quantities of Pacific cod and brought home two million pounds of boneless, skinless fillets in little over a month.

Due to financial problems, Uri and Sjong sold the *Arctic Trawler* in 1987. They wanted cod, but primarily caught pollock. The smaller pollock was difficult to process into fillets and even more challenging to sell (Hornnes 2006). Additionally, there was a limited U.S. market for U.S.-processed Pacific cod fillets, since Pacific cod was less desirable than Atlantic cod (W. Pereyra, personal communication). "The marketplace wasn't there," Sjong said. "People were not used to buying their fish this way. It wasn't best to be number one" (Sjong 2003). American consumers were skeptical because U.S. whitefish products had tradi-

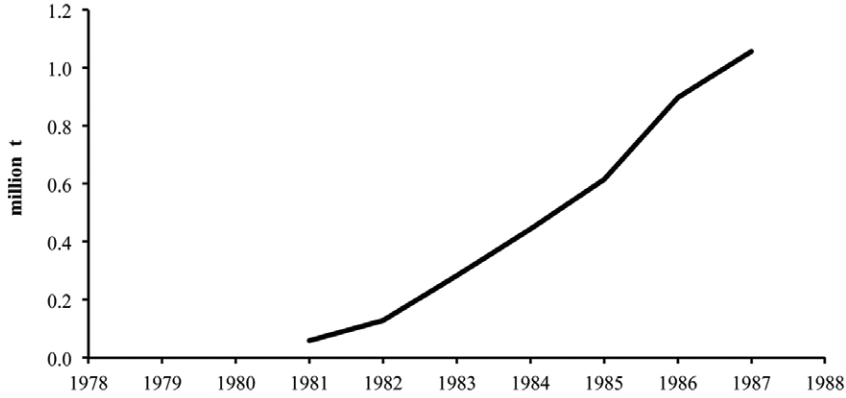


**Figure 2.3. Pollock joint venture harvests (million metric tons). Source: NPSC 1990; NMFS 2002.**

tionally been of poor quality. To top it off, the market was flooded with subsidized exports from Canada. This left little room for new product (Hornnes 2006).

Since domestic processors had difficulty marketing cod fillets, it seemed even less likely that they would be successful with the smaller, more abundant pollock. Further difficulties remained with the production of different product forms; while domestic processors knew how to fillet fish, they lacked experience producing pollock surimi and the Japanese were reluctant to share surimi production technology (Hornnes 2006). There was also a question about the viability of inshore surimi production. Fresh fish is essential to surimi production, and it was unclear whether surimi produced from fish held onboard for up to 48 hours could compete with surimi produced at sea (NPSC 1990). These limitations, combined with Japanese trade barriers, kept U.S. processors from entering the Japanese surimi market (Hornnes 2006).

## Domestic Inshore Pollock Production

Initial attempts to process cod may not have been very successful, but they were important because they set the stage for what came next. Pollock, much more abundant than cod, seemed to hold the greatest potential for future domestic production—if a profitable market could be found for the fillets and/or if U.S. processors could learn the secrets of surimi production and break through Japanese trade barriers. During the early 1980s, the tide turned as U.S. markets became more receptive

**UniSea seafood plant, Unalaska, July 2009. Keith Criddle**

to seafood, including whitefish. Marine Resource Consultants was able to reprocess Soviet pollock in Korea for sale into the U.S. fillet market. From 1982 to 1987, the U.S. consumption of seafood increased by 22%. This led to an increased demand for whitefish products—particularly Atlantic cod fillets. Through 1984, the supply of Atlantic cod kept up with the strong demand through rising imports and increased domestic catch. Over time, however, imports declined and domestic production failed to keep pace with consumer demand. Buyers were forced to look for substitute whitefish products, and pollock gained acceptability (Hornnes 2006).

At the same time, the demand for surimi also grew. In 1984, the Alaska Fisheries Development Foundation experimented with the production of surimi at the Alaska Pacific Seafoods plant on Kodiak Island. Between 1982 and 1987, nearly $4 million was spent on the Alaska Pollock Surimi Industry Development Project. The project focused on two goals: first, to develop domestic capability to produce surimi; and second, to increase U.S. demand for surimi products (Holmes 1987; NPSC 1990).

In addition to marketing and research from the U.S. industry, U.S. processors were aided by further "fish and chips" policies. With domestic processing capacity of pollock nonexistent through the early 1980s, increased pressure was placed on Japan in the mid-1980s to invest in the U.S processing industry. The MFCMA was amended in 1984 to

**Alyeska seafood plant, Unalaska, July 2009. Keith Criddle**

emphasize that allocations of TALFF should be based on a nation's purchase of U.S.-produced fishery products. The amendments further clarified that the United States was not required to allocate its surplus fishery resources to foreign nations. After the passage of the 1984 amendments, industry-to-industry negotiations led the Japanese fishing industry to agree to purchase 35,000 metric tons of processed fish from U.S. processors in 1985. However, this turned out to be a problem for Japan, because no U.S. operators produced surimi and the demand for pollock fillets in the Japanese market was so low that the Japanese failed to meet their purchase commitment.

Intense criticism from the U.S. industry and pressure to hold up Japan's TALFF allocation led Japanese companies to invest in two U.S. shore-based seafood processing plants in Unalaska. The first was UniSea, built by Nippon Suisan Kaisha, Ltd. The second plant, Alyeska Seafoods Corporation, had three owners: two Japanese companies, Taiyo Fisheries and Marubeni; and the U.S.-based Wards Cove Packing Company. The Alyeska plant was designed to process seafood 270-300 days a year and began processing in 1984 (A. Brindle, personal communication). Under continued pressure from the United States, the UniSea plant began producing surimi in 1985, and the Alyeska plant began producing surimi in 1986. In return for these infusions of capital and technical capacity, the Japanese expected support for full and timely releases of Japanese allocations of TALFF (NPSC 1990).

At the same time, Trident Seafoods began a plant expansion that allowed them to be the first truly domestic inshore operation willing to take a chance on pollock fillets. Chuck Bundrant, with the help of Kaare Ness, built Trident from the ground up. Bundrant got his start in 1961, when he went to Alaska for the summer to earn money for college in Tennessee. He stayed in Alaska. Alaska fishing-industry lore has it that he slept that first summer under a boat on the docks in Bristol Bay and took any work he could get on the boats and in seafood processing facilities. Bundrant did well, and after a few years he looked for new ways to make money fishing Alaska waters. His first venture, a partnership with Ness, was the purchase of a crabbing vessel that they paid off in full after only three months of fishing (Onstot 2008).

Bundrant continued to look for the most profitable fishing methods. At that time, most crab fishermen delivered their catch to processors who processed and sold the product. Bundrant decided to eliminate the middleman by freezing the crab at sea and selling directly to seafood wholesalers. He pooled his money with other fishermen—including Ness—to buy the *Billikin*, a 135-foot vessel. His company, Trident Seafoods, grew out of that investment and the concept of harvesting and processing crab at sea. The gamble paid off handsomely two years later, when crab vessel crews went on strike over low ex-vessel prices offered by processors. The *Billikin* continued to catch and process crab, which it sold directly to wholesalers. Since no one else was fishing, Trident had the advantage of high market prices and high catches. Earnings from that year allowed Bundrant to continue to expand his fleet (Onstot 2008).

To take advantage of the vast groundfish resources, Bundrant decided to build a processing plant near the fishing grounds to take deliveries of crab and cod from his growing fleet of catcher vessels. The plant was built at Akutan, between Unalaska and Unimak Pass, next to a village of only 60 people. It was an ideal location, with a deep, sheltered harbor and no distractions for plant employees. More importantly, it was close to the Slime Banks, a very productive fishing ground, and it was only six hours by boat from Unalaska. Trident produced 40 million pounds of salted cod in 1982-1983, but lacked U.S. buyers. Bundrant tried to export to European markets, but struggled to find buyers. According to corporate lore, he traveled across Europe and was turned down by buyer after buyer. With one more stop on his trip, he made a deal with God that if he were able to sell the cod, he would repay him in the future. At the next stop, Bundrant sold the entire load of cod and saved the plant. As the story goes, he repaid God by building a large church in the town of Akutan, where the plant is located. Even with the large sale, Trident lost money processing cod (Hilderbrand 1986b).

The Akutan plant burned down during the 1983 fishing season, but it was rebuilt in time for the latter half of the 1984 season. With the crash in the crab fishery, groundfish production became even more

important. The plant initially focused on cod because the fillet machines were not designed to handle pollock, which are smaller fish. Shortly thereafter, advances in filleting technology permitted Trident to begin producing pollock fillets. The Baader 182 filleting machine—with its new, less labor-intensive technology—deboned most of the smaller pollock without high-cost human labor. In addition, pollock was much more abundant in the Bering Sea than Pacific cod and studies indicated that switching to processing pollock instead of cod could be extremely profitable. Trident estimated that a switch from cod to pollock would change a net loss into an estimated profit of nearly 35% (Hilderbrand 1986b).

Bundrant still needed to find a market for pollock fillets. Although cod imports and production were not keeping up with the increased U.S. seafood demand, pollock still had not gained widespread acceptance. Bundrant was a gambler; he took a chance on cod and found buyers when it had seemed impossible, so taking a chance on pollock seemed like the next step. Joe Plesha, currently legal counsel for Trident Seafoods, recounts a meeting he attended with Japanese fishing interests and Alaska Senator Frank Murkowski in 1983. As a Murkowski staff member, Plesha was surprised to learn that Japan took 2 billion pounds of pollock off Alaska's shores annually. He asked why American consumers weren't interested. "It's a trash fish," they responded. American boats didn't have the ability to trawl for pollock, and they lacked the capacity to produce blocks of minced fish or surimi. The Japanese told Plesha the only American trying to participate in the pollock industry was Bundrant, but he wouldn't be successful. "That's the first thing I heard about Chuck," says Plesha, "He'll never make it" (Onstot 2008).

Bundrant made additions to the Akutan plant and added equipment for processing pollock in time for the 1985 fall fishing season. He still needed to find a market for the "trash fish." A potentially huge profit was nothing if there was no one to buy the fillets. His major break came when he got executives from Long John Silver's to visit the Akutan plant. David Abbasian, the current Akutan plant manager, cooked frozen pollock for dinner. The executives thought the product was fresh and were impressed that the frozen product was of such high quality. Long John Silver's signed a multimillion-dollar contract to provide breaded, frozen whole pollock to the chain. Although certain seafood companies (Mrs. Paul's Kitchen, Van de Kamps, and Gorton's) had already begun to use pollock in some of their fish sticks and other products, this was a breakthrough. "That was the first big, big major contract to introduce pollock to the U.S. market," Abbasian says. Other fast-food chains, such as McDonald's and Burger King, soon switched from Atlantic cod to the less expensive, more abundant pollock. Trident created a domestic market for the pollock fillet, which opened up new opportunities for domestic pollock processing (Onstot 2008; D. Abbasian, personal communication).

## Domestic At-Sea Production

With Trident's success in the U.S. fillet market and Japanese investment in Alyeska and UniSea for surimi production, the inshore sector capacity had blossomed. At the same time, investment began in the domestic at-sea sector. Although the *Arctic Trawler's* venture into the Pacific cod fishery had not been financially successful, the designers and investors in that venture saw the potential of factory trawlers in the pollock fishery. The company formed to design and build the *Arctic Trawler,* Maritime Technical Consultants Corporation, worked with a group of investors to construct the first domestic pollock factory trawler. The financiers included Erik Breivik, John Boggs, and Rick Hastings, prior owners of the *Arctic Trawler*, along with additional Norwegian and Norwegian-American crab fishermen. Together they raised $5 million in equity toward building a new vessel to fish for pollock (Hornnes 2006). But it was difficult to find backers for the remaining $7 million that was needed. U.S. banks had suffered losses from the crash of the crab fishery and were reluctant to provide vessel construction loans. "I think I talked to all bank directors and vice presidents from California to Seattle," recalls Lars Aage Eldøy, a shipbuilder and one of the founders of Maritime Technical Consultants Corporation. "They always needed more documentation about the fishery, prices, budget and so on." The problem wasn't solved until Eldøy went on vacation and met the director of the local Sunnmørsbanken in Alesund, Norway; one meeting later Eldøy was informed that the $7 million loan had been granted (Hornnes 2006).

The factory trawler *Northern Glacier* was built from scratch at J.M. Martinac Shipyard in Washington in 1983. Although the *Northern Glacier* was originally fitted to process cod, the sheer amount of pollock in the Bering Sea led Breivik to invest in a new Baader processor built to fillet pollock. Unfortunately, the machine was designed to process small pollock typically caught in the Russian fishery and it had problems filleting BSAI pollock. Breivik recalls that he and a Baader technician decided to modify the head-section. "He split the processor, and it was immediately successful. That triggered the run for pollock over here." The *Northern Glacier* pioneered the production of "frozen-at-sea pollock" fillets, and its success triggered significant investment into the domestic at-sea processing sector (Hornnes 2006).

The *Northern Glacier* was the first U.S. at-sea processor to focus on pollock, but more ships quickly followed. The next to invest was Kjell Røkke, another participant in the *Arctic Trawler*. According to John Sjong, Røkke made a name for himself while working on the *Arctic Trawler*: Sjong recounted a time when the net split and Røkke ran onto the net, pulled out a needle, and saved the catch. "He was 100 feet off the back of the boat, sitting on a bag of codfish, and he saved the load." (Sjong 2003). Coming from Norway with nothing, Røkke saw potential


**C/P *Northern Glacier*, Seattle, May 2007. Keith Criddle**

in the enormous pollock resource. After spending two and half years working on the *Arctic Trawler,* he managed to buy a small trawler and establish his own company in 1982. Røkke and shipyard owner Bob Breskovich became partners and started investing in vessels together. With a few trawlers in operation, they decided to purchase a vessel able to process pollock. According to friends, Røkke had a way with bank officials (J. Jacobs, personal communication). After negotiations with a London-based bank, the partners bought a processing vessel for $3.5 million. Financed by British and Indian capital, Breskovich and Røkke were able to acquire the vessel 99.9% on credit (Hornnes 2006). They renamed it *Golden Alaska* and used it as a mothership for their trawlers (NMFS 2002). The *Golden Alaska* joined the fishery in 1985 and turned a profit in its first year (Hornnes 2006).

Most pollock was still processed through foreign joint ventures, which left significant room in the pollock fishery for additional domestic processing vessels. The introduction of the *Northern Glacier* and *Golden Alaska* signaled future opportunities in the domestic at-sea processing sector. U.S. banks, however, were not willing to provide capital needed for the construction of factory trawlers, so those looking to expand operations turned elsewhere for investors and loans. Investors in the *Northern Glacier* were primarily Norwegian-Americans, so they turned to Norway where banks and investors were familiar with factory trawlers. Since additional investment was to come from Norway,

the investors preferred that the ships be built or rebuilt in Norwegian shipyards, which had significant experience converting vessels into factory trawlers and where export subsidiaries promoted shipbuilding (Hornnes 2006).

Before more vessels were introduced to the pollock fishery, however, there was some concern as to the legality of foreign investment and construction of U.S. fishing vessels. The United States requires that vessels pursuing commercial activities in U.S. waters have a U.S. certificate of documentation, which includes endorsements to pursue specific commercial activities. Four kinds of endorsements are available under U.S. maritime law, two of which were relevant to the Norwegians and the pollock fishery in Alaska. The first is a coastwise endorsement, which is required for vessels engaged in trade between U.S. ports. To obtain a coastwise endorsement, a vessel must comply with strict construction, rebuilding, and ownership standards as defined in statutes in the Jones Act of 1920. The coastwise endorsement in the Jones Act also requires 75% U.S. ownership in the vessel. If a coastwise vessel was substantially rebuilt abroad, it lost coastwise privileges. The second type of endorsement is the fishery endorsement, which is required for U.S. vessels fishing in all navigable waters of the United States and the EEZ. Fishery endorsements are subject to more lenient rebuilding and ownership standards. At the time, a fishing endorsement required the vessel to be owned by a U.S. citizen or a U.S- registered company; however, it did not require U.S. ownership of the stock of the company. It also allowed more rebuilding abroad (NMFS 2002).

Until 1980, U.S. fishing vessels were required to have both coastwise and fishery endorsements. However, in 1980 it was determined that fishing vessels that only operated in the EEZ did not need coastwise endorsements. This opened opportunities for fishing vessels to obtain substantial financing from Norwegian investors. The only requirement was that officers and directors, as well as a majority of the board of directors, be U.S. citizens. That is, all the stock could be owned by foreigners; the investors merely had to set up a "shell-corporation" in the United States. According to Eldøy of Maritime Technical Consultants Corporation, the person employed as office manager was the head of the board of directors in one of the companies established to own the vessels, and Eldøy had a cousin who held a similar position. Although much of the investment in the at-sea sector came from U.S. fishermen such as Uri, Sjong, Pereyra, and Ness, there was still substantial foreign investment into the factory trawlers that were converted. This allowed foreign nationals like Røkke to participate in the "Americanization" of U.S. EEZ fisheries, including the BSAI pollock fishery (Hornnes 2006; B. Myhre, personal communication).

In addition, not having to obtain a coastwise endorsement meant that fishing vessels could be substantially rebuilt abroad, return to the

United States, and regain U.S. documentation with full U.S. fishing privileges. Norwegian investors hired the Washington, DC-based attorney Bill Myhre to provide legal assistance to make sure that their vessels met all legal requirements. In 1986, Myhre was again hired to investigate whether it was possible for Norwegian investors to buy U.S. vessels, take them to Norway for conversions into factory trawlers, and then return them to the United States to fish in the U.S. EEZ. Through consultation with the U.S. Coast Guard authorities, the conversion in Norway of U.S. vessels to factory trawlers was deemed legal under then current law (B. Myhre, personal communication).

This set off a flood of vessel conversions. Between 1986 and 1990, 20 vessels were converted in Norway to function as at-sea processors in the BSAI pollock fishery (Table 2.1). The initial conversions were performed in close cooperation with U.S authorities. The first vessel, the *Seafreeze Pacific*, was taken to Norway for conversion on 3 September 1985. It was the *Arctic Trawler's* sister ship; after the conversion it was renamed the *Royal Sea*. Sjong and Uri, the original owners of the *Arctic Trawler*, were the primary investors. Four more vessels were soon converted. They included a former tuna vessel and three oil rig support vessels. The tuna vessel conversion was the *Snow King,* financed by Uri, Sjong, and Ness. The same three investors, aided by Pereyra's Profish International, paid for the conversion of the three oil rig support vessels. These were renamed the *Royal King*, the *Royal Prince,* and the *Royal Princess*. Substantial investment was needed for these conversions; each cost $8 to $14.6 million (Hornnes 2006; B. Myhre, personal communication).

Between 1986 and 1990, 11 more conversions were financed with Norwegian equity. Breivik, who had taken part in the investment of the *Northern Glacier*, converted a supply vessel into a combined surimi and fillet factory trawler called the *Pacific Glacier* for his company, Glacier Fish. Emerald Seafoods, a company backed by Norwegian investment, partnered with Korean investors to refit three factory trawlers—the *Claymore Sea*, the *Heather Sea*, and the *Saga Sea*. This partnership hoped to gain access to surimi production in two of the vessels. Røkke, after selling his ownership in the mothership *Golden Alaska*, financed three factory trawlers between 1988 and 1990—the *American Dynasty*, the *American Empress*, and the *American Triumph*. Røkke took his conversions further than most companies; he stripped down a majority of the old vessels and completed nearly all the work in Norway (Hornnes 2006).

**Table 2.1. Norwegian rebuilt vessels introduced into the pollock fishery (Hornnes 2006).**

| Main investors | Vessel name | Shipyard | Delivery date |
|---|---|---|---|
| Sjong, Uri, and various partners, including Ness | *Royal Sea* | Batbygg | 31 May 86 |
| | *Snow King* | | 14 Aug 87 |
| | *Royal Prince* | | 19 Dec 87 |
| | *Royal King* | | 28 Apr 88 |
| | *Royal Princess* | | 28 Apr 88 |
| Breivik and Co. | *Pacific Glacier* | Mjellem and Karlsen | 01 Jun 88 |
| Saekvik and Co. | *Crystal Viking* | Ulstein | 15 Jul 88 |
| | *Crystal Clipper* | | 01 Nov 88 |
| Saetremyr and Ervik | *Claymore Sea* | Soviknes | 01 Aug 88 |
| | *Heather Saga* | Kvaerner-Kleven | 01 Mar 89 |
| | *Saga Sea* | Soviknes | 01 Jun 90 |
| Røkke, Mogster, and Togersen | *American Empress* | Aukra | 20 Dec 88 |
| | *American Dynasty* | Ulstein | 01 Jul 89 |
| | *American Triumph* | Langsten | 21 May 90 |
| Morgan, Nicolov, and Japanese partners | *Northern Eagle* | Ulstein | 01 Mar 88 |
| | *Northern Hawk* | | 01 Jun 88 |
| Remoy | *Orion* | Myklebust | 08 Nov 88 |
| Huse and Sporesem | *Ocean Rover* | Langsten | 09 Dec 89 |
| Jeff Hendricks | *Alaska Ocean* | Ulstein | 01 Jun 88 |
| North American Partnership | *Ocean Phoenix* | Batbygg | 01 Jan 89 |


**C/P *Northern Jaeger*, September 2006. Keith Criddle**

Interest in conversions was not limited to foreign investors; American interests contracted for Norwegian rebuilds of three factory trawlers and a mothership. Pereyra, through Profish International, and a group of Norwegian-Americans invested in the *Ocean Phoenix,* a 640 foot ex-container ship. It became the largest fishing vessel in the United States, serving as a mothership to process fish for its owners' catcher vessels. In addition, Oceantrawl, Inc., headed by Bob Morgan, invested in three foreign converted factory trawlers, with the *Northern Eagle* and *Northern Hawk* converted in Norway and the *Northern Jaeger* converted in Germany. Morgan, a former director of the Pacific Seafood Processors Association, a trade association to protect the interests of several shore-based processors in Alaska, was described as "the chief standard bearer for U.S. processors in the Americanization effort." (Hornnes 2006). When confronted about his decision to involve a Norwegian shipyard and a Norwegian bank to convert factory trawlers, he responded:

> Capital has no nationality. You have to differentiate between capital sources and control. If you're an entrepreneur, you get capital where it's available. (Hornnes 2006)

While a majority of factory trawler rebuilds were done in Norway, some conversions were done in the United States. In 1987, Pereyra, together with Korean investors and several Norwegian-American fisher-

men, formed Profish International and financed the conversion of the 1941-built gas oil tanker *OAG-I* into the factory trawler *Arctic Storm*. It was not only the first vessel of its type rebuilt in the United States (although some work was done in Korea), it was the first U.S.-flagged surimi factory trawler (W. Pereyra, personal communication; NPSC 1990). In addition, Arctic Alaska Fisheries converted several vessels into factory trawlers in U.S. shipyards, including the *Kodiak Enterprise, Island Enterprise*, *Seattle Enterprise*, *American Enterprise*, and *U.S. Enterprise.*

While surimi demand grew as Japanese and Korean markets opened up to U.S. imports, investment in factory trawlers was also fueled by rising domestic demand for pollock fillets. Bundrant opened the U.S. market for U.S.-processed pollock fillets, and during 1986 and 1987 the prices for pollock fillets increased rapidly as demand grew. This attracted new participants and additional investment from fishermen, aided by advances in fillet technology that allowed greater recovery and more automation. At the same time, surimi processing capability became more readily available. Factory trawlers now had the option to focus on fillets or surimi, or a combination of both, which allowed for a more profitable product blend. This combination of factors increased profitability of the pollock fishermen, and created a rush of investment into that sector (Hornnes 2006).

There are several reasons that much of the investment in rebuilt factory trawlers was completed in Norway and sponsored by Norwegian investors. One reason is that the process of converting the vessels in Norway was easy for investors. To build the factory trawlers, the "ideal" vessel was first identified. The "ideal" was a U.S.-built vessel that operated outside the United States for more than two years, which allowed it to avoid duties on new onboard equipment. The Maritime Technical Consultants Corporation would then purchase the vessels and find suitable investors. Loans generally came from Norwegian banks, and the vessels would be converted in Norwegian shipyards. It became a bundled process, where potential suitors were approached, terms were agreed to, and subsequent paperwork was a mere formality. Geir Ole Setremyr, co-owner of Emerald Seafoods, remarked that they were offered a package solution: "We were inquired about whether we were interested. The initiative came from Kâre Eikrem [shipbroker at Alesund Shipping]" (Hornnes 2006).

Another reason for Norwegian involvement was that Norwegian shipyards were more experienced and more efficient at fishing vessel rebuilds than their U.S. counterparts. Furthermore, Norwegian investors knew the shipbuilders in Norway and their experience with factory trawlers. Frode Igland, from the Norwegian Den Norske Bank remarked,

> I don't think that Norwegian investors would have had their vessels converted in U.S. shipyards. They prefer the Norwegian design and equipment. The United States had no experience in building factory trawlers. (Hornnes 2006)

U.S.-built vessels and shipyards were more expensive, partly because they didn't have to worry about competition from shipyards outside the country. U.S. fishing vessels cost up to 30% more than foreign-built vessels because U.S. fishermen did not have the option to purchase vessels from foreign shipyards (GAO 1976). With their experience and lower costs, Norwegian shipyards became the destination of choice for vessel conversions.

U.S. investors also benefited from favorable currency exchange rates. The Norwegian krone (NOK) was at a low against the U.S. dollar in the mid-1980s. This meant that U.S dollars bought more from Norwegian shipyards than they did from U.S. shipyards. For instance, in March 1985, when the dollar cost NOK 9.48, Sjong was able to get an $8 million loan to fully fund conversion of the *Royal Sea*. At that price, "It was a very cheap boat," especially when compared to the over $30 million that Røkke spent on some of his vessels only two years later. For Norwegian investors, it was not a problem that the exchange rate was in their disfavor, since they invested their currency in their nation's shipyards. As the dollar dropped steadily in the later 1980s, this advantage declined (Hornnes 2006).

In addition, Norwegian banks provided capital at terms U.S. banks were unwilling to match. U.S. banks were unwilling to take chances on the risky fishery sector. In Norway, however, it was a different story. Norwegian banks were familiar with the business of factory trawlers and were happy to offer the loans. The three largest business banks in Norway, Norske Creditbank, Christiania Bank og Kreditkasse, and Bergen Bank, increased their capital holdings by 150% between 1983 and 1987 by financing factory trawler conversions. Competition was so fierce that the Norwegian banks opened branch offices in Seattle to compete for business from the primarily Seattle-based fishermen (Hornnes 2006).

Perhaps the most important reason for Norwegian involvement was that Norwegian banks provided capital at interest rates subsidized by the Norwegian government. Subsidization of shipbuilding projects dates back to Japan in 1947, and resulted in all major shipbuilding countries offering subsidies by the 1960s in order to remain competitive. To understand how these interest subsidies work in the shipbuilding process, it is important to understand the two-step process by which vessel construction is financed. First, the ship owner pays a share up front, perhaps 20% of the price. The shipyard then finances the remaining construction costs by obtaining a construction credit from a bank. When the ship is completed, the ship owner obtains long-term collater-

alized loans to pay the shipyard's construction credit and finance the vessel (Hornnes 2006).

In 1982, Norway introduced new legislation involving export subsidiaries with the intent of supporting its shipbuilding industry. This new arrangement involved interest rate subsidies for shipyards as well as long-term credits to vessel owners. These were available for both domestic and export contracts. Long-term credits and interest-rate subsidies were soon supplemented by a cash-payment arrangement, in which the Norwegian government supplied much of the equity in the transaction to rebuild vessels. The interest rate subsidy, which was granted to shipyards, was then accepted by banks as equity. According to Pereyra, such subsidies financed 100% of the equity needed for the *Royal King*, *Royal Prince,* and *Royal Princess*, in which his company Profish International had a one-ninth interest.

# Chapter 3. Rise of the Inshore and At-Sea Sectors

## Anti-Reflagging Act

As the domestic at-sea sector ramped up construction of vessels through both domestic and foreign investment, certain U.S.-processing interests realized they were vulnerable to a different threat—the reflagging of ships by foreign countries. Under the Vessel Documentation Act of 1980, foreign-owned companies could reflag their foreign-built vessels as vessels of the United States and then transfer ownership to a U.S. shell corporation. In addition, American entities could purchase foreign-flagged vessels and reflag them as U.S. ships. By reflagging vessels, foreign companies received the same priority as U.S. companies for the Domestic Annual Processing (DAP) allocation, thereby circumventing the purpose behind Americanization. Initially, the primary concern was directed at the Japanese, who were involved in joint ventures and could have reflagged their motherships and provided competition to domestic processors.

U.S. processing interests expressed their concerns in a letter to several senators and congressmen, including Senator Stevens of Alaska, on 24 September 1986:

> The rapid increases in domestic harvests through joint venture fishing arrangements and domestic processing operations have drastically reduced foreign fishing (TALFF). Consequently, the large foreign fishing fleets which have been operating in the U.S. fishing zone are now faced with the prospect of reduced utilization of these foreign built vessels, many of which are fully amortized.... To counter this growing Americanization threat certain foreign fishing companies are now aggressively pursuing plans to maintain their control and pre-eminence in the fisheries off Alaska by forming majority owned "U.S. citizen" corporations for the purposes of acquiring U.S. flag harvesting vessels and/or reflagging their existing factory vessels as U.S. processing vessels. Several foreign fishing companies have taken such action. We expect others to follow suit in the near future. (Committee on Merchant Marine and Fisheries 1986)

The letter called for regulations "that a foreign built vessel cannot be documented as a 'vessel of the United States' for purposes of processing U.S. harvested fish" in the EEZ as well as regulations that "require that any U.S. documented vessel engaged in harvesting or processing fish" in the EEZ "be majority-owned and controlled by U.S. citizens" (Committee on Merchant Marine and Fisheries 1986).

The letter was signed by several industry groups. Trident Seafoods, the only majority-owned U.S. shore-based processor that had ventured into processing pollock, signed the letter, as the reflagging of foreign vessels could hurt their share of the allocation. In addition, other groups that represented U.S. catcher vessels, longliners, and other fishermen signed the letter in opposition to the reflagging loophole. The letter was also signed by the Alaska Factory Trawler Association (AFTA), which represented domestic factory trawlers in Alaska. At the time of the letter, only one factory trawler had entered the pollock fishery after being converted in Norway, and was owned by American citizens, Uri and Sjong. The last to sign the letter were representatives of the domestic shipbuilding industry. Their concern was that the reflagging loophole could reduce demand for U.S.-built vessels (Committee on Merchant Marine and Fisheries 1986; NPSC 1990).

To address these concerns, H.R. 5658 and H.R. 5662 were introduced to the House of Representatives 7 October 1986. H.R. 5658 excluded foreign built vessels, while H.R. 5662 amended maritime laws to prohibit documentation of foreign built or foreign-owned fish processing vessels. Additional bills were introduced over the next eight months, with most attention focused on preventing reflagging of vessels. Nevertheless, a majority of the testimony before the Senate Committee on Commerce, Science, and Transportation on 28 April 1987 opposed imposing any citizen ownership requirements on U.S. flag vessels, because many in the industry desired access to foreign capital. Before the House Merchant Marine and Fisheries Committee the following day, Delmar Smith of the American Waterways Shipyard Conference submitted testimony citing 21 examples of U.S. fishermen and processors who were unable to obtain financing in the United States to construct or convert U.S. vessels. The various bills were finally consolidated into one primary piece of legislation on 4 June 1987: H.R. 2598, commonly known as the "Anti-Reflagging Act."

Although the letter and original drafts of the Anti-Reflagging Act focused on reflagging foreign motherships as U.S. vessels, the important issue of foreign rebuilt vessels emerged shortly thereafter. The initial investment sparked concern from some competitors that failed to capitalize on the opportunity. Domestic catcher vessel owners, who primarily delivered to foreign motherships, would be affected, since domestic investment in factory trawlers would eliminate the Joint Venture Processing (JVP) allocation they relied on. Likewise, Trident and

other shore-based processors did not want the additional competition for the DAP allocation.

Shipbuilding unions also became increasingly concerned. As discussed before, Norwegian investors and the shipbuilding industry started a flurry of projects in 1986 and 1987, for at-sea processors in the U.S. EEZ, and that meant U.S. shipbuilders were missing out on millions of dollars of work. Testimony before the American Waterways Shipyard Conference indicated that:

> Within the past few months, several of these conversion jobs have been undertaken by Norwegian shipyards. When we first became aware of this, we were astounded that it could conceivably be cost effective to move these surplus supply vessels from the United States to Norway to do the conversion work. Based on our analysis and information, on an unsubsidized basis, the U.S. shipyards which have traditionally been involved in this work are very competitive with, if not cheaper than, yards who do the same work in Europe, particularly Scandinavia. This is especially true with the devaluation of the U.S. dollar and the strengthening of foreign currencies. In addition, the cost of conversion is increased by the cost of moving the vessels from the United States to shipyards in Europe and back, a cost which on a per vessel basis is estimated to be approximately $150,000.
>
> When we became aware of the fact that we were losing this conversion work to foreign shipyards in Europe, we investigated to determine how it could possibly be. The information we developed indicates to us the shipyards doing this work in Norway are offering significant subsidies, both direct subsidies for reconstruction work and subsidized financing. In fact, we are aware of one circumstance where a vessel owner was approached by representatives of a Norwegian shipyard and offered a significant subsidy to do the work in their shipyard. (NPSC 1990)

To protect their jobs, U.S. shipbuilding unions pushed for further regulations over and above those originally included in the letter. Shipbuilding interests documented 36 fishing industry vessel projects that had involved substantial foreign shipyard work. They pressed Congress for regulations that would prohibit the rebuilding of any U.S. fishing vessel in foreign shipyards. There was also an additional push from a shipbuilding group that wanted to develop in the North Pacific. According to Rod Moore, a former member of Congressman Don Young's staff, a group of U.S. investors, which included George Steinbrenner of the New York Yankees, offered to create a system of barges and develop

a "highway" in the North Pacific for the fishing industry—if favorable conditions were created. The same investment group also blocked a last minute insertion from Washington Congressman Mike Lowry that would have permitted the Norwegian conversion of U.S. vessels (NPSC 1990; Myhre 1998; W. Pereyra, personal communication).

Shipbuilding unions and shipyards became important drivers of new legislation. They promoted their desired legislation as the next step of "Americanization" in U.S. fisheries. And as long as there was a "grandfather" clause that permitted those already invested in foreign rebuilt vessels to participate in EEZ fisheries, there was little opposition. This was an important provision, for at this point, at least 24 vessels had been granted rulings from the U.S. Coast Guard to confirm their eligibility for fisheries endorsements after their foreign rebuilding projects.

It was, in fact, the U.S. government that stood to lose the most from this piece of legislation. In the 1970s, the United States implemented a loan guarantee program to promote offshore oil supply and delivery vessels. The program guaranteed 87.5% of loans, and with the crash in the price of crude in 1986, the government was left with a glut of vessels. The primary buyers of the docked vessels were fishermen looking for potential vessels for conversion, so proposed provisions eliminating foreign rebuilt vessels would eliminate the government's principal customers (B. Myhre, personal communication). In spite of these concerns, on 28 July 1987, the bill was amended to (1) prohibit fishing industry vessels rebuilt abroad from fishing in U.S. waters; and (2) require that controlling interest in corporations be held by U.S. citizens. However, it explicitly exempted currently documented vessels.

It was not until 4 August 1987, at the bequest of fishing interests trying to stall the ban on reflagging foreign vessels, that Senator Frank Murkowski introduced an amendment to the bill that required U.S. control of fish processing vessels. It was a measure that benefitted few fishery participants. A majority of the domestic factory trawler fleet was built either through foreign direct investment or financing. Shipbuilders wanted foreign capital to flow to new projects, as long as it went toward building or rebuilding vessels in the United States. Catcher vessels that delivered to foreign-owned processors did not want to lose their foreign buyers. It was believed that by introducing the unfavorable regulation at the last minute, the legislation would lose its primary supporters and the bill squashed. The amendment still grandfathered current owners and corporations, not the vessels, a distinction that would become a point of contention later on (Myhre 1998; B. Myhre, personal communication).

Senator Murkowski introduced the amendment to the Senate with the following statement:

> This provision will not remove the privilege of fishing from any person or company that is presently operating or that can demonstrate that it already has undertaken to purchase a vessel for use in the fishery. It simply ensures that future entrants are controlled by the interests of the United States, rather than those of other nations. This amendment is a needed—in my opinion, a mandatory—step in the process of Americanizing our fisheries. Only a few years ago, Americanization seemed like a goal that would never be reached. Then, after our objectives were given form by the Magnuson Act, we began at last to make rapid progress. Our biggest lapse, however, has been to ignore the fact that much of our industry is financially subject to foreign interests. I will be the first to admit that foreign investment has brought some benefits. It has, for example, helped our fishermen learn new techniques, provided access to new markets for some processors who employ U.S. workers, and made it possible for both at-sea and onshore capacity to expand rapidly. But now is the time to say enough! (NPSC 1990)

The proposed ownership requirements encouraged considerable debate, with significant opposition to its inclusion. The Senate amended the bill on 17 December 1987, and with it, the wording that explicitly terminated the grandfather clause when the vessel was sold to another owner. This amendment was combined with the House version of the bill and was passed 22 December 1987. It was almost vetoed by President Ronald Reagan, but on 11 January 1988 it was signed as the Commercial Fishing Industry Vessel Anti-Reflagging Act of 1987 (Myhre 1998).

The final Anti-Reflagging Act contained several important elements. The first was an expanded definition of fishery to include fish processing, storing, and transporting. As a result, fish processors and tenders were required to obtain a fishery endorsement rather than a registry endorsement. Prior to the Act, foreign motherships could process fish with only a registry endorsement, which allowed 100% foreign ownership (through a U.S. subsidiary corporation). This requirement made participation by foreign fishing and processing vessels illegal and eliminated the eligibility of reflagged vessels (U.S. 101 Stat. 1778 1988; NPSC 1990; NMFS 2002).

To tighten foreign ownership rules further, the Anti-Reflagging Act made the qualifications for a fishery endorsement more restrictive. Before the Act, foreign ownership was legal through a U.S. shell corporation, but the new law mandated U.S. controlling interest of at least 50% of the common stock. In addition, the Act required that all rebuilding, including construction of major components, be done in U.S. shipyards. This eliminated future use of foreign shipyards. The Act also prohibited

factory vessels from hiring entirely foreign crews, mandating that 75% of the unlicensed crew on the vessels be U.S. citizens (U.S. 101 Stat. 1778 1988).

Since the Anti-Reflagging Act was signed into law on 11 January 1988, but enforced retroactively to 28 July 1987, there was a grandfather clause that accounted for investments made by vessel owners under prior laws. If the Act had been enforced without the grandfather clause, the retroactive date would have eliminated numerous vessels already in the pipeline or under construction in Norway and other foreign shipyards. Under pressure from U.S. companies with vessels under construction in foreign shipyards, Congress inserted several grandfather clauses into the Anti-Reflagging Act that permitted vessel rebuilds and foreign conversions based on the prior law. The first category of clauses eased the prohibition against foreign rebuilt vessels. Under this clause, a vessel converted outside the United States was still eligible for fishery endorsement, if one of four conditions existed:

1. If before July 28, 1987, the vessel was licensed under registry and operated as a fish processor or tender in the navigable waters of the United States or the Exclusive Economic Zone;

2. If before July 28, 1987, the vessel was purchased by a U.S. citizen or corporation for use as a processor or tender under contract entered into before July 28, 1987;

3. If before July 28, 1987, the vessel was documented as a U.S. flag vessel and was rebuilt in a foreign country before July 28, 1987; and

4. If a U.S. built vessel is subsequently rebuilt in a foreign shipyard providing rebuilding is done under contract entered into before January 11, 1989, and the vessel is delivered before July 28, 1990.

(U.S. 101 Stat. 1778 1988)

These clauses were intended to account for foreign ownership and construction of vessels that began under prior law, as well as for vessels that were in the process or had been purchased for reconstruction in other countries, but were intended for the U.S. EEZ. There was an additional category of grandfather clauses that eased the impact of the citizen control requirements. The clause reads:

> [The citizen control requirement] applies to vessels issued a fishery license after July 28, 1987. However, that [requirement] does not apply if before that date the vessel…
>
> 1. was documented under chapter 121 of title 46 and operating as a fishing, fish processing, or fish tender vessel in the navigable waters of the United States or the Exclusive Economic Zone, or
>
> 2. was contracted for purchase for use as a fishing, fish tender, or fish processing vessel in the navigable waters of the United States or the Exclusive Economic Zone, if the purchase is shown by the contract or similarly reliable evidence acceptable to the Secretary to have been made for the purposes of using the vessel in the fisheries.
>
> (U.S. 101 Stat. 1778 1988)

These grandfather provisions were intended to accommodate foreign-owned factory vessels already in the fisheries and instances where foreign-owned entities had already purchased factory vessels for the purpose of operating them in fisheries (NPSC 1990; NMFS 2002).

## Effects of the Anti-Reflagging Act

Passage of the Anti-Reflagging Act limited the long-term foreign development of the pollock and other fisheries in the U.S. EEZ. The Act eliminated rebuilding of factory trawlers in foreign shipyards not specifically grandfathered, thereby insulating U.S. shipyards from future competition. There was also an increase in the percentage of U.S. hires for jobs on processing vessels—although there are still some foreign hires that come over on work visas. Most importantly, perhaps, the Act eliminated the ability of foreign vessels to reflag, which affected Japanese and Korean plans to reflag their fleet as U.S. vessels.

Much to the chagrin of advocates for limits on foreign investment, the Anti-Reflagging Act did not stem the flurry of new vessels and foreign capital flowing into EEZ fisheries. Domestic catcher-vessel owners (who now backed the foreign ownership requirement with the elimination of foreign reflagging) and processors had hoped that the bill would eliminate the foreign investment in efficient factory trawlers. This was not the case. The Act had a limited impact on the foreign control of vessels. First, the controlling ownership rule applied only to corporations, and the U.S. Coast Guard (USCG) applied the same standards that are applied under the Jones Act. For corporations, the USCG simply requested the nationalities (but not identities) of the CEO or chairman of the board, and a rough indication of the proportion of

voting shares owned by U.S. citizens (under 50%, 51% to 74%, or 75% and above). In theory, a foreign individual or entity could own 100% of the nonvoting stock and 49% of the voting stock, and still be eligible for a fishery endorsement. The foreign-control law could also be avoided through the use of loans. Many foreign investors acquired a majority interest in fishing vessels through loans secured by a preferred ship's mortgage in accordance with the Ships Mortgage Act. Since preferred ship's mortgages are secured by the vessels, such loans gave foreign investors considerable influence and control over a highly mortgaged vessel. Shipyards and banks in Norway and Japan were reported to have invested hundreds of millions in factory trawler conversions through preferred ship's mortgages. Thus as the regulations were written, the Anti-Reflagging Act did little to restrict foreign control of fishery vessels (Gay 1992; NMFS 2002).

The Anti-Reflagging Act also allowed any vessel that qualified for a fishery endorsement to be bought by either a U.S. or foreign entity and be rebuilt in a foreign country—as long as the contract was entered into before 11 January 1989, and the vessel was delivered before 28 July 1990. Before the Anti-Reflagging Act was passed, Congress was informed that 24 vessels had received favorable rulings from the USCG to proceed with foreign rebuilding projects, and documents were circulated to Senate staff which indicated that up to 46 foreign rebuilding projects were likely eligible under the grandfather clause. With the impending regulations to ban significant foreign rebuilding projects, the vessels that had received a ruling were bought by the highest bidder. This resulted in conversion of the ships into processing vessels. For example, Sunmar Alaska Inc. had plans to build shipping vessels to supply the American fishing fleets. The company wanted to rebuild three vessels into fishing tenders, and applied for a USCG ruling to proceed with the rebuilding project outside the United States. With the passage of the Anti-Reflagging Act, Sunmar switched plans and decided to build processing vessels instead. They sold the vessels before completion, including the *Alaska Ocean* and *Northern Hawk*. So although one goal was to eliminate foreign rebuilt capacity, the Anti-Reflagging Act actually played a role in the rapid increase of foreign rebuilt at-sea harvest capacity in the pollock fishery. After the Act was passed, fishermen completed 17 of the total 20 at-sea processing vessels converted in Norway. Additionally, fishermen converted 23 out of the 24 vessels that received rulings that allowed conversion in foreign shipyards (Hornnes 2006; B. Myhre, personal communication).

Another issue was with the language used to address changes in ownership of the vessels. Under the verbiage in the Anti-Reflagging Act, a vessel was grandfathered under the Act, and as a result, changes in the owners would not affect the status of vessel. An example would be a factory trawler rebuilt in Norway, 100% owned by Norwegians, and

had received a fishery endorsement to fish in the United States under the grandfather clause in the Anti-Reflagging Act. As the Act was written, it could be argued that the grandfather exemption ran with this vessel, so if it were sold to a Japanese company 20 years later, it would still carry its fishery endorsement. This became a point of contention, since there was testimony before Congress to indicate that the grandfather clause was only intended to account for current owners who made investments under the prior law. Though this wording was removed in a subsequent amendment, there remained a question as to whether the push to quickly pass the bill led to legislation that did not convey the true intent of Congress (NPSC 1990; NMFS 2002).

The USCG was left to interpret the Anti-Reflagging Act as written, and on 12 December 1990, formally adopted the regulations interpreting the ownership-savings clause. The regulation stated that a corporation that met the pre-existing requirements regarding citizenship of its president, but not satisfying the newly enacted 51% citizen-control requirement may, nevertheless, be eligible for a fishery endorsement if, prior to 28 July 1987, the vessel came within subsection (1) or (2) of the savings clause. In other words, the savings exemption was to "run with the vessel" rather than the owner, an interpretation that is consistent with maritime law (B. Myhre, personal communication). The implication of this ruling was great, because any international corporation could now avoid the citizen-control requirements altogether by simply purchasing vessels holding "grandfathered" fishery endorsements (NMFS 2002). A GAO study estimated that approximately 29,000 U.S. vessels were licensed for fishing, and thus grandfathered as of the savings clause cutoff date (GAO 1991).

This did not sit well with certain U.S. shipyards and fishing companies. U.S. shipyards expected to be protected by the Act, because they could not compete with foreign shipyards. Catcher vessels would lose their JVP allocation, their foreign partners would be unable to reflag, and domestic factory trawlers would take a larger share of the pollock total allowable catch. Furthermore, Trident and other shore-based processors realized that increased competition from factory trawlers posed a competitive threat. The elimination of these factory trawlers would substantially benefit the remaining participants of the pollock fishery as more participants battled over the pollock catch. On 16 May 1990, before the USCG published a final ruling on grandfather clauses, the Southeast Shipyard Association and several U.S.-owned fishing companies challenged the granting of new fishery endorsements to two factory trawlers, the *Resolute* and the *Northern Hero*. Both vessels were owned by corporations controlled by U.S. citizens prior to 28 July 1987, and were subsequently sold to corporations in which foreign citizens held controlling interests. Not only were the vessels under foreign ownership, but the plans to build the vessels in Norway were changed

so that rebuilding would be done in Japan with further design modifications. A court decision was reached on 30 April 1991, when District Court Judge Penn overturned the USCG interpretation of the ownership savings clause, ruling:

> ...the savings clause did not attach to vessels and thus did not permit the transfer of "grandfathered" vessels to noncitizen-controlled corporations.

The USCG interpretation, the court stated, would

> ...effectively obliterate the primary purposes of the Anti-Reflagging Act

which the court identified as promoting

> ...the continued orderly growth, development, and competitiveness of the U.S. fishing and fish processing industry.... (NPSC 1990; NMFS 2002)

The District Court's decision caused immediate concern throughout the fishing industry. At least 60% of the North Pacific offshore fishing industry was owned by foreign-controlled corporations. The USCG decided not to appeal the District Court's decision; instead it issued an advance notice of rulemaking to consider new interpretations of the savings-clause exemption. An estimated 28 factory trawlers with 1.1 million metric tons of processing capacity risked losing their fishing endorsements. Affected companies immediately appealed the decision, and while the cases were in court, the USCG chose not to strip any vessel of its fishery endorsements (NPSC 1990; NMFS 2002).

On 24 November 1992, through the appeals process, Eleventh Circuit Court Judge Randolf reversed the District Court's decision and upheld the original USCG interpretation of the savings clause running with the vessel. Randolf's opinion was based on the fact that under maritime law, it is the vessel, and not the owner, that is eligible for documentation. Randolf noted that endorsements are issued to vessels rather than owners. Furthermore, Randolf reasoned that the language of the savings clause clearly frames exemptions in terms of the vessel. According to Randolf:

> On its face, the clause makes nothing clear on who holds title to the vessel in the future. The criteria mentioned in the clause relate back, not forward. Whether a ship is grandfathered depends on what documentation had been issued to it before July 28, 1987 ... to give the savings clause the meaning the

> plaintiffs ascribe to it—that a grandfathered vessel will lose its exemptions if it is sold to another corporation after July 28, 1987 would require many additional words to be read into the statute. (979 F.2d 1541)

That is, Randolf overruled the District Court's original ruling because it was not based on the original language of the Anti-Reflagging Act. The District Court's ruling was made on the basis of a House report that described the legislative intent of the Act. However, this report was not given to the Senate before they voted, so it was incorrect for the District Court to use the House report to interpret the Act's intent. Randolf had further issues with what it meant for the change of ownership. For instance, if one share of stock was sold, did that constitute a change in ownership (NPFMC 2002; B. Myhre, personal communication)?

Both the District and the Circuit Court appeared frustrated by the Act's inexact language and incomplete legislative history. Attorneys with the USCG Office of Documentation and Tonnage consider the Anti-Reflagging Act so poorly crafted that its intent is often incomprehensible—and consequently, nearly impossible to implement. Senator Stevens concluded:

> When we marked up that bill, we just didn't do a good job. We should have closed that door, and we should have been very plain about what a rebuild was. And when we said, "to the owner," we should have said, "to the original owner," to the owner who submitted the papers at the time that the exemption was sought; but we didn't. (NPSC 1990; NMFS 2002)

With the Circuit Court's decision in place, the Anti-Reflagging Act did little to slow the short-term growth of new processing capacity in EEZ fisheries. Although only 22 of the potential 46 vessels that the writers of the Act knowingly allowed into the fishery were ever given a fishery endorsement, this proved to be more than the pollock fishery could sustain. Instead of slowing the number of vessels being rebuilt for at-sea processing in the pollock fishery, the number of rebuilt vessels quickly increased as operators sought to attain a foothold in the fishery before Congress closed loopholes in the Anti-Reflagging Act (NMFS 2002). Although there was an attempt to lobby Congress to amend the Act, no changes were made until nearly eleven years after its passage.

## Rise of Inshore and Offshore Sectors

As the number of rebuilt factory trawlers grew between 1988 and 1990, it became increasingly clear to both shore-based and at-sea processors that the capacity for pollock processing was going to exceed the quan-

tity of fish available. Total Allowable Level of Foreign Fishing (TALFF) and JVP allocations were becoming ever smaller, and with additional processing capacity in the pipeline it was evident that TALFF and JVP allocations would be eliminated altogether, and domestic processors would soon fight over the pollock resource. By 1990, nearly 50 factory trawlers participated in the fishery, and it was not only the at-sea sector that was growing—the inshore sector was undergoing a similar flurry of capital investment in processing and harvesting capacity. Trident expanded its primary focus from pollock fillets and, through a partnership with Nippon Suisan in 1988, had begun construction on a surimi plant (Atkinson 1988). With political pressure placed on Japanese companies, large investments had been made in the domestic inshore sector with UniSea, Alyeska, and Peter Pan to produce pollock surimi. In addition, Westward Seafoods, another Japanese-owned company, built a plant in Unalaska that became operational in 1991, producing pollock surimi. Although foreign-owned, these processing facilities were onshore and catches delivered to them qualified as DAP.

With the exception of Trident and Wards Cove, investments to build and develop these shore-based processing facilities came from Japanese companies, which at the time included Nippon Suisan, Maruha, Taiyo, Marubeni, and Nichiro. These companies began to feel pressure from factory trawlers now taking part in the pollock fisheries. Until this point, the Japanese had dominated the pollock fishery. They had pioneered the harvest and processing of the pollock resource in the 1960s and 1970s, and maintained more than 80% of the TALFF during the early 1980s. They responded to U.S. pressure during the 1980s by helping U.S. crabbers transition into joint venture trawlers. These Japanese companies assumed they would eventually be able to reflag their motherships and catcher/processors to qualify for the DAP allocations, but the Anti-Reflagging Act had cut off Japanese access to pollock:

> The Japanese had never thought when they had all the joint ventures going through, that they would lose control. They thought that they would use the joint ventures as an interim step, then they would re-flag those boats, and the industry would be theirs. But they got cut off at the path. (Hornnes 2006)

Instead, most of their processing ships, which had been working in joint ventures and had received a portion of the JVP allocation, were losing their allocation to the expanding domestic processing fleet. Joint venture harvests and processing peaked at 1,057,316 metric tons in 1987, and by 1989 joint venture harvesting had declined to 277,186 t, with only 93,415 t of that going to foreign joint ventures (NPSC 1990).

It was apparent that within a year or two, the only aspects of the Japanese fishing operations eligible for DAP allocations of pollock would

**Westward seafood plant, Unalaska, July 2009. Keith Criddle**

be shore-based processors. But these investments were threatened as well. The shore-based processors' portion of the pollock catch had risen from 23,133 t in 1986, to 242,278 t in 1989. On the other hand, catches by domestic factory trawlers rose even faster, with growth from 31,080 t in 1986, to 846,278 t in 1989. This set the stage for a battle between the Japanese-dominated inshore sector and the rapidly expanding largely Norwegian-financed factory trawler fleet (NPSC 1990; Hornnes 2006).

## Operation Differences between Sectors

While both the at-sea and inshore sectors have unique strengths, by the early 1990s it was clear that the at-sea fleet had an operational advantage in the race-for-fish. The domestic at-sea processing sector consisted of two primary fleets: factory trawlers and motherships. Unlike inshore catcher boats, factory trawlers and mothership fleets have the ability to stay on a school of pollock for as long as it is profitable, with more time spent fishing and less spent traveling to and from fishing grounds. Thus the at-sea sector was more efficient at catching fish than catcher vessels that delivered to shore-based processors. Pollock processed at sea was also viewed more favorably by Japanese consumers. Because factory trawlers and motherships have the ability to process the pollock within hours, these processors typically receive higher prices for their products, especially surimi and roe (Bledsoe et al. 2003). For example,

**F/V *Dominator,* Bering Sea, July 2009. Joe Plesha**

similar grades of roe typically receive a 30% premium if processed at sea (Strong 2011).

The primary distinction between motherships and factory trawlers is that motherships depended on fleets of catcher vessels to harvest the fish. In 1990, three domestic motherships operated in the Bering Sea pollock fishery. They ranged from 305 feet to 688 feet long. The *Golden Alaska* entered the North Pacific fisheries in 1985, the *Ocean Phoenix* entered in 1989, and the *Excellence* entered in 1990. Each mothership owned or contracted with a fleet of catcher vessels. Although motherships process large volumes of fish, the mothership sector did not expand as rapidly as the factory trawler sector (NMFS 2002).

Catcher vessels operating in the Bering Sea are relatively homogeneous; most participated in a variety of Bering Sea and Aleutian Islands (BSAI) fisheries, including pollock, Pacific cod, and crab. In this sector, vessels range from 60 to 193 feet in length, with most pollock trawlers in the 70 to 130 foot range. They have with an average of 1,500 horsepower, an average gross tonnage of 225 t, and an average hold capacity of 8,300 cubic feet. The stereotypical catcher vessel is an ex-crabber retrofitted in the early 1980s. The operating range of catcher vessels was largely determined by their hold capacity. Those with little or no storage capacity generally worked in the mothership sector and

transferred laden codends directly to the mothership. Catcher vessels, with hold capacity and refrigerated seawater hold cooling systems, had the option to deliver to motherships or shore-based processors. If they delivered to shore-based processors, they traveled anywhere from half a day to up to two days to reach the fish. From the time they made their first tow of fish, they had 24 to 48 hours to transport the fish back to shore. Otherwise quality degraded and the fish were only suitable for low-value products such as fishmeal. Consequently, catcher vessels that delivered to shore-based processors fished as close to the plant as possible, typically within a range of 150 miles (NPSC 1990; NMFS 2002).

In 1986, most catcher vessels were involved in joint ventures with foreign motherships. Of the approximate 130 catcher vessels that operated in the Bering Sea in 1986, only 10 delivered primarily to shore-based processors. Although motherships offered lower ex-vessel prices, operating costs were also lower because less fuel was used between deliveries and more time was spent fishing (NPSC 1990; NMFS 2002).

The JVP allocations peaked in 1987. By 1990, increases in domestic at-sea and shore-based processing capacity entirely displaced JVP allocations. In 1986, 920,817 metric tons, or over 96% of the pollock total allowable catch, was harvested by catcher vessels that delivered to at-sea and shore-based processors. Three years later, catcher vessels landed only 38% of the pollock total allowable catch, even though nearly the same number of catcher vessels was active in the fishery. Catcher vessels, which had been profitable and successful during the joint venture era, were in trouble. With the phasing out of Japanese motherships and the rapid expansion of the domestic factory trawler fleet (which did not require catcher vessels), the options for catcher vessels were limited. They could deliver to one of three domestic mothership operations or to shore-based processors, but in either case, they were losing out to the factory trawlers, which were more efficient at harvesting pollock (NPSC 1990).

The catcher vessels were not the only companies to lose catch share. Shore-based processors that depended on the catcher vessels for fish were also de facto losers; they were limited by the amount of pollock that catcher vessels provided. In 1989, the inshore sector had three major processors: Alyeska and UniSea in Unalaska and Trident in Akutan. These three facilities had a combined capacity for 470,000 metric tons of pollock. With Westward Fisheries Inc. scheduled to complete construction of a plant in Unalaska in 1990, inshore capacity was expected to increase to 650,000 t. With harvests of only 242,278 t in 1989, catcher vessels were unable to fully supply the existing shore-based processors, let alone the Westward plant (NPSC 1990).

Trident was the only inshore processor focused on fillet production, but Trident also produced surimi. Alyeska, UniSea, and Westward focused on ensuring a supply of surimi to their Japanese parent com-

panies. These processors also produced roe, fishmeal, and fish oil from pollock and processed a variety of other species including cod, halibut, and crab. Shore-based processors did not face the same space constraints faced by motherships or catcher/processors and were thus in a better position to manage inventories in cold storage and to process low-valued byproducts. This was especially true under conditions where vessels were locked into a race for shares of a limiting total allowable catch. Under the race-for-fish, factory trawlers focused on high throughput of high-value products such as surimi and roe rather than maximizing utilization rates. While shore-based processors also had an incentive to maximize throughput, they could recover additional value from fishmeal and fish oil. Nevertheless, this was not enough of an advantage to offset the operational advantages of the at-sea processors (NPSC 1990).

# Chapter 4. Inshore/Offshore I

Inshore/Offshore I is the label given the first attempt by the North Pacific Fishery Management Council to set a separate pollock quota for the inshore sector. The inshore sector was losing the race for pollock. Expansion of the factory trawler fleet did not slow, while the inshore sector was already processing pollock at well below design capacity. To counter this trend, shore-based processors decided to lobby for an exclusive sector allocation or an exclusive fishing zone for inshore sector catcher boats that extended to a 100-mile radius around their facilities. Faced with losing a race-for-fish on the fishing grounds, the inshore sector set out to transform the battle into a political contest to be waged before the North Pacific Fishery management Council (NPFMC) and in Congress.

An early and unsuccessful effort to protect the inshore sector was initiated in December 1986, when the mayors of Akutan and Unalaska asked the NPFMC to create a 100-mile radius fishing zone around Unalaska, wherein fish could be harvested only if they were delivered to domestic processors. Had the proposal passed, it would have pushed joint ventures out of productive nearshore fishing areas. The request did not lead to Council action, but it laid the groundwork for subsequent efforts by the inshore sector to secure an exclusive harvesting area (NPSC 1990).

In June 1987, the NPFMC began to look at roe stripping—a practice that entailed removing the valuable roe from female pollock and discarding the remainder of their carcasses as well as the male carcasses. This practice made financial sense in a fishery geared to maximize throughput of high-valued product and minimize the opportunity cost of hold space, but was shamefully wasteful. Nevertheless, some factory trawlers and motherships found it profitable to strip roe during the pollock spawning season, which typically takes place between January and the beginning of April. By stripping roe, they could minimize labor costs and dedicate scarce hold space to the most profitable product—roe. In 1990, Amendment 14 to the Bering Sea and Aleutian Islands (BSAI) Fishery Management Plan, a ban on the practice of roe stripping, was passed through the Council process for the 1991 pollock season (Low et al. 1989; Fahys 1990; NPFMC 1990; NMFS 2004). By pressing the issue in public, the inshore sector sought to further stigmatize factory trawlers,

which already stood accused of "Hoovering" the sea to the demise of Atlantic cod and other important fishery resources worldwide.

Near the end of 1988, joint venture harvesters realized that there would be a dramatic drop in the coming year for pollock allocated under Joint Venture Processing and that within a few more years all pollock would be allocated to Domestic Annual Processing. Catcher vessels realized they would lose their contracts to fish for foreign motherships and they had few options other than deliver to shore-based processors. By January 1989, the American High Seas Fisheries Association, which represented joint venture catcher vessels fishing for Japanese motherships, began to express interest in allying with shore-based processors to advocate for an inshore fishing zone that could be used exclusively by vessels delivering to shore-based processors. Doug Gorden, executive director of the American High Seas Fisheries Association, believed that the Council would adopt a limited-access quota system that did not include allocations of shares to processors, but within that quota system fish harvested within a certain zone would only be delivered onshore. This would guarantee catcher vessels a portion of the catch (NPSC 1990; J. Plesha, personal communication).

The inshore sector had the support of an important ally in the U.S. Congress. Chuck Bundrant of Trident Seafoods had developed a close relationship with Senator Stevens, who maintained strong support for the Americanization of U.S. EEZ fisheries off the coast of Alaska. In 1989, Earl Comstock, Stevens' staffer for fisheries issues, indicated to representatives of the inshore sector that Senator Stevens would support creation of an inshore fishery zone to protect them from factory trawler competition. Comstock felt it should happen as soon as possible, since it was a non-election year for Congress, and the Magnuson Act was up for reauthorization. By this time, Senator Stevens was no longer the junior senator who needed help introducing the MFCMA; he was a powerful member of the Senate, having already served for more than 20 years. Senator Stevens supported the inshore sector because he believed that doing so meant jobs for Alaska; his support proved vital for this and subsequent issues in the pollock fishery (J. Plesha, personal communication).

At the January 1989 NPFMC meeting, the inshore sector began talking to members of the Council. The goal was to have Council members ready to consider analyzing an amendment to the BSAI fishery management plan to create specific inshore and offshore allocations of the pollock total allowable catch by the April meeting. The inshore sector faced a difficulty: they needed to convince the NPFMC—which was dominated by Alaska representatives—that the NPFMC should guarantee a portion of the pollock resource to the inshore sector (a sector that was largely foreign-owned and based out of Seattle). Alaskans had sought statehood in part so that fish traps controlled by Pacific Northwest interests

could be outlawed; therefore, they could be expected to oppose regulatory actions that granted preferential rights to nonresidents. Council members from Washington and Oregon could not be counted on to support the inshore sector because the at-sea sector was also almost entirely based out of Seattle and provided an enormous number of jobs to the Pacific Northwest. Thus the inshore sector realized that they needed to win over NPFMC members from Alaska (J. Plesha, personal communication).

Concern over rapid expansion of the factory trawler fleet was not just an inshore sector concern. At the same January 1989 NPFMC meeting, fishermen and companies with existing factory trawler investments expressed concern about overcapitalization of the domestic at-sea processing fleet. Pereyra, who became a NPFMC member in summer 1990 and with investments in the at-sea sector, proposed to the Council to:

> Establish an immediate cut-off date of January 16, 1989, after which, vessels not in the pipeline "may or may not be" considered by the Council as eligible for participation in the fisheries under the Council's jurisdiction. (NSPC 1991)

Pereyra explained to the Council that no matter what they did, overcapitalization of the groundfish industry was a reality. He estimated that in 1989, there would be 69 U.S. factory trawlers in the North Pacific and in the following year there would be 100. The letter was signed by four individuals in the at-sea sector but was opposed by Trident and other members of the inshore sector. They objected to limited access regulations that neglected consideration of shore-based processors (NSPC 1991). Alaska Council members also objected to the proposal. The concern was that most of the pollock fleet was not Alaskan; therefore, they did not want to support a proposal that excluded the possibility of Alaskan involvement in an Alaska-based fishery. In particular, Alaska Council member Tony Knowles, who was mounting a campaign for governor, did not want to support a measure that could be perceived as anti-Alaskan (W. Pereyra, personal communication).

The at-sea sector had no incentive to support inshore processor allocations; they were winning the race-for-fish. Moreover, as a sector, the at-sea processors had a higher rate of domestic investment than did the shore-based processors. This should have given them an advantage in the court of public opinion. Although there had been significant investment from Norwegian, Korean, and Japanese interests, U.S. investors such as Francis Miller of Arctic Alaska Fisheries, Wally Pereyra of Arctic Storm and Profish International, Bob Morgan of Oceantrawl, as well as numerous Norwegian-Americans like John Sjong and Konrad Uri, had invested significant resources in at-sea fleets. They seemed to hold the advantage in fighting off and delaying any inshore allocation.

However, the tide unexpectedly turned against the at-sea processors. About a month after the January 1989 meeting, a few factory trawlers surged into the Gulf of Alaska pollock fishery and scooped up more than 37,000 metric tons of pollock in six weeks. The high level of pollock catch prompted NMFS to close down the fishery in March, a drastic action in a fishery that normally ran through December and supported a fleet of small catcher boats based in Kodiak (NPSC 1991; NMFS 2002; Wolff and Hauge 2008). Although the factory trawlers had done nothing illegal, the backlash was immediate. The picture of big, evil factory trawlers taking all the fish from the small, local fishermen was media fodder. The *Anchorage Daily News* featured a front page article titled "Fleet Dumps Thousands of Tons of Fish" that highlighted the practice of roe stripping and denounced the effects of factory trawlers on local fishing (Bernton 1989). Dave Harville, a Kodiak fisherman with three boats that delivered pollock to local shore-based processors, stated:

> This is the Seattle-ization of our fisheries. They took our fish and shut down their competition. Now, they're going to go on out to [the] Bering Sea and fish the rest of the year. But we can't move the island. (Bernton 1989)

At the April 1989 NPFMC meeting, fishermen and processors from Kodiak, Alaska, requested that the Council consider specific allocations of fish for processing by the inshore and offshore sectors of the fishery, to prevent future preemption of resources by one sector of the industry. In testimony at that meeting, Dave Harville described the view that became the mantra for the inshore sector:

> As the at-sea processing segment of our industry has grown, coastal communities have been increasingly concerned that unregulated at-sea processing would result in the demise of coastal communities. What happened with pollock in Kodiak last month proved that coastal communities should be frightened…. But unless we want to kiss our coastal communities good-bye this can't be allowed to happen again. Shore-based processors must be given preferential access to the fish within their area. Just because the at-sea fleet is overcapitalized, doesn't mean they should be allowed to devastate coastal communities. (NPSC 1991)

The view, which was vocalized in front of the Alaska majority Council and throughout Alaska media, caricatured a largely foreign, Seattle-based sector out to destroy Alaska coastal communities and their shore-based processors. Alaska fishermen from Kodiak came out in favor of an inshore allocation. It was the perfect coup for the BSAI inshore sector

and set in motion, at the Council level, the idea of a specific inshore allocation. After fierce debate on both sides, the NPFMC voted to request proposals from industry to be submitted to the Council by 9 June 1989, for consideration during the NPFMC June meeting. After that meeting, the Council newsletter stated that the Council:

> …will adopt formal alternatives at its September meeting, commence analysis in October, and consider taking action in April 1990 to send the resulting amendment package out for public review.

The Council formed a working group, the Fishery Planning Committee (FPC), to collaborate with NPFMC staff and agency personnel to review various alternatives for an allocation of fishery resources between at-sea and inshore sectors. NOAA General Counsel advised on the legal viability of the various alternatives. With one ill-considered decision to fish in the Gulf of Alaska (GOA) pollock fishery, a few factory trawlers opened the door for the introduction of separate inshore and offshore allocations. This ushered in an era of turmoil in the fishery that industry participants describe as the "pollock wars" (J. Plesha, personal communication).

The FPC met on 6 September 1989 and identified several general alternatives. A couple of options focused on the GOA pollock fishery. For example, one choice examined a prohibition on factory trawlers in the GOA combined with special areas in the BSAI reserved for harvesters that delivered to shore-based processing facilities. Another option was formation of super-exclusive registration areas, which typically state that if a fisherman decides to participate in a particular fishery, they are not allowed to participate in other fisheries. Other potential regulations focused on the eastern Bering Sea fishery and how to create a specific allocation or dedicated fishing area for shore-based catcher vessels. These alternatives included priority access for inshore deliveries, inshore-offshore allocations with or without special operational areas, and traditional tools (e.g., trip limits, short openers) to extend the seasons and preserve product flow to all sectors of the industry. Finally, the committee picked the status quo to allow members to compare the various choices against the decision of doing nothing. The FPC recommended that proposals dealing with limited entry and a prohibition on roe stripping be considered outside of the inshore/offshore issue, as it was outside the scope of the issue and would slow down preparation of analyses of the environmental and regulatory impacts of inshore/offshore allocations (NPFMC 1992).

## Arguments against the Inshore/ Offshore Allocation

Both sides presented strong arguments for and against the inshore/offshore allocation. Testimony from Pereyra outlines some of the strongest arguments advanced by the at-sea sector. He described his involvement and investment in the mothership *Ocean Phoenix*, the largest vessel in the U.S. at-sea fleet:

> The reason for getting into this project [the investment of the *Ocean Phoenix*] goes back a number of years when we first became involved in the joint ventures. At that time, we were advised by Congress, including such nobles as Senator Magnuson, Senator Stevens, Congressman Young, and others that the joint ventures weren't going to last forever and while special provision was being given for joint ventures to be prosecuted, we had to look to the DAP sector for a long term operation. With this in mind, a couple years ago as the joint ventures started to peak, we joined together to look at options we might have for getting into DAP fisheries. (NSPC 1991)

The first argument is that development of the domestic at-sea sector was encouraged by the selfsame political leaders who encouraged development of the inshore sector. The owners of the *Ocean Phoenix* had spent in excess of $50 million. It was not fair to treat the at-sea sector as "second class citizens." In reference to the proposed preferential allocation to the inshore sector, Pereyra commented:

> We feel [this] is a form of taking, and as such, would require that we be compensated for our losses.

Investment in the at-sea sector was made with the expectation of the status quo; that is, that the current rule structure would not change to favor one sector. It was unfair from the perspective of the at-sea sector for the Council to make fundamental changes that expropriated the value of capital invested in the at-sea fleet (NPSC 1991).

Ron Pauly, vice president of Oceantrawl Inc., which owned three surimi factory trawlers, further argued that setting inshore/offshore allocations

> ...seem in direct conflict with the encouragement that was given to this industry within the last two or three years to Americanize, of which the factory trawler group, as a group, are substantially responsible [for].... It seems grossly unfair to be

> encouraged one year to invest and the following year face the possibility of losing potential livelihood. (NPSC 1991)

Not only did the at-sea sector argue that action alternatives proposed under Amendment 18/23 were unfair, but that such an allocation would reduce net benefits to the nation. Pauly argued:

> We are efficient at catching fish. We're efficient at processing fish. And we're extremely efficient at maximizing the market value of that fish. (NPSC 1991)

In the same vein, Pereyra argued that the at-sea sector possessed some additional advantages over the inshore sector:

> The alternatives we had were building a processing plant and putting that processing plant on shore or in a floater near shore and modifying our catcher boats by lengthening them and installing RSW capability so that they could haul fish from the fishing grounds to the plant or floater. Or secondarily, building a processing plant and putting it into a floater and taking the floater to the fishing grounds. After considerable analysis and discussion, we chose the latter. The reason being is that we determined on a business decision basis that this was the most efficient way to operate. It was the most cost effective and it would make us competitive in the international market place, as we could produce the highest quality products at the most competitive prices. (NSPC 1991)

For those involved in the at-sea sector, a conscious decision had been made. It was more efficient and cost effective to operate at sea. From a business standpoint, at-sea production was more cost efficient than inshore production (NPSC 1991).

Not only were at-sea processing vessels more cost-effective, but the products produced at sea were of a higher quality, which meant they were able to obtain higher prices in the marketplace. At-sea processors were able to get the most value from the pollock. Pereyra argued that:

> In actuality, the discrimination against off-shore processors would reduce the overall efficiency and competiveness of [the] domestic industry in the marketplace. In this regard, it's a clear violation of national standard five [in the MFCMA]. (NPSC 1991)

National standard five states that:

> Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose. (MSFCMA 2007)

Processing at sea was more profitable, and to take fish away from the at-sea sector to give to the inshore sector was not efficient or competitive but instead served a sole purpose of economic misallocation (NPSC 1991).

The at-sea processors also felt that giving the inshore sector an allocation would adversely impact employment:

> The *Ocean Phoenix* project got started by finding a large vessel in which to build and install a processing plant. It required a used container ship 680 feet long. [We] built a large processing plant and have installed that plant in the container ship. The vessel is now in Portland, Oregon being finished and hopefully will be in the Bering Sea in December receiving fish from seven JV catcher boats, or ex-JV catcher boats I should say, producing surimi, fillets, roe, and meal from pollock. Together, we will be employing throughout the year in excess of 400 people. And the total cost of this endeavor is in excess of $50,000,000.
>
> Why are we concerned? We are greatly concerned because the majority of the proposals that you have before you, or the options you have before you, to give priority to fish delivered to shoreplants would put limits on our mobility which we feel is very important to our success and would also limit the availability of fishing grounds to us. Such measures would severely damage and probably bankrupt our operation. Hundreds of people would lose their jobs. (NPSC 1991)

One of the most important issues raised by the at-sea sector was the MFCMA mandate that EEZ fisheries should be managed in a manner most beneficial to the country as a whole. Bert Larkins, Alaska Factory Trawler Association (AFTA) executive director at the time, pointed out an important topic little discussed:

> One, we've heard about how the Magnuson Act requires that some concern be expressed about the coastal communities involved. I agree… I think that this Council's area of jurisdiction [over] coastal communities that would apply here include Newport, Oregon. The[y] include Westport. They include Seattle as much as they do Kodiak and Dutch Harbor. (NPSC 1991)

The impact of any changes must be seen through the eyes of all affected states, not just the state of Alaska. Although the Council was dominated by Alaska representatives, the Council needed to examine what was most beneficial to the country as a whole, as required by the MFCMA (NPSC 1991).

## Arguments for the Inshore/ Offshore Allocation

The inshore sector countered with several arguments, advocating strongly for an inshore allocation. They continued to leave the focus on Kodiak fishermen and processors. The inshore sector emphasized Alaska and what would happen to Alaska's rural economies if the at-sea sector continued to expand. They argued that the demise of shore-based processors would irreparably harm Alaska's coastal communities through the loss of jobs, income, and tax revenues. Not only would an inshore allocation protect current Alaska jobs, it would increase economic benefits and jobs available to Alaskans. According to testimony of Alec Brindle, of Wards Cove Packing Company, and a 50% partner in Alyeska Seafoods:

> Our company has two plants located on Kodiak Island… I have sitting in my desk drawer, a couple of Corp. of Army Engineer permits for expansion, [but] after the experience of last spring [shut down of the Gulf of Alaska Fishery] … we were shut down. What we do … depends on the action of this Council. We think the future of shoreside communities in Alaska is basically at stake. (NPSC 1991)

Most testimony from the inshore sector focused on Alaska, and how the loss of shore-based processors would affect the communities where they were located (NPSC 1991).

They argued that gains from the inshore allocation would, most likely, accrue to the economies of western Alaska and Pacific Northwest, with Unalaska being the largest winner. With three major pollock processors located in Unalaska, it was expected that the local economy would benefit from stable employment and indirect spending. According to the cost/benefit analysis conducted for the proposed sector allocations, Unalaska stood to gain 388 full-time equivalent jobs. The Washington economy was also expected to benefit, since most shore-based processors were based out of Seattle, and companies recruited a majority of their employees from the region (NPFMC 1992; Iani 1992).

The inshore sector also pointed to important unfair, operational advantages of the factory trawlers, e.g., they did not pay local and state taxes in Alaska; shore-based processors in Unalaska paid a 3% sales

tax as well as a 3% state fish tax, 50% of which went back to the local government. They argued that an increase in shore-based production would benefit local communities by contributing much needed funding for infrastructure. The tax revenue was an important source of income for communities with few other sources of income (NPSC 1990; NPFMC 1992).

The at-sea sector also avoided numerous regulations, such as the State of Alaska water-quality standards and many workplace laws that only apply to onshore companies. The North Pacific Seafood Coalition (NPSC 1990) also pointed to the high level of foreign investment in the at-sea sector—although it reluctantly recognized the high level of foreign investment in shore-based processors such as UniSea, Westward, Peter Pan Seafoods, and Alyeska Seafoods. NPSC (1990) outlined three proposals to provide increased protection for the inshore sector. First, start the fishing season after April 1. This effectively eliminated the race for the valuable roe product, even though it acknowledged that the NPFMC Science and Statistical Committee found no evidence of adverse biological impacts from harvesting spawning pollock. Second, increased protection for the area around Unalaska, similar to the 100-mile zones first proposed in 1986. Third, split the pollock total allowable catch 50:50 between inshore and offshore sectors.

Both sectors raised valid arguments. Each had grown since the mid-1980s and invested significant capital with the support of Congress. With the exception of Trident, growth of the inshore industry was a result of U.S. pressure on Japan to encourage plant construction. The Japanese had little choice over their initial investment, since the United States threatened to withhold TALFF and JVP allocations; the Japanese had to invest or be excluded from the pollock fishery. The at-sea sector also invested with the encouragement of Congress. Congress was aware that foreign investment supported many of the at-sea vessels; nonetheless, it was viewed as a desirable counterweight to Japanese influence in the inshore sector. Foreign capital normally leveraged the investment of U.S. fishermen, which permitted them to buy expensive factory trawlers, and this coincided with Congress' desire for Americanization of U.S. fisheries. Furthermore, domestic investors could choose to invest in either the inshore or at-sea sectors, and with the exception of Trident and Wards Cove, most chose to invest in the at-sea sector, because it was more efficient and profitable. Perhaps the strongest argument the Japanese inshore sector could muster, in support of the inshore/offshore allocation, was that their investment was coerced and therefore they merited a portion of the allocation (NPSC 1990).

The elimination of the inshore sector as a result of the continued growth of the at-sea sector would also affect Alaska's coastal communities, although the magnitude of the impact was less certain. Both inshore and offshore sectors required support services in Unalaska.

Hotels, airplane, and grocery services were used by fishing and processing crew, and there was occasional need for repair and supply services. For the most part, however, both sectors purchased supplies from Seattle, hired nonresident and foreign crew and laborers, and had headquarters in Seattle or elsewhere outside Alaska. In addition, fishing and processing crew often worked 12 to 16 hours a day, so the amount of money they spent in Unalaska or Akutan was minimal. Many shore-based processors operated company stores to meet employee needs for work gear and sundries, and barged up their own fuel. A majority of the catcher boats that participated in the mothership and inshore sectors were based out of Seattle and elsewhere outside of Alaska. If shore-based pollock processors had closed, there would have been adverse impacts in Unalaska and Akutan, but some of the impacts would have been offset by increased demand for support services related to the at-sea sector. The bigger loss to the communities would be loss of tax revenue. Akutan's budget was almost entirely supported by local taxes paid by Trident. While Unalaska has a more diverse tax base, taxes paid by the shore-based processors were a substantial component of city finances (NPSC 1990; NPFMC 1992).

To a large degree, in the 1990s the EEZ fisheries off Alaska were "Seattle's fisheries." Everyone involved in the fishery knew this, and the goal of the inshore sector was to position themselves as "more" Alaskan in an effort to encourage Alaska members of the NPFMC to favor a sector allocation advantageous to the inshore sector. They knew, however, the precariousness of their position. At the time of the September 1989 NPFMC meeting, Joe Plesha felt it was more difficult to argue for a quota than just for the "protection from the factory trawlers ability to pulse fish," which simply meant protection from factory trawlers in a zone around Unalaska. The inshore sector had to "continue to make Alaska aware how important this issue is to the State" (J. Plesha, personal communication). It was, however, going to be difficult to do, as a cost/benefit analysis conducted for the NPFMC suggested that implementation of the proposed sector allocations would likely reduce net national benefits by $153 million (Miller et al. 1992).

## Reaching Out to Congress

The at-sea sector realized it faced a losing battle at the NPFMC level. Therefore, while it continued to defend and represent itself before the Council, the at-sea sector focused its lobbying effort at a congressional level. The at-sea sector lobbied in favor of changes to the MFCMA, which was up for renewal in 1990, with an aim to increase the number of Washington and Oregon representatives on the Council. The push for seats was a risky maneuver with a potentially big payoff. With additional seats, the at-sea sector hoped to block the creation of an inshore zone

or an inshore sector allocation, but a failed effort to amend the MFCMA risked stiffening support for the inshore sector among Alaskan appointees to the NPFMC. The at-sea sector enlisted help from Washington state's Democratic congressional delegation, although it was unable to gain the support of Washington Senator Slade Gorton. He maintained careful neutrality since he had constituents on each side of the dispute. The at-sea sector also secured the services of Jim Gilmore, an influential Washington, DC, lobbyist (Brown 1992a; J. Plesha, personal communication).

The inshore sector seemed to have the support of Senators Stevens and Murkowski of Alaska, as well as Alaska Congressmen Don Young. However, Young, who had pledged his support to the inshore sector, suggested that a compromise might be in order: offer one additional seat for Washington and Oregon—as long as Alaska received one in return. The inshore sector expressed its strong opposition to Young's suggestion, telling Young that if he even talked compromise, many Alaskans would be furious. In addition to directly courting Congress, the inshore sector hired Charles Black of the high-powered public affairs firm Black, Manafort, Stone, and Kelly. Black was highly influential in political circles, and was later appointed co-chair on President George H.W. Bush's re-election campaign in 1992 (Brown 1992a; J. Plesha, personal communication).

Both parties to the inshore/offshore contest also tried to argue their points through the media. The at-sea sector focused their efforts on the Washington state area, and the inshore sector focused on Alaska. Many articles in the *Seattle Times* supported factory trawlers and complained of NPFMC bias against the at-sea sector (Brown 1992b; Schaefer 1992ab; Schaefer and Wilson 1992). The *Seattle Times* posted stories of local Seattle fishermen who fished catcher vessels in the at-sea sector and opposed an inshore allocation (Anderson 1991a,b; Brown 1992a). The inshore sector countered. John Iani of the Pacific Seafood Processors Association repeatedly wrote letters to the editor, contending that the *Seattle Times* articles omitted relevant facts favorable to the inshore sector (e.g., Iani 1991, 1992). Articles that favored the inshore sector appeared in Alaska, as the *Anchorage Daily News* covered topics such as the factory trawlers' exemption from the Fair Labor Standards Act minimum wage and overtime requirements (e.g., *Anchorage Daily News* 1990; Bernton 1990).

The at-sea sector also took steps to reposition itself as an Alaska sector. Emerald Seafoods, a factory trawler company, sold a substantial share of itself to Chugach, an Alaska Native corporation. Senator Stevens had historically used his Congressional pull to benefit Native Alaskans, and this seemed to be a ploy to influence the Senator. Indeed, Eric Silberstein, CEO of Emerald Seafoods, proceeded to tell everyone at the December 1989 NPFMC meeting that since Chugach purchased

part of Emerald Seafoods, Senator Stevens would back off the inshore/offshore issue. Silberstein also asserted that Emerald Seafoods would operate in the Gulf of Alaska in spring 1990. "Why not?" Silberstein said at the meeting. "It's legal and we have an Alaska Native corporation as part owners. We have just as much right to operate there as anyone" (J. Plesha, personal communication).

If, after the 1989 Gulf of Alaska pollock closure, the at-sea sector had volunteered to refrain from fishing there in future years—much like the foreign fleets did in the early 1980s in the 100-mile radius around Unalaska—the inshore/offshore amendments may have been stopped. But with the race-for-fish and the instability within the fishery, factory trawlers were unable to present a unified front.

While Silberstein was correct that Emerald Seafoods and other factory trawlers could fish the Gulf of Alaska, it was not a wise idea to broadcast this information. Instead, it probably just reinforced the tarnished image of the factory trawler industry. Perhaps not coincidentally, NOAA shut down the Gulf of Alaska pollock fishery entirely in 1990, citing conservation concerns about the pollock biomass. Indignant, Emerald Seafoods sued NOAA, claiming the shutdown

> …is really a political move against factory trawlers. To label it a conservation measure aimed at preventing overfishing is a complete misrepresentation. Its purpose is quite clear—to keep trawlers out of the Gulf. (Associated Press 1990)

By 1990, it was apparent to the at-sea sector that a plan amendment protecting the inshore sector would be passed by the NPFMC. AFTA hired Timmons and Co. to lobby federal agencies and Congress on the inshore preference issue. Timmons was a former deputy assistant to President Richard Nixon, a former assistant to President Gerald Ford, and national director for President Ronald Reagan in 1980 and 1984. His connections in Washington, DC, were considered second to none. Trident, which was involved in a 50:50 venture with ConAgra, a diversified food company, used Paul Karody, ConAgra's lobbyist, and Senator Stevens to counteract Timmons' influence. With strong lobbying on both sides, AFTA was unable to sway Congress to amend the MFCMA to add more seats for Oregon and Washington to the NPFMC, and without the change, it was unlikely that the at-sea sector could change the preferred alternative or final decision through the Council process (J. Plesha, personal communication).

Meanwhile, the inshore/offshore debate at the NPFMC continued. At the April 1990 meeting, staff members for the Council indicated that the analysis for the inshore/offshore debate needed to be moved to a later time, due to the complexity of the issue. With that change, the time for a final decision was June 1991. At the June 1990 NPFMC meeting, the

inshore sector had three fishermen testify on several issues intended to highlight negative aspects of factory trawlers. In particular, they established a record of grounds preemption, grounds souring (from discarded carcasses from roe stripping), gear conflicts, and localized depletion caused by factory trawlers (J. Plesha, personal communication).

At the September 1990 NPFMC meeting, roe stripping was voted upon. Although considered separate from the inshore/offshore legislation, it was associated with the at-sea sector and portrayed the at-sea sector in a negative light. All at-sea processors voted in favor of a ban on roe stripping, although a proposal to stop all fishing during the spawning season was rejected. Instead, the Council decided to look at allocating a portion of the pollock total allowable catch (TAC) to the spawning season but decided to delay the vote until December in order to check with NOAA legal counsel. The final decision by the NPFMC allocated the pollock TAC to "A" and "B" seasons, with up to 40% of the TAC allocated to the A or roe season (January-March) and the remainder to the B season (June-October). This was done to protect pollock during the spawning season, which some thought was important to the sustainability of the stock (NPFMC 1992, NMFS 2004).

After much debate between the Council and the Fishery Planning Committee, the final draft of the Inshore/Offshore Draft Supplemental Environmental Impact Statement was completed for the April 1991 meeting and sent out for public review. In June 1991, after public review, the Council voted by a 7-4 margin to pass Amendment 18/23 with Pereyra voting with the Alaska majority. The preferred alternative consisted of five major components:

1. For the Gulf of Alaska, 100% of pollock and 90% of Pacific cod would be reserved for vessels delivering to shore-based processors.

2. For the Bering Sea, the pollock TAC was to be allocated between the inshore and offshore sectors to be phased in over three years with the percentage reserved for the inshore sector starting at 35%, then rising to 40% in the second year, and 45% in the third year.

3. A catcher vessel operational area would be reserved for a specified time for inshore harvesters.

4. A sunset date of 31 December 1995, with reversion to the status quo ante unless the Council adopted a comprehensive rationalization management strategy. Strategies to be considered included limited entry, individual fishing quotas, and a continuation of the inshore-offshore allocation.

5. A 7.5% allocation of the Bering Sea pollock allowable biological catch for a Western Alaska Community Development Quota program.

This amendment contained the important elements that the inshore sector desired: a guaranteed allocation of the pollock TAC, to be increased over time, and a zone established around the inshore processors that gave inshore catcher vessels priority to the resource.

The proposed Western Alaska Community Development Quota (CDQ) Program[4], which set aside 7.5% of the pollock TAC to foster community development projects in western Alaska, was a radical innovation. Under terms of the Council's preferred alternative, Alaska's governor in consultation with the NPFMC was to establish eligibility and criteria for qualification to participate in the program. The NMFS Alaska Region Office would administer the allocations on behalf of the Secretary of Commerce (NPFMC 1992).

The rationale for a CDQ allocation dated back to the Council's 1984 Comprehensive Fishery Management Goals. One of the goals called for the promotion of economic stability, growth, and self-sufficiency in maritime communities, with an expectation that improved opportunities for maritime communities to enhance their self-sufficiency, would benefit the region and the nation (NPFMC 1992). Henry Mitchell, an NPFMC member who represented western Alaska interests, together with Harold Sparck, a rural fisheries activist, devised the concept of the CDQ program and a strategy to use the inshore/offshore debate as a vehicle to create it. Mitchell, a lobbyist for southeast Alaska charter fishermen, had roots in western Alaska. Sparck, a resident of Bethel, Alaska, headed an advocacy group, Nunam Kitlutsisti—"protectors of the land." Mitchell and Sparck wanted to create jobs to combat western Alaska's seemingly hopeless poverty. They believed that Alaska's coastal villages deserved a share in the hundreds of millions of dollars of fish being caught off their shores (DeMarban 2008).

The idea had additional supporters. In 1988, Paul Fuhs, mayor of the City of Unalaska circulated a six-page proposal to fishing industry members, pitching the idea of CDQs:

> The clearest way to ensure that local communities will benefit from the bottom fishery is to allocate a Community Development Quota (CDQ) directly to Alaskan communities. This quota would be a powerful tool for providing jobs and financing for boats and harbor developments leading to stable rural economies.

4 The CDQ program weaves in and out of the inshore-offshore battles and their culmination in the American Fisheries Act. The role that the CDQ program played in those events, and how those events shaped the CDQ program, are discussed as they occurred; a detailed discussion of the outcomes of the CDQ program is reserved for Chapter 7.

At the April 1989 NPFMC meeting, Fuhs testified in favor of some type of quota system,

> which sets aside a community development quota for communities who have not yet had a chance to participate and can use this quota to leverage financing for the appropriate size vessels that it would take to process or to get the processing equipment.

He suggested "45% to fishermen, 45% to the processors, [and] 10% as a community development quota" (NPSC 1991).

At the June 1990 meeting, Mitchell, who served on the NPFMC at the time, proposed that CDQs be given to disadvantaged communities based upon recommendations of the governor to the secretary of commerce. To be eligible, a community needed to be near fishing grounds, have little economic viability outside commercial fishing, have cultural dependence upon fishing, and not have substantial existing harvesting and processing capacity. Mitchell was supported by Council member Larry Cotter, a strong ally of the inshore sector. As the Council debated the inshore/offshore issue, Mitchell moved the CDQ amendment to the preferred alternative. His motion was seconded by Pereyra, as it complemented a new employment program initiated by AFTA: to hire western Alaskans and thereby garner additional Alaska support. Mitchell believed Council members who opposed the inshore allocation voted to add the CDQ amendment even though they opposed it, in anticipation that the Secretary of Commerce Barbara Franklin would reject the entire measure because of the CDQ amendment. According to Mitchell, Senator Stevens carried through on his commitment to secure Franklin's approval. To ensure support, the CDQ amendment was passed with a limited duration of three years, allowing the Council to reconsider the measure at a later point (DeMarban 2008; W. Pereyra, personal communication).

NMFS began its required review of Amendment 18/23 on 1 December 1991. On 4 March 1992, NMFS approved Amendment 23 to the Gulf of Alaska Fishery Management Plan and approved Amendment 18 to the BSAI Fishery Management Plan with two exceptions. First, implementation of the sector split would be delayed until the 1992 pollock B season, to allow time for required public notice and public comment. Second, NMFS deemed that while a 35:65 split would satisfy MFCMA National Standards, increased allocations to the inshore sector in the second and third years were not consistent with the National Standards. The NOAA Administrator stated that NOAA was not opposed to the concept of an allocation between onshore and offshore interests as an interim measure pending development of a market-based solution to overcapitalization. NMFS' disapproval of the BSAI pollock allocations for 1993 through 1995 was based, in part, on a cost/benefit analysis pre-

pared by NMFS that indicated a net economic loss to the nation of $153 million under the proposed allocations for years 1993 through 1995 (Miller et al. 1992). This was in direct violation of National Standard 7 and Executive Order 12291, which directs fishery councils to consider the economic implications of their actions. This marked the first time, since the passage of MFCMA, that a cost/benefit analysis was cited as evidence for a significant U.S. fisheries decision (Herrick et al. 1994). The NOAA Administrator urged the Council to work as expeditiously as possible toward some method of allocating fish other than a free-for-all open access fishery or direct government intervention. He did, however, note that the primary issues addressed by the amendment were consistent with MFCMA. These topics included preventing preemption by one fleet of another, safeguarding capital investments, protected coastal communities that are dependent on a local fleet, and encouraging fuller utilization of harvested fish (NMFS 2002).

At its April 1992 meeting, the Council considered NMFS' actions and decided to revise Amendment 18. The Council supplemented its previous analysis of allocation alternatives. At a special meeting to deliberate this issue in August 1992, the Council again measured the comments of its advisory bodies and the public, adopted a preferred alternative, and submitted it to NMFS as revised Amendment 18. As adopted by the Council, the revised Amendment 18 established a 35:65 inshore/offshore allocation for 1993, the first year of the revised amendment. The inshore allocation was increased to 37.5% for 1994 and 1995. In addition, the revised Amendment 18 proposed two changes to the catcher vessel operational area (CVOA). Under the new version, the CVOA would be in effect only during the pollock B season (1 September to 1 November), and motherships (and factory trawlers that operated as motherships) would be allowed to receive deliveries and process pollock inside the CVOA, as long as they did not engage in directed fishing for pollock themselves. In September 1992, the Council submitted the revised Amendment 18 to NMFS for review and approval (NMFS 2002).

On 23 November 1992, after consideration of the revised amendment, public comments, the record developed by the Council, and the analysis of the potential effects of the proposed amendment, NMFS again partially approved the revised Amendment 18. NMFS approved pollock allocations of 35% and 65% for vessels that caught pollock for processing by the inshore and offshore components, respectively, for the years 1993 through 1995, and the establishment of the CVOA. However, NMFS disapproved the 2.5% increase for 1994 and 1995. It concluded that the sole purpose for increased allocation to the inshore component during those years was economic, and therefore, in violation of National Standards 4, 5, and 7 of MFCMA, as well as Executive Order 12291 (Executive Order 12291 1981). The final implementation of

these decisions was published on 24 December 1992 (Miller et al. 1992; Herrick et al. 1994; NMFS 2002).

AFTA fought the sector allocations in court, hoping to overturn the regulations as a violation of MFCMA. It sought an injunction against the new harvest regulations, but the new allocations were upheld by U.S. District Court Judge Barbara Rothstein on 24 July 1992. The at-sea fleet had no choice but to make the best of the new regulations.

With the inshore/offshore allocations in place, the offshore sector was headed for a tumultuous time. The inshore sector had won the political battle that guaranteed itself a larger share of the pollock TAC and brought a measure of stability. The offshore fleet, on the other hand, had just gone through a period of rapid expansion in the number of active vessels and in the capacity of those vessels. The number of factory trawlers to harvest pollock had grown from a single vessel in 1985, to 54 in 1991. The capacity now far exceeded the quantity of pollock available to the at-sea sector.

The market could support the new vessels in 1991, and 1992, for a few reasons. The Japanese had controlled imports of seafood until the late 1980s, through the use of import quotas, that limited the introduction of U.S.-produced seafood products, and colluded on prices offered for U.S. seafoods. As a result, many domestic processors of pollock, such as Trident, initially focused their efforts on finding buyers in the U.S. market. Losing most of their pollock allocation to the new domestic at-sea fleet, Japanese companies had no choice but to turn to U.S. processors for surimi and other products. But they continued to exert monopsony-like control over import prices by funneling purchases through import/export companies with the authority to collude to minimize prices paid to U.S. exporters.

The unequal balance of market power changed in 1990, when Røkke spearheaded formation of the United States Surimi Commission (USSC) under the authority of the Exports Trading Company Act of 1982. Congress passed the Act to stimulate U.S. exports of products and services. The Act allowed the U.S. Department of Commerce to issue a certificate that entitled a holder to a limited exemption under federal and state antitrust laws. The certificate

> …has enabled our members to deal with a myriad of import quotas and other trade barriers that previously thwarted U.S.-owned fishing companies from successfully competing in various foreign markets—particularly Japan, the largest surimi market in the world. (D. Christensen, personal communication)

The USSC allowed the domestic at-sea fleet to establish a common negotiating position to offset the strong negotiating position of the Japanese import/export companies.

> These are efforts that would be dauntingly difficult for relatively small independent companies to accomplish on their own behalf. (D. Christensen, personal communication)

By controlling a relatively large portion of the pollock surimi supply, the USSC was able to negotiate higher export prices.

With diminishing control over surimi sources and prices, as well as decreases in the amount of surimi held in Japanese cold-storage facilities, a perceived shortage of surimi occurred in Japan. Prices for surimi tripled in 1991-1992, as Japanese firms built their inventories (D. Christensen, personal communication). The elevated surimi price partially offset reductions in catch-per-boat caused by expansion of the at-sea sector and allowed the large number of factory trawlers to earn enough to continue fishing. However, with reduced catch shares entailed by the inshore/offshore allocation in the latter half of 1992, and unsustainable surimi prices, the pollock fishery was set for a tumultuous period (Sproul and Queirolo 1994).

## Implications of Inshore/Offshore I

Passage of Amendment 18/23 gave inshore processors protection from the factory trawler fleet and nearly doubled the quantity of fish delivered during the previous year. This in turn allowed catcher vessels, displaced by the transition from Joint Venture Processing operations, an opportunity to harvest fish. The sector allocations did not, however, address the more import issues that faced the pollock fishery: overcapitalization and the associated race-for-fish. With estimated combined processing capacity of the inshore and offshore sectors reaching 3.2 million metric tons in 1990, and only 1.385 million metric tons allocated for catch, there was far more capacity than needed to harvest and process pollock in the Bering Sea (NPSC 1990).

If a fishery provides profitable opportunities—and entrance to the fishery, investment in fishing vessels, or vessel upgrades are unconstrained—more and more harvesting and processing capacity will enter the fishery. Without a TAC, unconstrained capacity growth decimates fish stocks. Imposition of a TAC can prevent overfishing and stock collapse, but, in the absence of efficacious capacity constraints, fisheries generally devolve into economically perverse derbies wherein vessels race to catch as much fish as they can before the TAC is met and the fishery closed. Under such circumstances, fishing companies tailor their operations to maximize catch-per-day by overspending on additional horsepower to tow larger nets to catch more fish in less time. Companies also respond by building larger holds on the boats to be able to fish longer and by spending more money on spare parts and supplies to ensure their vessels can stay out longer. Vessels under a race-for-fish will fish

under unsafe conditions, in order to ensure that they are able to catch as large of a share of the fish (and therefore revenues) as possible—one trip can mean the difference between profitability and loss. Background documents written for the FCMA in 1976 recognize this.

> Often too many fishermen, vessels, and gear concentrate in "harvesting" a particular species which may result in overfishing. When this happens, harvesting costs of fishermen increase and their efficiency decreases. More fishermen often means less catch for each. To conserve fish resources, States have enacted regulations which generally give little consideration to fishermen's economic efficiency. As the economic viability of fishermen becomes impaired, obtaining financing at reasonable rates of interest and with reasonable loan payback periods becomes more difficult for them. (GAO 1976)

Fishing under these conditions leads to shortened seasons; a classic case was the Pacific halibut fishery where overcapacity collapsed a year-round fishery into a two-day season in the mid-1990s. Vessels in the halibut fishery caught as many fish as possible on those two days and the catch was thrown into freezers for processing at a future date. This resulted in lower prices paid for the product. The pollock fishery was headed in the same direction. Factory trawlers were engineered to operate for 10 or 11 months a year, but as harvesting and processing capacity flooded into the fishery between 1988 and 1991, there were proportionate reductions in season length. By 1991, the pollock A season had shrunk to 53 days and the B season was down to 95 days—five months of fishing time for vessels designed, financed, and built under expectations of longer seasons and larger catches.

Compressed seasons, due to the increased numbers of factory trawlers, meant lower-quality products, lower product recovery rates, and lower valued product forms; vessels operated to produce products that were fastest to produce. During this time, most at-sea vessels focused on surimi production, which is quicker and less labor intensive than fillet production. Also, the race-for-fish increased the tendency to roe strip before that practice was banned. It was more profitable to catch as many fish as possible in the shortest amount of time, keep the high-valued roe, and discard everything else. After the ban on roe stripping was in place, it was still efficient to strip the roe, and create low-quality surimi and fishmeal products from the carcasses, rather than to produce labor-intensive fillets. In the absence of rights to predetermined shares of the TAC, the individually sensible but collectively irrational decision was to maximize catch and throughput rather than maximize quality or product recovery rates.

Inshore/Offshore I did nothing to address the root cause of overcapitalization. In fact, for the at-sea sector, it intensified an already heated race-for-fish: instead of access to nearly 80% of the TAC, the at-sea sector was now limited to a maximum of 65% of the TAC. For the inshore sector, although they were now guaranteed 35% of the TAC, catcher vessels had taken over 1 million metric tons of pollock in Joint Venture Processing partnerships in 1987, so Inshore/Offshore I simply guaranteed them a share of the TAC that was much smaller than they had taken before the rapid expansion of the domestic at-sea sector. The three motherships in the at-sea sector had their own fleet, for the most part, so most of the former joint venture fleet was locked into deliveries to the inshore sector (NPSC 1990).

Inshore/Offshore I failed to address overcapitalization, so the race-for-fish quickly intensified within each sector. From 1993, the first full year of sector allocations, through 1997, annual season length shrank by 33% in both inshore and offshore sectors (Figure 4.1; Figure 4.2). The factory trawler fleet was arguably hurt the most; it saw its already short seasons shrink even more. The valuable A season, when the profitable roe is harvested, collapsed from 53 days in 1991 to 26 days in 1995.

High surimi prices in 1991 and 1992 had helped factory trawlers weather the shortened seasons and the reduced average catch-per-vessel, with many companies making just enough to get by. In 1993, however, they were hit with a perfect financial storm. First, factory trawlers faced their first full season under Inshore/Offshore I. This meant their catch share was reduced by 12.6%. Second, they faced a changed surimi market. As at-sea vessels turned their focus to producing more surimi, the market was flooded with excess product. In 1993, with Japanese inventories full and the additional product in the marketplace, surimi prices plunged. Factory trawlers were hit hard, and it had an immediate effect on the industry (NPFMC 1995a; Hornnes 2006).

With limited ability to move factory trawlers out of the U.S. EEZ, the banks that made the loans to build and convert vessels were in immediate danger. Norway's Christiania Bank, which had substantial loans tied up in factory trawlers, initially chose a bridging strategy with the expectation that a rationalization plan (a fishery management structure designed to end the race-for-fish by offering fishermen long-term entitlements to specified shares if the TAC) would be passed. It was expected that a share-based system would allow the at-sea sector to consolidate and return to profitability. Depending on how it is structured, a catch share system can create entitlement that could be held by individuals or corporations. Such entitlements can typically be bought, sold, or leased to others, and in many cases even used as collateral for loans. Norwegian banks and investors expected that a catch share system would be implemented before Inshore/Offshore I expired (Hornnes 2006).

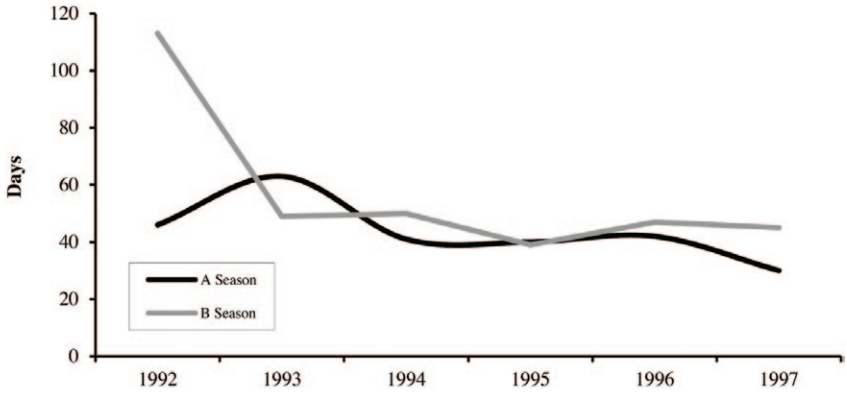


**Figure 4.1. Inshore sector season length. Source: NPFMC 1998b.**

Even with the support of some banks, there were a significant number of bankruptcies and consolidation in the industry between 1992 and 1998. Although there were 54 factory trawlers fishing in 1991, records indicate that only 25 vessels fished in all six years from 1991 through 1996. Major turnovers occurred with an annual average exit rate of 25%. When companies failed to meet obligations, banks found themselves in the unenviable position of holding vessels that had few alternative uses. With too many vessels already fishing in the Bering Sea and few other fisheries big enough to support the large vessels, banks cut their losses by selling vessels even if the sales price was insufficient to cover the bank's equity. The result was that repossessed vessels were sold and returned to the fishery with a lower capital investment, and therefore the ability to turn a profit with a smaller catch than for investors who had financed the vessel previously (NPFMC 1998b).

While other investors scrambled to liquidate their assets, Kjell Røkke at American Seafoods saw these tumultuous times as an opportunity to purchase factory trawlers at fire sale prices. Because the initial allocation under a catch share system is usually based on the catch history of the vessel, Røkke set out to acquire as many vessels and as much catch history as he could, even if it meant being saddled with unprofitable vessels in the near term. In short order, Røkke became the primary player in the factory trawler fleet (Hornnes 2006).

In 1992, American Seafoods, which already owned three factory trawlers, purchased two factory trawlers, the *Pacific Scout* and *Pacific Explorer*, that had been converted in Norway in 1988. Two years later, in 1994, Røkke added the *Royal Prince* (converted in Norway in 1987).

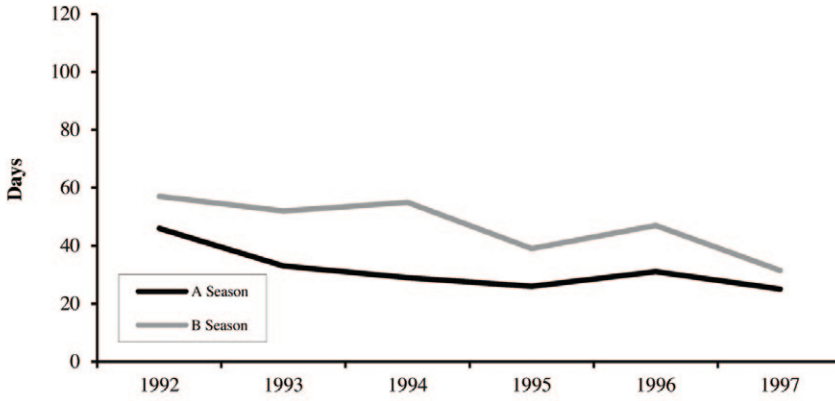


**Figure 4.2. Offshore sector season length. Source: NPFMC 1998b.**

That same year, Røkke's partners sold out and he became the 90% owner of American Seafoods and six factory trawlers. Another major player joined the pollock factory trawler fleet in 1992 when Tyson Foods Inc. purchased Arctic Alaska Fisheries for an estimated $212 million. Tyson, a leader in the poultry industry, looked to expand into seafood products. Arctic Alaska's 31 vessels included five at-sea processing vessels in the pollock fishery. Tyson bought Arctic Alaska Fisheries at its peak, taking on substantial debt, but the purchase made Tyson an instant player in the pollock fishery. The last significant buyer under Inshore/Offshore I was Wally Pereyra and his partners in the *Arctic Storm*. In 1994, they purchased the *Michelle Irene* and renamed it the *Arctic Fjord*, which made Arctic Storm management the owners of two factory trawlers. While these purchases by Tyson, American Seafoods, and Arctic Storm were significant, they merely foreshadowed the greater turmoil to come.

## Inshore/Offshore II

Inshore/Offshore I was intended to be a short-lived bridge to a comprehensive rationalization program to end the race-for-fish and allow an orderly partial decapitalization of the fishery. With the turmoil in the factory trawler fleet, the NPFMC review of different solutions was followed closely. The at-sea sector favored some type of individual fishing quota or license-limitation program. It also felt that some type of buyback program was necessary to remove excess capacity from the fishery. Shore-based processors remained opposed to rationalization of the fishery unless it included some kind of processor share. Trident and

other inshore companies realized they would not receive anything close to their then current production capacity if quota share allocations were based on past catch history. It was in the best interest if the inshore sector to use the Council process to delay rationalization as long as possible, while pressing for a mechanism to increase their present share.

While vessels continued to race each other for fish in the Bering Sea, their owners jockeyed for advantage before the Council and in congressional corridors. Factory trawlers, desperate to stem capacity growth, pressed for a moratorium on new vessels. In November 1992, shortly after it finished with Inshore/Offshore I, the NPFMC looked to end the race-for-fish. It established the Comprehensive Planning Committee (CPC), a group tasked to identify alternatives to include in a plan amendment. After determining a range of alternatives, the CPC selected a preferred alternative that they felt would best address the issue at hand. In this case, the amendment plan was named the Comprehensive Rationalization Plan. The CPC also took the important step of developing a problem statement. Council members and industry groups tended to fall into different camps as rationalization took front stage. Harold Sparck, who was influential in implementing the CDQ, argued that CDQs must be included in plan alternatives. The North Pacific Longline Association asked that the Council consider using auctions for the initial allocations. As relatively new participants in the cod fishery, they were concerned because they had a relatively short catch history. The Kodiak Longline Vessel Owners Association agreed, and they advocated the Council to consider auctions for 3, 5, or 10 year periods. The Fishing Company of Alaska, on the other hand, opposed privatization, but maintained that the management solution needed to be comprehensive. The American Fishing Trawler Association, meanwhile, believed that individual fishing quotas (IFQ) were the preferred solution. The American High Seas Fisheries felt that only IFQ and auctions addressed overcapitalization and the race-for-fish (J. Plesha, personal communication).

Two months later, in January 1993, the CPC determined that some type of IFQ system or limited-license programs would best address the current issues facing the fisheries in the Bering Sea. Unlike an IFQ program that establishes catch shares, limited-license programs attempt to limit fishing intensity by restricting the number of fishermen or vessels allowed in the fishery. The CPC determined that (1) a limited-license system could handle five of the fourteen issues that needed to be addressed in rationalization of the pollock fishery; and (2) an IFQ system could best address thirteen of the fourteen issues (NPFMC 1995a). Trident argued the importance of examining allocations of IFQ where harvesting and processing sectors are considered. At this meeting, the proposed schedule for implementation of the Comprehensive Rationalization Plan was to have a plan approved by the end of 1994, for

implementation in the 1996 season. It was considered to be an aggressive schedule, but a majority of the Council was in favor of some form of IFQ system (although certain member support hinged on how the IFQ rights were initially allocated); as a lobbyist for the Pacific Seafood Processor Association (representing shore-based processors), NPFMC chairman Rick Lauber was adamantly opposed to any form of IFQ that failed to protect processors (J. Plesha, personal communication).

In April 1993, the CPC broke the comprehensive planning analysis into four cases: Case 1 was the historical fishery, Case 2 was the baseline fishery, Case 3 was a snapshot of the fishery after implementation of the alternatives, and Case 4 was the downstream effects of the management alternatives after implementation. At the meeting, the Science and Statistical Committee also recommended that the document which provided a moratorium on the entry of new vessels be released for public review. At this meeting, a primary focus was for Council staff to lay out for the Council and industry some detail of the analytical approaches that would be used in the Comprehensive Rationalization Plan assessment (J. Plesha, personal communication).

In June 1993, the CPC studied limited-license programs, individual fishing quotas, and allocations to processors. They also considered a possible two-pie scheme that would have allocated fishing quota to harvesters and processors for groundfish and crab fisheries in the Bering Sea. In September 1993, after ten months, the committee laid out the final alternatives it felt needed to be included in the rationalization plan. The first option was the overall groundfish/crab IFQ alternative, which was identified as the preferred choice. The second alternative was a two-pie IFQ alternative, which would create individual processor quotas to mirror the IFQ for the harvesting sector. Although individual processor quotas were deemed illegal by NOAA general counsel, the NPFMC wanted to move forward with the idea for analytic purposes. The third alternative was a limited-license program (NPFMC 1995a; J. Plesha, personal communication). The Council also approved a vessel moratorium. At the time, Trident came out in strong support of processor shares. Not only would it reward their company for their investment in the fishery, it would offset their concern that processors under an IFQ system would bid up the price of fish harvested to the point where only the processor's variable costs would be covered. Trident was concerned that the economic rents (the profits beyond the amount needed to motivate fishermen to harvest fish) would accrue to catcher vessel owners, which was clearly not beneficial to Trident or any other shore-based or mothership processor. Earl Comstock from Senator Stevens' office was also initially attracted to the two-pie system. At the meeting, Council staff were asked to examine the feasibility of allocating catch shares to crewmembers who had helped pioneer the fishery. Council staff were

also requested to do further work on a processor allocation (J. Plesha, personal communication).

In August 1993, the Council requested a legal opinion on the legality of individual processor quotas. There was concern that the MFCMA might not permit individual processor quotas and they wanted to know what justification would have to be given to win approval of some form of individual processor quotas. There was also concern about the legality of Japanese-owned processors being allocated rights to U.S. fish. At the next meeting, in October 1993, the goal was for the list of alternatives to be finalized by the December meeting, so that Council staff could prepare an analysis. NOAA advised the Council that allocating IFQ or individual processor quotas to shore-based processors would be prohibited unless the Magnuson Act was modified. Nevertheless, the Council decided to ask staff to continue to evaluate individual processor quotas as one element of possible alternatives.

During this time, various groups adopted positions for or against the alternatives. Near the end of 1993, Skippers for Equitable Access made a strong push for skipper shares to be included into any IFQ system. Multiple letters and testimony were presented to the Council to argue that skippers deserved consideration for their contribution to the North Pacific fisheries. Additionally, an attempt was made and supported by Clem Tillion to look at allocating various crew shares to captains, in recognition of the time they had spent catching pollock. At the September 1993 meeting, it was decided that the analysis should include an option for crew shares. The Alaska Marine Conservation Council advocated that the boats that had low discards be allocated more quota, to reward "clean" fishing (J. Plesha, personal communication).

The December 1993 Council meeting addressed the issue of whether to allocate all Bering Sea species, or focus on pollock and cod. The options of potential cutoff dates to use as historical catch, CDQ allocations, individual processor quotas, transferability, ownership provisions, foreman/plant worker considerations, and particularly the initial quota share calculation, were examined. Issues about whether to give greater weight to prior Domestic Annual Processing harvests vs. Joint Venture Processing catches, or schemes that looked at long or short timeframes for establishing catch history and demonstrating recent participation. It was at this meeting that the Council abruptly decided to delay the scheduled vote on the Comprehensive Rationalization Plan. In a letter after the meeting to the Rick Lauber, the Council chairman, industry groups representing more than 80% of the fish harvested in the North Pacific decried the decision as "a transparent political maneuver to once again delay Council consideration of this crucial subject" (J. Plesha, personal communication). Not surprisingly, the vote was supported by Alaska Council members, with Washington state representatives strongly objecting. Like many other decisions, the Alaska-

dominated Council supported the measure that it thought would best represent its own interests.

The focus remained on IFQ for all groundfish and crab fisheries, but the scope of the plan appeared to cover such a large number of interests that it further slowed the process. The CPC was disbanded as the Council realized that the contentious issue would require the entire Council's full attention. At the January 1994 meeting, the Comprehensive Rationalization Plan dominated the discussion. It was determined by the Advisory Panel, in a 17-2 vote, that a limited-license program would allow for the quickest implementation. However, the Council concluded that a limited-license program would not address the issue of the inshore/offshore allocations, and asked staff to begin evaluation of continuing the inshore/offshore allocations program beyond the 1995 sunset date. The Council specifically instructed staff to consider extending the provisions of Inshore/Offshore I for an additional three years, to allow time for continued development of the Comprehensive Rationalization Plan (NPFMC 1995a).

The at-sea sector feared additional reductions to their share of the pollock total allowable catch, so they supported a simple rollover of Inshore/Offshore I and continued to push for the adoption of the Comprehensive Rationalization Plan in the pollock fishery. The inshore sector also backed a three-year extension of Inshore/Offshore I, and pushed for an increased inshore allocation. The Alaska Council members, along with at least one Washington representative, maintained viewpoints that on certain critical issues, at least in part, favored the inshore sector. It made sense to push for increased allocation, as the inshore sector had excess capacity and desired a higher proportion of the total allowable catch, whether it came through an IFQ program or through an increased sector allocation. Trident continued to express open opposition to any IFQ program that failed to include processors. In general, it appeared that inshore opposition to an IFQ system would remain until the Comprehensive Rationalization Plan included either individual processor quotas or provided increased benefits to the inshore sector. Politically, this gave Trident, the only entirely domestic company, the power to withhold support for any IFQ proposal until they were offered something in return for their support. With the rate of bankruptcy in the at-sea sector, it appeared that at some point the offshore fleet would have to give up some of the total allowable catch in order to get its support for IFQs and less financial instability.

The battle also continued outside the Council process. Clem Tillion, a Council member who was a strong supporter of IFQs, asked Alaska Governor Walter Hickel to replace chairman Lauber with Henry Mitchell. Tillion argued that by replacing Lauber, who was against both IFQs and CDQ, the Governor would gain nearly 17,000 votes from Native Alaskan supporters of the CDQ program. Although the Governor considered

the idea, he stuck with Lauber as one of his nominees to the Council. Tyson Foods, with their newly acquired position in the at-sea sector, also tried to have Lauber removed by utilizing their close connection with President William Clinton. Tyson's lobbyist Ashley Reed met with Governor Hickel and informed the Governor that Tyson would set up a meeting with President Clinton to discuss opening Arctic National Wildlife Refuge (ANWR), if he were willing to pull Rick Lauber from the list of nominees. Reed told the Governor that without the anti-IFQ chairman on the board, the pro-IFQ Clem Tillion would become chairman, and thereby increase the likelihood of an IFQ program. This did not please Governor Hickel, who refused to remove his support for Lauber, and instead replaced another nominee who supported Tillion for one who supported Lauber. Much to the chagrin of Tyson Foods and Clem Tillion, Lauber was re-nominated and continued as the NPFMC chairman (J. Plesha, personal communication).

In June 1995, after many months of debate on an IFQ plan for pollock and cod, the NPFMC adopted a limited-license program for the BSAI groundfish and crab fisheries, although a final rule was not submitted to NMFS until June 1997. The Council also passed Amendment 38/40, later to be known as Inshore/Offshore II. Designed to regulate the 1996-1998 fishing seasons, Inshore/Offshore II continued the 65:35 sector allocations. There were a couple of reasons the Council decided against increasing the inshore allocation. First, they anticipated that changing the allocation would require a rigorous cost-benefit analysis and it would be difficult to complete the analysis before the expiration of Inshore/Offshore I. Second, even if the analysis were completed on time, it was unlikely that a cost-benefit analysis would support an increased inshore allocation. Inshore/Offshore II also continued the pollock CDQ program and the catcher vessel operational area (CVOA) with two exceptions. It reduced the dimensions of the CVOA and allowed the at-sea sector to fish in the CVOA once the inshore sector caught their quota (NPFMC 1995a).

# Chapter 5. Introduction of the American Fisheries Act

## Reauthorization of the Magnuson Stevens Act

Although Inshore/Offshore II was little more than a three-year extension of Inshore/Offshore I, it had a significant impact on the factory trawler fleet. Banks had provided bridge financing with the expectation that the Council would implement a catch share system by 1995. With the passage of Inshore/Offshore II, it was evident that a catch share system was at least three years away. In addition, although the Council approved the limited-license program (NPFMC 1994), NMFS had not yet completed draft rules to implement the limited-license program, let alone submitted the draft rule for review by the Secretary of Commerce. The unclear regulatory process and uncertainty about the ultimate outcome led banks to lose confidence in the ability of fishing companies to make good on their vessel-backed loans. Owners of factory trawlers who endured losses in anticipation of receiving windfall capital gains under an initial allocation of IFQ realized that there was no near-term solution to the overcapitalization and race-for-fish problems. Thus, under the current scenario, these at-sea vessel owners faced the unenviable prospect of several more years of continued operating losses.

Another bill, which was developed and passed outside the Council process, further impacted the possible introduction of IFQs. The legislation, which renamed the MFCMA the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), focused on recovery of overfished fisheries, protection of essential fish habitat, and reduction of bycatch. It also contained a moratorium on new IFQ programs pending completion of a National Research Council study of their effects (National Research Council 1999b). Trident backed the provision. On 25 March 1995, while Congress debated different provisions, Bart Eaton, an executive vice president for Trident, testified before the Senate Subcommittee on Oceans and Fisheries. He told the committee Trident was concerned that the "primary recipients of IFQs for groundfish off Alaska will likely be the foreign-owned factory trawler companies" and it supported the moratorium "until the Secretary of Commerce promulgates IFQ guidelines." He also testified against a proposal to require a

two-thirds majority vote on all Council actions that result in significant reallocations of fishing privileges among industry participants. Such a proposal, if passed, would have allowed Washington and Oregon Council members to block any further Alaska-only supported amendments (J. Plesha, personal communication). The MSFCMA was passed in 1996 and put into law in 1997, with the moratorium on IFQs in effect and the two-thirds majority vote removed.

The MSFCMA effectively eliminated IFQs as an option for rationalizing the pollock fishery. Not only were the shore-based processors relieved of the threat that a vessel-only IFQ program posed, but the MSFCMA also stipulated that "the term 'individual fishing quota' does not include a sector allocation." This provided assurance that the Council could continue the existing inshore/offshore allocation scheme indefinitely.

The Council continued to debate the specific details of the limited-license program, but the prospect of limited access did nothing to defuse the inshore and offshore battle over pollock. The limited-license program would serve to stop the addition of new vessels to the fishery; it would do nothing to reduce existing superfluous harvesting or processing capital. In addition, the at-sea sector had to look forward to an ongoing and likely inefficacious political battle against increases in the inshore allocation (NPFMC 1994). The combination of Inshore/Offshore II and the moratorium on IFQs triggered a wave of bankruptcies in the at-sea sector. With no end to the race-for-fish in sight, bankruptcy and consolidation became the norm. American Seafoods, which owned six factory trawlers in 1996, seized the opportunity to buy up every bankrupt factory trawler it could find. American first bought the *Ocean Rover*, a vessel that had been converted in Norway. It then signed an agreement with Oceantrawl Inc., the U.S./Japanese-owned company represented by Bob Morgan, to manage its factory trawlers, the *Northern Eagle*, *Northern Hawk*, and *Northern Jaeger*, a fleet it later purchased. American Seafoods' next major acquisition included five vessels from International Marine Management, Inc., which had ownership from Konrad Uri, John Sjong, and Kaare Ness. This fleet included four vessels converted in Norway, the *Royal Sea*, *Snow King*, *Royal King,* and *Royal Princess*, as well as the *Aleutian Speedwell*, which had been converted in the United States. Their names were changed to the *Katie Ann*, *Elizabeth Ann*, *Rebecca Ann*, *Victoria Ann*, and *Christina Ann*. In 1997, American Seafoods purchased the Emerald Seafoods vessels, the *Claymore Sea*, *Heather Sea,* and *Saga Sea*, which were then being fished in Russian waters. With those acquisitions, American Seafoods controlled a fleet of 19 factory trawlers, 16 of which were then operating in the U.S. EEZ.

Together, these vessels represented over half of the factory trawler capacity in the pollock fishery[5] (Hornnes 2006).

Along with the consolidation in the U.S. fishery, several vessels were sold to companies operating outside the Alaska fisheries. Russian companies bought some of the vessels. One was the *Arctic Trawler*, the first U.S.-owned factory trawler used in the Bering Sea for groundfish. Tyson also sold a factory trawler to Russia. In addition, Emerald Seafoods sold three vessels to a Russian enterprise that was unable to meet its payment obligations; the vessels were later bought out of bankruptcy by American Seafoods (Plesha 1997).

According to Kjell Røkke, these investments were part of a calculated strategy which he felt would give him an edge. First, Røkke continued to hope for the eventual implementation of an IFQ-management system. He felt that control of a large fleet of factory trawlers would give him a strong position to persuade policy makers to allow implementation of an IFQ program. Second, a large fleet would give him control over a large portion of the catch history associated with his vessels. Since the initial distribution of quota under an IFQ system is typically based on catch history, Røkke would be richly rewarded with a large quota allocation. Lastly, he felt it would enable American Seafoods to surrender vessels in give-and-take negotiations on an IFQ system. He guessed that if new legislation were passed, there would be some type of buyback provision to reduce excess capacity, and he could sell the least-efficient vessels in his fleet (Hornnes 2006).

## Introduction of Inshore/Offshore III

With continued bankruptcies within the factory trawler fleet, and growth of American Seafoods, talk at the Council level focused on reduction of fleet capacity and rationalization plans. Paul MacGregor, an attorney representing the factory trawlers, testified at a 1997 meeting:

> …boats don't go away. People buy'em and the people that buy them are the ones … that are the more successful companies. As companies have gone bankrupt in the offshore fleet, a number of companies have picked them up. So you have today a fleet that's pretty much the same size as it was back in 1990, there have been a few vessels sold to Russia, but absent those your fleet is more or less the same size. (Plesha 1997)

5 The ninetieth vessel was the *Brown's Point*, for which American Seafoods held an option to buy. They later purchased the vessel and included it as a vessel to be scrapped in the 1998 American Fisheries Act.

Testimony for the at-sea sector focused on some type of fleet reduction plan or rationalization plan, since sector allocations had decreased stability within the at-sea sector (Plesha 1997).

Still, attempts at rationalization stalled, and the Council revisited inshore/offshore sector allocations for a third time. At the April 1997 meeting, the Council acknowledged that a comprehensive rationalization plan to address overcapitalization and preemption issues could not be adopted and implemented prior to the expiration of Inshore/Offshore II. The Council began development of a third set of inshore/offshore Fishery Management Plan amendments. In June 1997, the Council requested information in the form of pollock industry profiles that enabled it to examine the evolution and status of the Bering Sea and Aleutian Island (BSAI) pollock fisheries from 1991 through 1996. At the September 1997 meeting, after examination of the industry profiles, consideration of public comment, and Council discussion, the Council adopted a complex set of inshore/offshore alternatives for analysis (NPFMC 1998b).

Over the course of the next several Council meetings, these inshore/offshore alternatives evolved into five basic alternatives and included various sub-options within each alternative. At the June 1998 meeting, the preferred alternative was similar to Inshore/Offshore II, with a couple of modifications: (1) 4% of the BSAI pollock total allowable catch, after subtraction of reserves, would be shifted to the inshore sector resulting in a 39:61 split between inshore and offshore sectors; (2) a portion of the inshore Bering Sea B season allocation, equal to 2.5% of the BSAI pollock total allowable catch after subtraction of reserves, would be set aside for small catcher vessels, and would become available on or about August 25 of each year to other vessels; and (3) catcher vessels delivering to the offshore sector would be prohibited from fishing inside the catcher vessel operational area during the B season from September 1 until the inshore sector B season allocation was closed to directed fishing. Inshore/Offshore III (BSAI Fishery Management Plan Amendment 51) would remain in effect for the years 1999 through 2001 (NPFMC 1998b).

## Cooperatives

During 1998, while the Council was discussing Inshore/Offshore III, factory trawler companies began building support for an alternative approach to rationalize the pollock fishery; harvesting cooperatives, similar to those created in the Pacific whiting fishery off the coast of Washington in 1997. The whiting cooperative provided fishermen with an opportunity to enjoy the benefits of individual catch shares while legally circumventing the moratorium on new IFQ programs (PFMC 1993; Sylvia and Larkin 1995; Freese et al. 1995; Larkin 1998; Townsend 2005).

The Pacific whiting fishery and the pollock fishery shared key features. They had a similar industrial organization with inshore and offshore sectors consisting of factory trawlers, motherships, shore-based processors, and catcher boats, with nearly all of the catch being processed into surimi (Radtke 1991; Dorn et al. 1993; Larkin and Sylvia 2000). Like the pollock fishery, the Pacific whiting fishery had been managed with sector allocations, with a preference given to the inshore sector. Within each sector, vessels raced for fish, leading to compressed seasons, reduced product quality and reduced product recovery (PFMC 1993, 1995, 1997). Similarities between the pollock and Pacific whiting fisheries also extended into capital ownership. For example, the ten factory trawlers involved in the Pacific whiting fishery were owned by four companies that also participated in the pollock fishery: American Seafoods, Tyson Foods, Glacier Seafoods, and *Alaska Ocean*.

With the intent of ending the race-for-fish and securing their portion of the whiting total allowable catch (TAC), the four companies introduced the idea of harvesting cooperatives. The idea was a combination of the enterprise allocation system utilized in the Atlantic cod fishery of the east coast of Canada, and the Fisherman's Cooperative Marketing Act of 1934, which provides limited antitrust exemptions for the fishing industry. In 1982, to respond to gear conflicts and battles between inshore and offshore sectors, Canada designed and implemented a management structure that allocated a percentage of the TAC to each sector, and within the offshore sector the TAC was further subdivided into three portions. This guaranteed, though only on a year-to-year basis, individual portions of the offshore TAC to the two largest companies that typically amounted in aggregate to over 80% of the offshore allocation. The remaining quota was granted to a group of independent fishermen, who fished in a typical race-for-fish fishery. Although the inshore fishermen, who weren't granted any individual rights to the TAC, and the independent offshore fishermen, who continued to increase vessel size and capacity, failed to realize gains, the two large offshore companies were able to reduce their fleet size and increase their efficiency (Gardner 1988; Binkley 1989; PFMC 1993).

The Fisherman's Cooperative Marketing Act of 1934 was intended to allow groups of "small" producers to form cooperatives to jointly market their products. Because the offshore whiting companies interested in forming a cooperative were large, integrated companies, there was concern that the proposed cooperative would be found in violation of antitrust law. Much of this concern came from Tyson Foods' prior experience with antitrust issues in the poultry industry. Therefore the whiting industry spent considerable time consulting with the Anti-Trust Division of the Department of Justice, in order to obtain a ruling on the legality of the organizations (PFMC 1993; PWCC 2010; J. Plesha, personal communication).

On 27 May 1997, the Department of Justice accepted the argument that a harvesting cooperative would be pro-competitive, and permitted the formation of the cooperatives (Klein 1997). After receiving the favorable ruling through a Business Review Letter by the Department of Justice, the four companies took a single afternoon to split the sector allocation into individual company allocations. The whiting cooperative fulfilled three primary functions for the companies: it allocated quota shares of whiting and subdivided sideboard constraints; it facilitated bycatch avoidance; and it provided for monitoring of compliance and enforcement of the contractually allocated shares of the sector allocation. Of these, the foremost was the authority to sub-allocate quota within each sector and within each cooperative (multiple cooperatives could be formed within a sector). This happens on a contractual basis, in the form of a membership agreement. Participation was voluntary and governed by civil contract. In practice, the cooperative system is similar to an IFQ system. However, beyond deciding on the allocation of harvesting privileges, cooperative members also decide on rules for trading or selling their allocations as well as penalties for violating contractual agreements (Sylvia and Larkin 1995; Criddle and Macinko 2000; Sullivan 2000; Anderson 2002; PWCC 2010).

The four offshore whiting companies saw immediate results. With suspension of the race-for-fish, they immediately reduced the number of vessels in the fishery. Product recovery rates increased from 17.2% to 20.6%; a 20% increase in product with no increase in catch. Bycatch rates also declined as vessel operators had more flexibility to shift to fishing grounds with lower bycatch rates. In addition, the cooperative members agreed to maintain full-time observer coverage, report their catches to a third party service, and to pay penalties to each other if they exceeded their shares. The cooperative was self-regulating, and enjoyed increased profits from eliminating the race-for-fish (Sylvia and Enriquez 1994; Sylvia et al. 2008; PWCC 2010).

Success of the Pacific whiting cooperative led the companies to recognize the potential benefits of a similar structure in the pollock fishery. In addition, many of the same at-sea sector companies had already experienced similar benefits from the CDQ shares they had leased. The 7.5% pollock allocation given to the CDQ program under Inshore/Offshore I and continued under Inshore/Offshore II had been sub-allocated to six CDQ entities, which represented more than 50 western Alaska communities. Because the CDQ entities did not have the capacity to harvest pollock, they leased their sub-allocations based on bids that included royalty payments, employment opportunities for community members, and investment opportunities. While the Inshore/Offshore I regulatory impact review anticipated that the CDQ share would "accrue to the inshore sector," the opposite occurred (NPFMC 1992, 1995). Shore-based processors including Westward and Trident

tried to compete for the CDQ share, but they were unwilling to pay as much as the factory trawlers were willing to pay. For example, in 1993 and 1994 Trident was able to lease the quota from the Aleutian Pribilof Island Community Development Association (APICDA), a CDQ group, but ended up sub-leasing the quota to American Seafoods and buying the fillets back after CDQ pollock was harvested and processed. Over time, a majority of the CDQ pollock has continued to be leased and fished by factory trawlers, who were able to process the fish more effectively and extract higher value from the product and were therefore able to offer higher royalty payments (NPFMC 1992).

Fishing CDQ shares yielded exciting results for the factory trawler companies. Because the CDQ quota provided exclusive harvest rights, fishing companies did not need to race each other when they fished their CDQ quotas. This gave operators greater flexibility to choose when, where, and how to fish. Decisions could be based on maximizing profit per pound of CDQ instead of maximizing catch-per-day as they did in the regular fishery. Companies could participate in the race-for-fish during the A season, then after the quota for that season was exhausted, fish for their CDQ pollock at a pace and in a manner that allowed them to capture more value from the fish. For example, in 1994 high value fillets represented 26.1% of the product mix for factory trawlers during the race-for-fish, and 39.6% when they fished their CDQ quota. In addition, the overall product utilization rate jumped from 14.3% to 16.7% when fishing switched from the "open" season to the CDQ shares. The increased efficiency gave the factory trawlers a glimpse of the benefits that could be obtained from rationalization (NPFMC 1998b).

With the success seen in CDQ shares and in the whiting cooperative, factory trawlers tried to introduce the idea of cooperatives late into the 1998 Council debate over Inshore/Offshore III. American Seafoods pushed the idea forcefully, with other factory trawler companies in support. However, in order to facilitate formation of a cooperative, the at-sea sector needed separate allocations to the factory trawl sector and the mothership sector. To gain the inshore sector's support for the allocation, representatives from the factory trawlers agreed with inshore representatives to shift 4% from the offshore quota to the inshore sector, anticipating that gains from being able to form a cooperative would more than offset the reduced sector allocation (NPFMC 1998b).

Council discussion at the June 1998 NPFMC meeting focused on a last minute proposal to establish a three way sector allocation: 40% inshore, 50.5% offshore, and 9.5% to "true" motherships. This is the first time the idea of cooperatives was publicly discussed with the three sector allocations. There was much debate over the three sector allocation, and according to participants, an agreement was almost reached through the Council process. The three sector allocation did not go through, however, because motherships did not see how it would advan-

tage them. Their historic portion of the catch had represented between 8.5% and 11.5% of the total allowable catch and they saw no advantage to agreeing to the split (NPFMC 1998b).

With disagreement among participants, the Council refused to pass the three-sector split. One Council member indicated that he felt the Pacific Fishery Management Council, which managed the whiting fishery, was unaware that the industry intended to form a cooperative in the whiting fishery when they passed a three-sector allocation. Given his knowledge of the industry's intent to form a cooperative, he would not support a three-sector split. Other members also felt uncomfortable with the short time they were given to consider the impacts of a cooperative, and there were complaints that those affected had not been given time to comment on the cooperative idea. There was also some concern whether cooperatives were too much like an IFQ and would be disallowed on review by the Secretary of Commerce due to the MSFCMA-imposed moratorium on new IFQ programs (NPFMC 1998b).

According to Plesha, the cooperatives were not discussed until that June 1998 meeting. Even with the offer for an increased portion of the quota share to the inshore sector, the short time frame may have prompted some concern from some shore-based processors who were worried about competing with an at-sea cooperative. There were additional concerns regarding potential spillover effects on other fisheries. If, as expected, formation of cooperatives would lead the factory trawler companies to use fewer vessels in the pollock fishery, would the liberated capacity spill into fisheries such as salmon and flatfish, and create increased competition for shore-based processors in those fisheries? This concern may have also influenced the Council (NPFMC 1998b).

The Council instead passed Inshore/Offshore III, which allocated 61% of the BSAI pollock total allowable catch to the at-sea sector (after subtraction of reserves and a 10% CDQ allocation) and 39% to the inshore sector, with the motherships still contained within the at-sea sector. The factory trawler companies felt betrayed. They had agreed to the 4% increase in the inshore allocation in exchange for support of the three-sector split and the ability to form a cooperative. Instead, they simply received a smaller share of the total allowable catch. The amendment was then sent to the Secretary of Commerce for implementation in the 1999 fishing season (NPFMC 1998b).

## American Fisheries Act

While the Inshore/Offshore allocation debate at the NPFMC remained the primary focus of the pollock fishery in the 1990s, opposition to foreign ownership of vessels remained. The court ruling in 1992, supporting the USCG interpretation of the Anti-Reflagging Act, did nothing to curb foreign ownership in the pollock fishery and it had allowed the rebuilt

factory trawlers a fishery endorsement. While fighting over sector allocations at the Council level, Tyson and Trident continued to argue for an interpretation of the Anti-Reflagging Act that would benefit them by reducing capacity in the pollock fishery through the reduction of foreign ownership and foreign rebuilt vessels. American Seafoods, which continued to grow, was owned by Kjell Røkke, a Norwegian national; by 1998, American Seafoods owned nearly all the Norwegian rebuilt vessels in the pollock fishery. Thus Trident and Tyson felt that if they could have a new congressional act introduced to implement policies that reflected their view of the original intent of the Anti-Reflagging Act, their number one competitor would be largely eliminated and their share of the pollock fishery would be increased (J. Plesha, personal communication).

After researching what rules would be required to truly end foreign ownership and the use of foreign rebuilt vessels in the EEZ fisheries, Trident and Tyson worked with Senator Stevens to introduce a new bill to Congress; on 25 September 1997, Stevens introduced the American Fisheries Act (S. 1221). As then written, the American Fisheries Act (AFA) would have stripped fisheries endorsements from numerous factory trawlers rebuilt in foreign shipyards under the Anti-Reflagging Act savings exemptions, established a 165 foot limit on U.S. fishing vessels, and would have limited foreign ownership of U.S. fishing vessels to 25% (NPFMC 2002). The AFA would have primarily affected American Seafoods, but would have also affected *Arctic Storm*, which had Korean owners, and *Alaska Ocean*, which had Japanese owners. In addition, the AFA would have removed fisheries endorsements from most of the factory trawl fleet that had benefited from rebuilds in Norway and Korea (Hornnes 2006). Surprisingly, the bill contained special exclusions for the mothership sector, which included vessels that had undergone substantial rebuilding in foreign shipyards and contained substantial foreign investment (Myhre 1998). In addition, the original draft of the AFA would have had no impact on foreign ownership of shore-based fish processors.

Naturally, opposition came from all affected owners. Bill Myhre, the attorney who had assisted the Norwegian investors in securing fishery endorsements for their converted vessels, wrote the document, "History of the Anti-Reflagging Act—the real story" to confront the threats posed by the AFA. First of all, AFA supporters claimed that the U.S. Coast Guard (USCG) had allowed more vessels to be rebuilt overseas than Congress intended. Second, they claimed that vessels had been rebuilt larger than Congress had anticipated. Third, they argued that the USCG had misinterpreted the law. Myhre defended against these assertions by presenting evidence that Congress knew precisely how many vessels had received rulings from the USCG, guaranteeing that they would not lose the fishery endorsement after conversion, and that the amount of

rebuilding would be significant. He argued that many congressmen were still concerned about attracting foreign capital as the Anti-Reflagging Act was debated, and thus consciously had allowed all the foreign rebuilt factory trawlers to enter the U.S. EEZ (Myhre 1998).

The AFA was met with additional opposition on a variety of fronts. A letter from Attorney General John Ashcroft was read in front of Congress, stating that passage of the AFA would be an unconstitutional invalidation of the factory trawlers' fishing endorsements and would be a violation of the Takings Clause (Myhre 1998). The factory trawlers, primarily based out of Seattle, appealed to Washington Senator Gorton for help in opposing the AFA. He was able to stall the AFA in committee. Senator Stevens then tried to add an amendment to the Commerce, Justice, State Appropriation Bill, which would have shifted 5% of the annual pollock total allowable catch from the at-sea sector to the inshore sector and would have required that all fishing vessels be 75% U.S.-owned or controlled. With objections from Senator Gorton, the amendment was withdrawn (J. Plesha, personal communication).

With their recent failure at introducing cooperatives through the Council process, the factory trawler fleet, with American Seafoods leading the charge, took their cause to Congress as well. On 20 July 1998, a little over a month after they had been denied by the NPFMC, American Seafoods attempted to combine the fights over the AFA and cooperatives by introducing a draft bill to a well-attended meeting held in the Senate Commerce Committee's hearing room. Various industry representatives from the At-sea Processors Association, Pacific Seafood Processors Association, United Catcher Boats, American Fisheries Act Coalition, and Greenpeace filled the room with congressional staffers in an effort to reach a compromise on the AFA. Two bills were proposed, one from American Seafoods and an alternative from the Norton Sound Economic Development Corporation (NSEDC), a western Alaska CDQ group. American Seafoods proposed a structure similar to what they proposed in Inshore/Offshore III, with the addition of limiting new participants in the catcher/processor sector. NSEDC proposed a structure similar to that passed in the Inshore/Offshore III, but with a subdivision of the offshore allocation into separate sector allocations for factory trawlers and motherships. In addition, NSEDC proposed a further increase in the CDQ allocation from 10% to 12.5% of the total allowable catch. While participants aggressively defended their respective positions, no agreement was reached (J. Plesha, personal communication).

Two days later, Senator Gorton sat down with a small group of AFA supporters and said he wanted to see a compromise bill passed by the end of the year. Gorton's position was that then current participants in the inshore and at-sea sectors should be recognized as legal participants, including both the foreign-owned and rebuilt fleet. He felt that the North Pacific was overcapitalized and that legislation should

be passed to reduce the excess capacity by reducing the number of factory trawlers, thereby eliminating the race-for-fish. Attendees were told he would schedule a meeting for 18 August 1998 when he would invite members of the industry to discuss their plan. Senator Gorton informed participants of five issues he wanted addressed in a proposed plan: Americanization, decapitalization, compensation, reallocation, and rationalization. He emphasized that if the involved parties were not able to reach a compromise soon, no act would be passed (J. Plesha, personal communication).

Although the benefits of a compromise plan were more than enough to motivate involved parties, American Seafoods received an additional incentive that made them even more inclined to negotiate. Before the original introduction of the AFA, Plesha had been researching vessels that had been granted fisheries endorsements under the grandfather clause of the Anti-Reflagging Act, and more specifically, he looked into the clause allowing foreign rebuilding as long as the contract to rebuild had been entered into prior to a specified date. Under a Freedom of Information Act request, he was able to obtain all the background materials for the ruling letters that the USCG had issued allowing the foreign rebuilds. While examining the paperwork, Plesha became suspicious of the documentation of three vessels, including the *Acona*. The *Acona* had been a 40 year old, 85 foot research vessel, which had been rebuilt into the third and final factory trawler that Røkke and American Seafoods had converted in Norway. The entirely rebuilt vessel, which was completed in 1990 and renamed the *American Triumph*, had the largest throughput capacity in the factory trawler fleet. Plesha noticed the contract for the *Acona* appeared backdated, so he sought out the other party on the contract and was able to obtain an affidavit attesting that the backdating had taken place in order to qualify it under the grandfather clause. The information was provided to the USCG, which initiated an investigation into the issue, and notified American Seafoods of their findings on 3 September 1998. The letter announced the USCG was going "to invalidate documentation for the fishing vessel *American Triumph*," effective in 30 days. Myhre, representing American Seafoods, suspects that the ruling would have been overturned in court, as there were agreements in place before the cutoff date established in the Anti-Reflagging Act. Still, the potential loss of endorsements for one of its most advanced and important vessels, which was responsible for catching and processing nearly 3% of the overall pollock total allowable catch, was something that American Seafoods did not want and could be expected to defend by offering concessions on other aspects of the AFA.

The plan introduced by the AFA coalition at the 18 August 1998 meeting still would have revoked the fishery endorsements of 18 factory trawlers. Seeking some type of compromise, Senator Gorton and his staff continued to meet with other industry participants over the next

few weeks to discuss issues related to the plan. The stage was then set for a more formal meeting in Washington, DC, on 9-11 September 1998 in the Senate Appropriations Committee hearing room. The meeting was chaired initially by Senator Stevens, and later by his staff member, Trevor McCabe. Senator Stevens expressed his positions, which focused on the same issues as Senator Gorton, namely that the bill require:

1. a 75% minimum level for U.S. ownership and control of vessels with endorsements to fish in the U.S. EEZ;
2. removal of the *American Triumph* and several other factory trawlers accompanied with a $40 million buyout of additional factory trawlers, with the Federal government and industry splitting the bill;
3. antitrust exemptions for sector cooperatives, including cooperatives composed of processors and catcher vessels; and
4. reallocation of the Bering Sea pollock fishery, with 10% "off the top" for CDQ and 50% for "onshore processors." (J. Plesha, personal communication)

With Senator Stevens' and Senator Gorton's expectations set out, the pollock industry had the outlines for framing a revised draft of the AFA (J. Plesha, personal communication).

The first three days of negotiations focused on the primary components of the AFA, as well as the details of the buyout. It was agreed that the shift of 10% of the directed pollock total allowable catch, from the offshore sector to the inshore sector, would be accomplished by using the buyout to compensate owners of factory trawlers for the catch history of vessels they agreed to remove from the fishery. Although the vessel buyout option was available for most factory trawlers, Stevens told industry that buyouts of the *Highland Light*, *Starbound,* and Tyson vessels would not be allowed, as they were "American" boats. With owners of the *Arctic Storm* and *Arctic Fjord* uninterested in the buyout, the only vessels that could be considered were the *Alaska Ocean*, *Endurance,* and American Seafoods' factory trawlers. As the primary target of the legislation with the largest fleet, American Seafoods negotiated the buyout of nine of their vessels. In addition, they agreed not to reflag the three Emerald Seafoods factory trawlers that American had purchased in 1997, which had spent 1996 fishing in the Russian EEZ. In exchange, it was agreed that the *American Triumph* would retain its fishery endorsement (Hornnes 2006; J. Plesha, personal communication).

The negotiators met again on 17-18 September 1998 to finalize some of the details, with a focus on the structure of the fishery cooperatives and protections for non-pollock fisheries in the BSAI and Gulf of Alaska.

The concern was that a rationalized pollock fishery would free up capacity that could be used to exploit other fishery resources. Crab processors voiced strong concern that surplus pollock processing capacity would be diverted to crab processing. Flatfish trawlers expressed concern that spillover of surplus capacity in the at-sea pollock fleet would exacerbate the already overcapitalized flatfish fisheries. In response to these concerns, the AFA added sideboard regulations. AFA-qualified factory trawlers were to be limited to catches of non-pollock species based on their past catch history; sideboard limits for the inshore sector and for motherships would be set at a later date by NPFMC and NMFS. For example, pollock processors were enjoined from processing more crab than their 1995-1997 average (NMFS 2002; J. Plesha, personal communication).

On the day the bill was to be finalized, NMFS proposed modifying the bill to require scrapping the nine factory trawlers that American Seafoods had agreed to remove from the pollock fishery so that the United States would not be perceived to be subsidizing a distant water fleet. In the end, with additional compensation offered, American Seafoods agreed to scrap eight vessels. The *American Empress* was exempted from the scrapping requirement and was subsequently sold to another company of Røkke's, and used to fish off the coast of South America (Hornnes 2006).

The State Department also interjected after the deal was complete, and insisted on grandfather clauses that took into consideration bilateral treaties with foreign countries. This involved investments made under prior laws. With the last issues resolved, the finalized draft SB1221 reached the Senate Appropriations Committee for inclusion with the omnibus appropriations package on 7 October 1998, and was subsequently passed by Congress on 21 October 1998.

The final bill was veto proof. Tyson Foods, which owned several factory trawlers, was losing money on their seafood line. Selling their fishery assets in an overcapitalized open access fishery would have generated very little return on investment. Tyson saw the AFA as an opportunity to recapture a larger share of their initial investment when it was time to sell, and Tyson's close political connections to the Clinton administration meant that they wielded influence in shaping the AFA (Bernton 1992; Ota and Hamilton 1993). Tyson ultimately agreed to give up 0.5% of the catch share history of their vessels in exchange for $5 million of AFA money. This allowed the AFA drafters to increase the mothership sector's allocation to 10%. With Tyson's backing, there was confidence that the bill would easily pass through the Clinton White House despite objections by NMFS (Bernton 1992; J. Plesha, personal communication).

## Summary of the American Fisheries Act

Congress intended the AFA to accomplish two primary goals. First, it was to complete the process of Americanization of the pollock fishery. Second, it was to end the race-for-fish and overcapitalization of the fishery.

Americanization of the U.S. fleet was assured through new regulation. There was a prohibition on the entry of any new fishing vessels that exceeded 165 feet registered length, 750 gross registered tons, or 3,000 shaft horsepower. The length limitations ensured that no new factory trawlers would enter the U.S. EEZ pollock fishery, thereby satisfying legislative objectives of Greenpeace and other environmental groups. The limits on horsepower were designed to limit the net size that catcher vessels could tow, setting an effective upper limit on the size of catcher vessels operating in the inshore and mothership sectors. The second and more sweeping requirement was that ownership of all U.S.-flagged fishing vessels had to comply with a 75% U.S. controlling interest standard (NMFS 2002).

In order to decapitalize the pollock fishery, the AFA established a buyout program that removed 10% of the at-sea production through a combination of $20 million in federal appropriations and $75 million in direct loan obligations. The direct loan obligations were to be paid for by a fee of six-tenths of one cent ($0.006) for each pound round weight of pollock harvested by catcher vessels delivering to inshore processors. In addition to removing capacity, the AFA listed, by name, vessels and processors and/or provided qualifying criteria for those vessels and processors eligible to participate in the non-CDQ portion of the BSAI pollock fishery. This created a prohibition on the entry of new vessels and processors into the BSAI pollock fishery (NMFS 2002).

With the removal of harvesting and processing capacity, the next step was to introduce a management structure that would end the race-for-fish among the remaining participants. This was accomplished by allowing the formation of cooperatives. The AFA also included a new allocation scheme for BSAI pollock. After NMFS and the NPFMC determine the pollock total allowable catch (TAC), the allowance for the CDQ program is set aside as the CDQ reserves. The remaining allocation forms the initial TAC, from which an incidental catch allowance is set aside to account for bycatch of pollock in other fisheries. This number was originally set at about 4.5% of the TAC, but was reduced in subsequent years closer to 3% in response to improved management precision in other fisheries. The remaining TAC, the directed pollock allocation (DPA), is split: 50% to the inshore sector, 40% to vessels harvesting pollock for processing by catcher/processors[6], and 10% to vessels harvest-

6 The AFA refers to factory trawlers as catcher/processors. This can be confusing because, in general usage, the term catcher/processor includes pot and longline vessels that process catches. Nevertheless, through the balance of this document, catcher/processor are used to denote AFA-qualified factory trawlers.

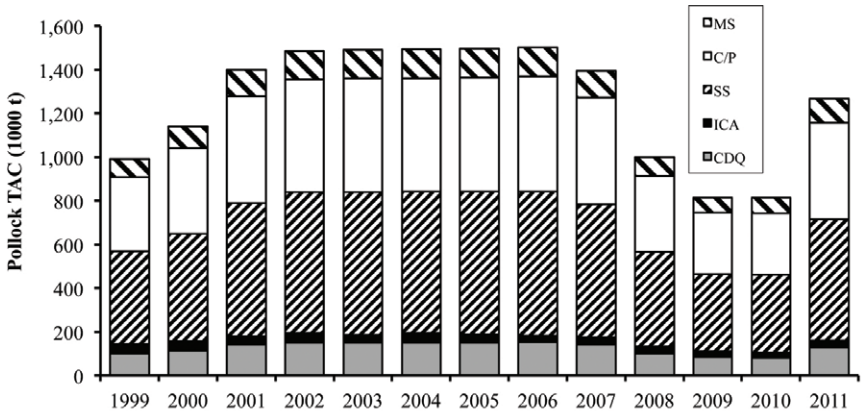


**Figure 5.1. Pollock allocations between sectors. MS = mothership; C/P = catcher/processor; SS = inshore; ICA = Individual Catch Allowance; CDQ = Community Development Quota. Source: NMFS 2011a.**

ing pollock for processing by motherships. These permanent allocations provide stability for the pollock fishery, although the actual harvest allocations can vary depending on variations in the abundance of pollock as reflected in variations in the annual TAC (Figure 5.1).

With the three-sector allocation in place, the stage was set for cooperatives to form. The AFA set standards and limitations for the creation of fishery cooperatives in the catcher/processor, mothership, and inshore sectors. The AFA-qualified factory trawlers were allowed to form cooperatives as they had in the Pacific whiting fishery. The inshore sector was allowed to form cooperatives under a quasi-IFQ program, wherein NMFS grants allocations of the inshore BSAI pollock TAC to inshore catcher vessel cooperatives in proportion to the catch history, contributed by vessels within the cooperative with the proviso that they agree to deliver at least 90% of their pollock catch to that processor. The contentious tying of vessels to a specific processor "is intended to promote win-win rationalization in both the overcapitalized harvesting and processing sectors" (Matulich et al. 2001). The cooperatives are also subject to annual reporting requirements. The AFA-qualified factory trawlers formed a cooperative in 1999; inshore and mothership cooperatives formed in 2000.

In order to limit concentration of ownership, the AFA established an excessive share harvesting cap of 17.5% of the BSAI pollock TAC. The AFA also required the NPFMC to develop "management measures to prevent any particular individual or entity from processing an excessive

share of the pollock," presumably through a share cap, which was later determined to be 30%.

There was also an increase in required observer coverage and a requirement for onboard scales to weigh catches aboard AFA-qualified factory trawlers. The AFA mandated 200% observer coverage on all AFA-qualified factory trawlers, which meant the vessels were now required to have two observers on board when they were harvesting and processing fish.

## Cooperatives and Fishery Sectors

The AFA establishment of a three-sector allocation was important for the pollock fishery. Between 1992 and 1998, the inshore/offshore allocations had been established through the NPFMC, and there were constant battles over how much fish each sector would receive. Setting the allocations through the AFA ensured that the allocations could not be amended by the Council. This gave the industry a new level of stability, as they could now turn their focus from lobbying the NPFMC for favorable allocations and instead focus on maximizing the value of their catches.

The cooperatives that developed within the three sectors were the most important benefit of the AFA. Cooperatives in the pollock fishery allow both leasing and selling of fishing privileges among cooperative members. The leasing and sale of harvesting privileges to outside parties is allowed only if the buyer agrees to abide by the rules set forth in the cooperative contract and are part of the sector to which the harvesting privileges were allocated. For example, a vessel in the inshore sector can lease catch shares to members of its own cooperative or to an outsider that operates within the inshore sector but cannot lease catch shares to vessels operating in the mothership or catcher/processor sectors. The buyer must also harvest and process the quota with one of the vessels already permitted, or a replacement vessel that meets specific criteria. Cooperative membership agreements are civil contracts with penalties for members who exceed their share of the quota. Cooperatives establish sideboard restrictions that can be traded among cooperative participants and between the different cooperatives (NPFMC 2002; Fell 2008). In addition, all cooperatives formed under the AFA were given antitrust exemptions from the Department of Justice (Klein 2000a-j).

# Chapter 6. American Fisheries Act Impact on the Pollock Fishery

The shift in management from a race-for-fish fishery to the cooperative structure had huge impacts on the Bering Sea pollock fishery. The pollock fleet, which had fought on the water over the fish and battled through Congress and NPFMC over fishing rights, was now able to focus on maximizing joint efficiencies in pollock harvesting and processing. This had several important impacts. Within each sector, the number of companies and vessels operating during the pollock fishery has shrunk as fishermen have taken advantage of operational efficiencies. Companies have merged, allowing different companies to take advantage of operational strengths. This has decreased costs. Companies now focus on maximizing revenues through increased utilization of fish, optimizing the product mix, increasing global markets, and capitalizing on the marketing value of being a well-managed fishery.

## Catcher/Processor Sector

Under the AFA, the pollock catcher/processor sector consisted of 20 vessels, a substantial reduction from the 29 catcher/processors that had targeted pollock in 1998, and much lower than the 54 operating in 1991. These vessels were specifically named in the AFA as the only factory trawlers allowed to operate in the fishery, and no replacement vessels could be used except in case of loss where:

> …such loss was caused by an act of God, an act of war, a collision, an act or omission of a party other than the owner or agent of the vessel, or any other event not caused by the willful misconduct of the owner or agent. (American Fisheries Act 1998)

The sector was allocated 40% of the directed pollock allocation (DPA), 8.5% of which (3.4% of the DPA) was allocated to the seven (high seas) catcher vessels that had qualified catch history from delivering to factory trawlers, leaving 36.6% of the DPA for the AFA-qualified factory

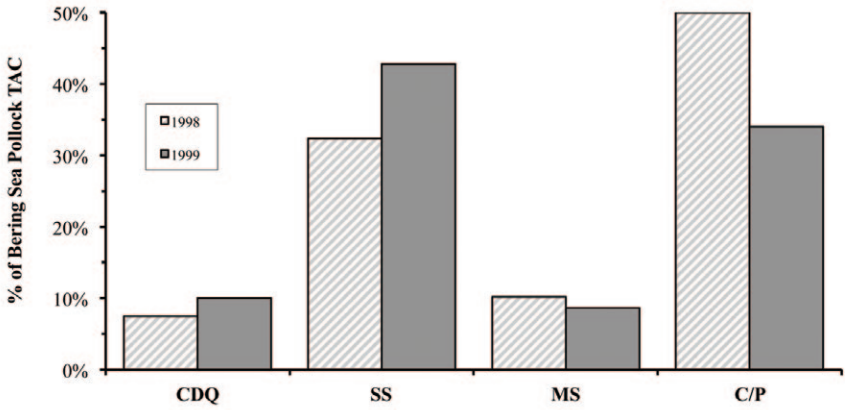


**Figure 6.1. Percentage of pollock total allowable catch allocated to each sector in 1998 and 1999. CDQ = Community Development Quota; SS = inshore; MS = mothership; C/P = catcher/processor. Source: NMFS 2002.**

trawlers. After harvesting nearly 50% of the total TAC in 1998, the reduction to 34% in 1999 represented a 32% loss of pollock to the catcher/processors, leaving the sector with the largest reduction in TAC from the AFA (Figures 6.1, 6.2).

Although the catcher/processor sector suffered a large reduction in the DPA, they benefited from the increased CDQ allocation. Catcher/processors have harvested a majority of the CDQ pollock allocations since the program was introduced in 1992. As a result, they captured 45.6% of the DPA and CDQ pollock harvested between 1999 and 2009, which compares to the 44.4% captured by the inshore sector over the same period (Figure 6.3). Over this time period, catcher/processor harvests have fluctuated from a high of over 694,000 metric tons in 2003 to a low of just over 351,000 t (Figure 6.4).

Under the AFA, the catcher/processor sector was allowed to form either a single cooperative that includes both catcher/processors and catcher vessels delivering to catcher/processors, or catcher/processors and catcher vessels could form separate cooperatives and enter into an inter-cooperative agreement. The latter structure was adopted. The Pollock Conservation Cooperative (PCC) was formed on 18 December 1998, two months after the passage of the AFA and in time for the 1999 fishing year. Also in time for the 1999 season, the seven high seas catcher vessels organized the High Seas Catchers' Cooperative (HSCC), with authority to lease or sell quota to AFA-qualified factory trawlers.

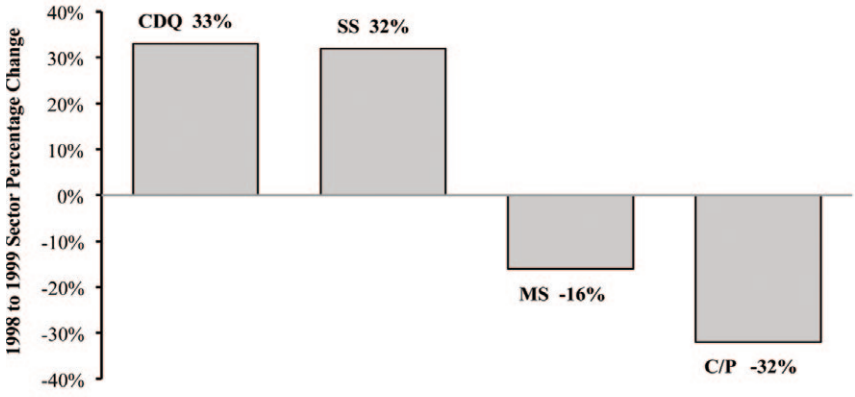


**Figure 6.2. Change in percentage of pollock total allowable catch allocated to each sector, 1998 to 1999. CDQ = Community Development Quota; SS = inshore; MS = mothership; C/P = catcher/processor. Source: NMFS 2002.**

Because it was more profitable to lease or sell quota than to harvest the fish themselves, most members of the HSCC leased or sold their quota to the PCC and its members. After passage of the AFA, the HSCC members were being offered approximately $300 per metric ton for leased quota share, a sharp increase from the 1998 price of approximately $132 per metric ton of delivered catch. Not only did leasing generate higher revenues, those revenues could be had without the cost of fishing. Consequently, HSCC members harvested less than 30% of their own catch allocation in 1999 and entirely ceased pollock fishing within a couple of years. It wasn't until 2008 that an HSCC vessel again fished its quota, and it wasn't because it was more profitable. Instead, American Seafoods needed another vessel to harvest their quota to avoid exceeding the 17.5% harvesting cap (NMFS 2002; J. Jacobs, personal communication).

There were two primary types of factory trawlers operating in the at-sea sector at the introduction of the AFA—surimi and fillet. All vessels produced roe, while the ability to process other products such as fishmeal varied from vessel to vessel. Both fillet and surimi factory trawlers were equipped to process fillets, while fillet factory trawlers lacked the capacity to produce surimi. Fillet factory trawlers generally searched for larger fish, because small fish could only be used for the low value fishmeal or mince. Surimi factory trawlers had the option of using small fish for surimi. Although surimi was not normally as valuable as fillet, it was worth significantly more than fishmeal or mince and it was easier

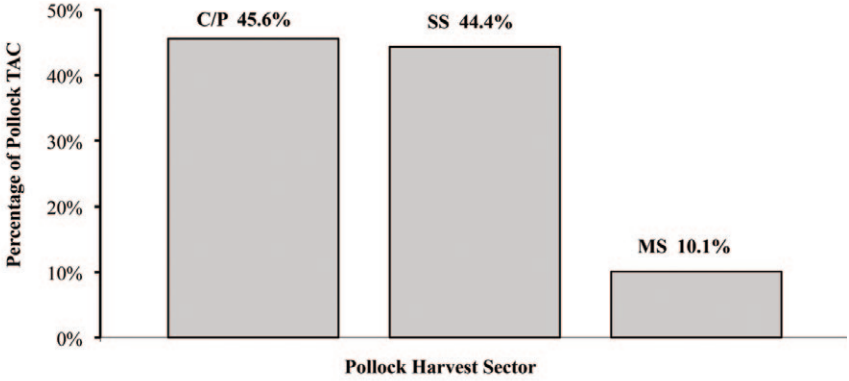


**Figure 6.3. Sector harvest percentage of Bering Sea and Aleutian Islands directed pollock allocation and CDQ pollock catches, 1999-2011. (Data are from NOAA catch reports. For these years, it is assumed that 90% of the CDQ allocation was harvested by the catcher/processor sector and 10% was harvested by the mothership sector.) TAC = total allowable catch; C/P = catcher/processor; SS = inshore; MS = mothership. Source: NMFS 2011c.**

and cheaper to find large schools of small fish. Some factory trawlers could harvest and process over 400 metric tons of fish per day, yielding over 150 t of frozen product. With freezer hold capacity as much as 1,500 t, they could stay on the grounds for a couple of weeks at a time. The ability of the surimi factory trawlers to adapt to different size fish and market conditions gave them a significant advantage over fillet factory trawlers under pre-AFA race-for-fish conditions. As a result, fillet factory trawler production peaked at 467,323 t of groundfish in 1991 and steadily declined to 90,963 t in 1999.

Due to their operational disadvantages eight of the nine vessels scrapped by American Seafoods in concert with AFA implementation were fillet factory trawlers. The vessels scrapped were the *Pacific Scout*, *Pacific Explorer*, *Pacific Navigator*, *Victoria Ann*, *Elizabeth Ann*, *Christina Ann*, *Rebecca Ann*, and *Brown's Point*. The ninth vessel, the *American Empress*, was banned from operating in the U.S. EEZ, and was sold to Kjell Røkke's Resource Group International (RGI) for use in fishing outside the United States. For removing these vessels, American Seafoods received $90 million compensation, as well as the money earned from sale of the *American Empress*.

Even with the loss of more than half of their boats, American Seafoods was still the largest company in the catcher/processor sector,

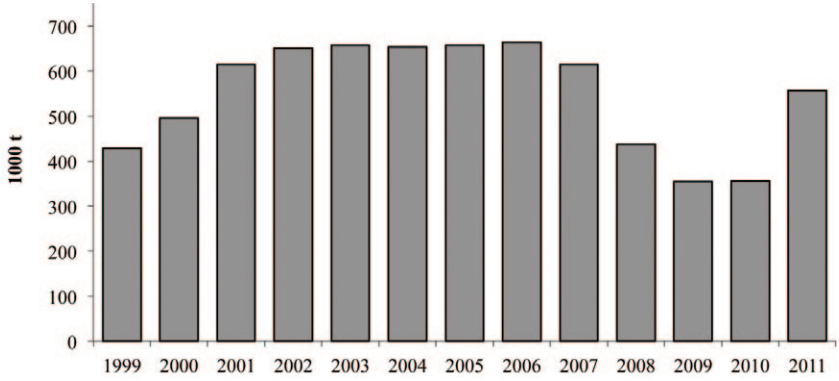


**Figure 6.4. Catcher/processor pollock harvests with 90% of CDQ, 1999 to 2011. (Data are from NOAA catch reports. For these years, it is assumed that 90% of the CDQ allocation was harvested by the catcher/processor sector and 10% was harvested by the mothership sector.) Source: NMFS 2011c.**

owning seven factory trawlers: *American Dynasty*, *Katie Ann*, *American Triumph*, *Northern Eagle*, *Northern Hawk*, *Northern Jaeger*, and *Ocean Rover*. Based on the catch history of these vessels, American Seafoods received 16.0% of the DPA, or 40.0% of the catcher/processor sector allocation. In addition, American Seafoods purchased the fishing rights of two of the HSCC vessels, the *American Challenger* and the *Forum Star*. This additional 0.56% of the DPA gave American Seafoods 16.5% of the DPA, or a total of 41.3% of the catcher/processor sector allocation. While American Seafoods ended up with significantly less catch than before AFA, the $90 million cash compensation eased the loss.

At the time the AFA was passed, American Seafoods was largely owned through Røkke's RGI. Thus with the ownership restriction in the AFA for no more than 25% foreign ownership, American Seafoods faced three options. One option would be to make a formal ownership change under which Røkke's two children, who are U.S. citizens, would be granted shares as advance of inheritance. A second option would be to apply for an exemption in accordance with the AFA grandfather clause. The third option was to sell out.

Røkke chose to sell off his ownership in American Seafoods and focus his efforts elsewhere. RGI had already begun selling off its holdings in Helly Hansen and Brooks Sports in the late 1990s, which it had acquired in 1993 and 1995. Selling his ownership in American Seafoods would allow Røkke to focus on his new Aker-RGI partnership, which was

based closer to Norway. He sold out his shares in 2000, when the largest owner of American Seafoods became Centre Partners, with additional investment from two CDQ entities: Coastal Villages Region Fund (CVRF) and Central Bering Sea Fishermen's Association (American Seafoods Group LLC 2002).

In addition to its seven catcher/processor and two catcher vessels, American Seafoods completed the purchase of the catcher/processor *Highland Light* and catcher vessel *Tracy Anne* in September 2008. The *Highland Light* was part of the Yardarm Knot Group, which was established in 1988 by Washington fishermen to harvest and process Alaska crab, salmon, and groundfish. Yardarm Knot took delivery of the *Highland Light* in 1990 from Bender Shipbuilding and Repair Co. of Mobile, Alabama. It was an American company, and before American Seafoods bought it out, the *Highland Light* had received 1.7% of the DPA, or 4.2% of the catcher/processor sector allocation; the *Tracy Anne* had received 0.46% of the DPA, or 1.2% of the catcher/processor sector allocation.

With the gain from further leases obtained through the retirement of the catcher/processor *Endurance*, who sold its share to the PCC in 2000, American Seafoods emerged with control of nearly 19.4% of the DPA, not including leased CDQ shares. This gave American Seafoods ownership over the 17.5% harvesting cap established in the AFA. However, the AFA cap limits the amount of fish a company can harvest, not the amount of quota a company can own. Companies that might otherwise exceed the harvest cap can address the issue a number of ways, which include having independent catcher vessels harvest the quota, leases of the quota, or swaps of directed pollock for CDQ pollock since CDQ pollock doesn't count against the harvesting or processing cap.

In 2010, American Seafoods and CVRF parted ways. In exchange for CVRF's share, American Seafoods transferred ownership of the *Northern Hawk*, three freezer-liner vessels, and 1% of the pollock DPA. This allowed American Seafoods to focus their business primarily on pollock, and eliminated some issues related to the 17.5% harvesting cap. For its part, CVRF was able to eliminate debt obligations associated with American Seafoods and take 100% control of the four vessels. CVRF continued to contract American Seafoods to run the operations of the vessels, which benefits American Seafoods by giving the company control over marketing and sales of the CVRF quota.

The second largest AFA-qualified factory trawler fleet belonged to Tyson Foods, through their subsidy Arctic Alaska, and consisted of five vessels: *American Enterprise*, *Island Enterprise*, *Kodiak Enterprise*, *Seattle Enterprise*, and *US Enterprise*. They were the largest U.S.-owned and built fleet in the catcher/processor sector, and had pushed for the AFA with the intent to capitalize on the windfall value of their catch history. Tyson received a 6.6% share of the DPA, or 16.4% of the catcher/

processor sector allocation. The DPA that Tyson received was 0.5% less than their historical catch, since they transferred that portion of their catch history to the mothership sector in exchange for $5 million, as part of the AFA.

Less than a year after AFA took effect, Tyson sold Arctic Alaska. In addition to five AFA-qualified factory trawlers, Arctic Alaska owned shore-based processors in Kodiak, Alaska; Newport, Oregon; Ucluelet, British Columbia; and on Pier 91 in Seattle, Washington. Arctic Alaska also owned a floating plant moored near Unalaska, and surimi processors in Toronto, Ontario; and Duluth and Motley, Minnesota. Plesha believes that Tyson sold out too early:

> They had lost a lot of money in seafood. The irony is that after the AFA passed, their assets became quite valuable. Had they hung on for another year, they would have stayed in the business or sold at a far higher price. (J. Plesha, personal communication)

The buyer was Trident Seafoods. The purchase of Arctic Alaska strengthened Trident's position as the largest company in the U.S. pollock fishery; however, the purchase left Trident with more than the 17.5% harvesting cap. To deal with this issue, Trident sold the inshore vessels previously owned by Tyson to B&N Fisheries, which is owned by children of two of Trident's shareholders. This sale brought Trident's harvests to below the harvesting cap.

The next largest owner of AFA-qualified factory trawlers was the Glacier Fish Company, which owned the *Northern Glacier* and *Pacific Glacier*. Based on the catch history of their vessels, Glacier Fish Company received 3.1% of the DPA, or 7.7% of the catcher/processor sector allocation. Glacier Fish Company was owned by Erik Breivik and other investors and the Norton Sound Economic Development Corporation (NSEDC), a CDQ entity that purchased a 50% stake in Glacier Fish Company in 1998. In May 2008, Glacier Fish Company purchased the *Alaska Ocean*, the largest AFA-qualified factory trawler. The *Alaska Ocean* had been owned by a partnership involving Nippon Suisan and Jeff Hendricks. The Japanese owners had been grandfathered in under the foreign ownership provision in the AFA. The *Alaska Ocean* held rights to 2.9% of the DPA, or 7.2% of the catcher/processor sector allocation. As part of the transaction, Nippon Suisan acquired a 25% stake in the Glacier Fish Company, thereby strengthening their access to surimi.

The Arctic Storm Management Group managed the next largest AFA-qualified factory trawler fleet, the *Arctic Storm* and the *Arctic Fjord*. Together, these vessels represented 3.5% of the DPA, or 8.7% of the catcher/processor sector allocation. The *Arctic Storm* was originally financed through Profish International in collaboration with Norwegian-


**C/P *Pacific Glacier*, Unalaska, March 2010. Keith Criddle**

American partners and a 50% Korean partner in 1986, in which they became 50:50 owners of the vessel. The ownership structure was allowed to continue under AFA grandfather provisions. Circumstances changed in the mid-2000s when the Korean partners underwent some ownership changes that required them to divest 50% of their ownership stake to comply with the AFA. The *Arctic Fjord* had been rebuilt in Norway and was originally named the *Michelle Irene*. It was later bought through a 50:50 venture between the American owners of the *Arctic Storm* and Norwegian interests, before Arctic Storm, Inc., bought out the Norwegian interests in 1994. Bristol Bay Economic Development Corporation (BBEDC), a CDQ group, maintains a 30% ownership position in the *Arctic Fjord*. Prior to AFA, both vessels were managed by Arctic Storm, Inc., which was 50% Korean-owned. The grandfather provision did not extend to *Arctic Fjord* management, so a management company—the 100% U.S.-owned Arctic Storm Management Group—was set up to manage both boats. The Arctic Storm Management Group also owns rights to two catcher vessels in the HSCC, the *Neahkahnie* and *Sea Storm*, which respectively were entitled to 0.6679% and 0.8226% of the DPA (D. Christensen, personal communication).

The remaining AFA companies were all single vessel companies. Aleutian Spray Fisheries owns the *Starbound*, representing 1.6% of the DPA, or 4.0% of the catcher/processor sector allocation. It had been built brand new in the U.S. and one of its primary owners was Kaare

Ness. There was also one company that had significant foreign ownership when the AFA was passed—Alaska Trawl Fisheries, which owned the *Endurance*. Alaska Trawl Fisheries received 1.4% of the DPA, or 3.4% of the catcher/processor sector allocation. After fishing as part of the PCC, Alaska Trawl Fisheries sold out to PCC; the *Endurance* was removed from active fishing and its allocation was split among the 19 remaining PCC vessels.

The AFA also allows for any unlisted catcher/processor that harvested more than 2000 metric tons of pollock in 1997 to be allowed to fish in aggregate up to 0.5% of the directed catcher/processor quota. Only one vessel, the *Ocean Peace*, is believed to be eligible. It has not been a regular participant in the fishery, although it participated in the 2008 and 2009 seasons.

To the catcher/processor sector, which had been in a constant state of flux throughout the 1990s, the stability provided by the AFA was critical. The fraction of the total allowable catch (TAC) harvested by the offshore sector had been cut from nearly 80% in 1992 to 56% under the proposed Inshore/Offshore III, and there was no reason to expect the erosion to stop. The AFA stopped the decline, albeit at a low level. More importantly, the AFA allowed the catcher/processor sector to form a cooperative, giving each vessel an individual share of the pollock TAC. Vessels no longer had to race for fish; instead, they could pace their operation in a manner that allowed them to increase recovery rates, optimize product mix, and organize more efficient operations.

The AFA also ensured that there would be no new participants in the fishery and, more importantly, allowed for a reduction in capacity within the catcher/processor sector, something the sector badly needed.

## Mothership Sector

The AFA identified by name the three motherships that had been active in the pollock fishery and would be permitted to continue to operate in the fishery. The catcher vessels that could deliver to these motherships were not specifically named, but their numbers were limited to 20, the number of catcher vessels that had actively participated in the mothership sector in years immediately preceding passage of the AFA. The AFA reduced the mothership sector's share of the DPA from an average of 10.5% to 10% without compensation. Due to variations in the overall TAC, the mothership sector's share of the DPA has varied from over 150,000 metric tons in 2004 to a low of just over 81,000 t in 2009 (Figure 6.5).

The AFA allowed for the formation of cooperatives in the mothership sector as long as 80% of catcher vessels agreed; the Mothership Fleet Cooperative (MFC) formed in 2000 with all 20 catcher vessels. Although the motherships themselves were also allowed to join the

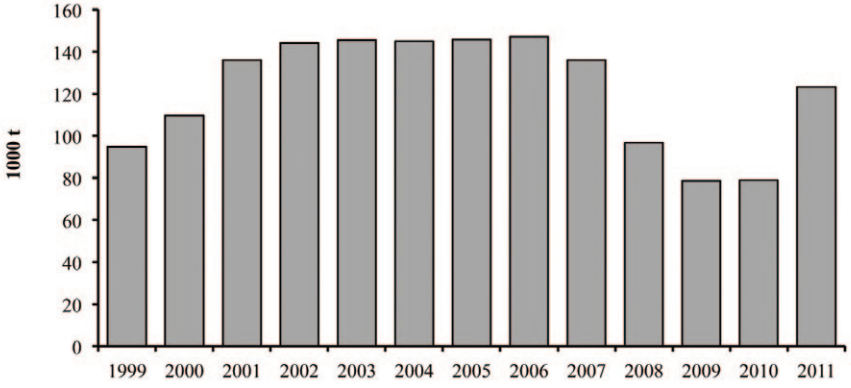


**Figure 6.5. Mothership pollock harvests with 10% of CDQ, 1999 to 2011. (Data are from NOAA catch reports. For these years, it is assumed that 90% of the CDQ allocation was harvested by the catcher/processor sector and 10% was harvested by the mothership sector.) Source: NMFS 2011c.**

cooperative, none have. Under the contractual terms of the cooperative, catcher vessels are free to deliver their share to any of the three eligible motherships, although catcher vessel ownership in a particular mothership often dictates where they deliver their harvests. To ensure a measure of certainty in their fish supplies, motherships have sold themselves, in part, to their catcher vessels. For example, the *Golden Alaska* sold a significant percentage of itself to the Yukon Delta Fisheries Development Association (YDFDA), a CDQ entity, in return for assured deliveries from the two catcher vessels YDFDA purchased. (NPFMC 2002; YDFDA 2009).

The AFA specifically grants the three motherships operating in the pollock fishery an exemption from the foreign ownership requirements, as long as after 1 October 2001 ownership changes do not exceed 50%. This allowed primary owners in the motherships to maintain their Japanese ownership and mortgages. Maruha is involved in the management of the three motherships, but ownership has changed such that all three motherships now meet the 75% U.S. ownership requirements under the AFA (B. Myhre, personal communication).

Like catcher/processors, motherships enjoy the advantage of being able to move with the fish, so catcher vessels that deliver to motherships have lower running costs and deliver fresher fish than catcher vessels that deliver to shore-based processors. Access to fresh fish helps motherships produce high quality roe and surimi that command pre-

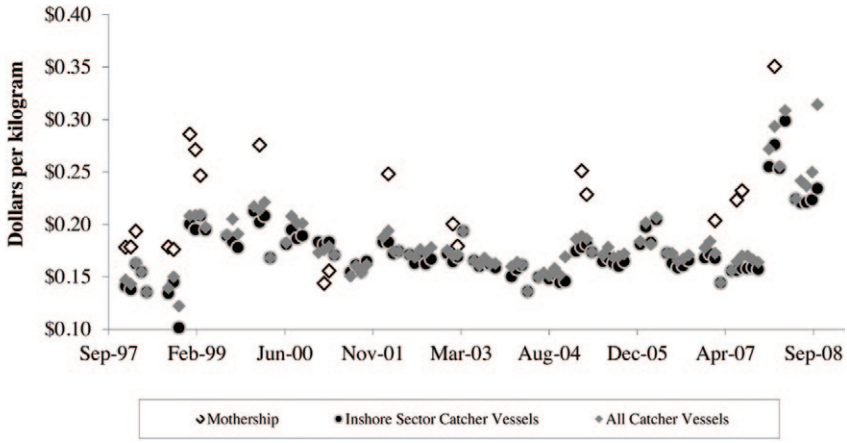


**Figure 6.6. Ex-vessel prices ($ per kg) for mothership catcher vessels, inshore sector catcher vessels, and all catcher vessels, 2009 base, 1998-2008. Source: Hiatt 2009.**

mium prices. However, when the AFA was passed, the motherships were not equipped to produce fillets; the *Golden Alaska* has since invested in filleting machines while the *Ocean Phoenix* has invested in head and gut equipment.

The increased value derived from finished pollock products allows motherships to pay higher ex-vessel prices to catcher vessels than do shore-based processors, with an average real[7] price of $0.220 per kilogram vs. $0.176 per kilogram (Figure 6.6). The mothership catcher vessels are also aided by increased flexibility in making deliveries, because unlike the inshore cooperatives, there is no penalty for switching motherships. In theory, this allows vessels to deliver to the mothership paying the highest price, driving up the value of pollock landings. As a result, mothership owners believe the AFA has transferred the economic rents from the processors to the catcher vessels (NPFMC 2002).

The MFC catcher vessels are generally smaller than catcher vessels in the inshore sector because they can transfer laden codends to the motherships and do not have to store pollock onboard in refrigerated seawater fish holds. In addition, MFC catcher vessels have the advantage of fishing within a few miles of their processors, which contrasts with catcher vessels that deliver to shore-based processors after traveling as much as 500 miles to reach the fishing grounds. Of the 20 catcher ves-

7 Adjusted to 2008 dollars

sels eligible to participate in the mothership sector, 15 are also eligible to deliver to shore-based processors.

At 305 feet, the *Golden Alaska* is the smallest of the three motherships. It joined the pollock fishery in 1985. As noted earlier, Røkke had an ownership stake in the *Golden Alaska* before he sold out in 1987. It works with four catcher vessels, with three working at a time. Ownership at the time of the AFA was maintained through a 50:50 partnership between U.S. interests and Nichiro. The vessel is now owned through a partnership of independent fishermen, the YDFDA, and Maruha, which maintains less than a 25% stake in the vessel (YDFDA 2009; B. Myhre, personal communication).

Until recently, the *Golden Alaska* focused on processing surimi, roe, and fishmeal. An $8 million upgrade in 2008 transformed the *Golden Alaska* into a flexible operation able to process headed and gutted, fillets, mince, surimi, fishmeal, and fish oil. With this upgrade the *Golden Alaska* can profitably operate with only 60% of the raw fish previously required to maintain daily operations. "We went through 500 metric tons per day of round fish, now we're down to a maximum of 350 metric tons," says factory manager Staale Rotnes (Fiorillo 2009). Following the upgrade, product recovery rates nearly doubled from the 20% range to over 40% recovery. The *Golden Alaska* runs four processing lines that produce 1,000 fillets per minute. The improved equipment also reduces the need for fresh water used in production of surimi from about 600 t per day to 200 t per day. Because freshwater is produced through distillation, the reduction in water use has resulted in savings of 1,500 to 2,000 gallons of fuel per day. Over the typical 120 to 130 operating days in a season, this creates huge savings (Fiorillo 2009).

The 680-foot *Ocean Phoenix*, the largest vessel in the pollock fishery, was converted from a container ship in 1989. The conversion was commissioned by Profish International, a group of American catcher vessel owners and their Korean partner, to process fish for their catcher vessels. The *Ocean Phoenix* employs a crew of 220; processing crewmembers work up to 16 hours a day. It can handle 15 to 20 deliveries a day from aligned catcher vessels in the pollock and Pacific whiting fisheries. When the AFA was enacted, seven catcher vessel owners were also part owners in the *Ocean Phoenix*; thus it would have met the 75% U.S. ownership requirement, except that it maintained various other business relationships, including a vessel mortgage, which likely would have been excluded under the AFA (NMFS 2002; B. Myhre, personal communication). Based on some changes in ownership and restructuring of debt, the Maritime Administration (U.S. Department of Transportation) now deems that all current foreign marketing agreements with Maruha comply with AFA provisions. Maruha's ownership position remains under 25%, although primary management responsibilities now reside in the hands of Westward Seafoods, a subsidiary of Maruha (B. Myhre,

personal communication). The *Ocean Phoenix* spent $10 million on new equipment to switch to headed and gutted in 2004. It is unique among vessels in the U.S. fishery in that its operations are now similar to those of most vessels in Russian fisheries for pollock in the western Bering Sea and Sea of Okhotsk. Like the *Ocean Phoenix*, most Russian motherships and catcher/processors sell frozen headed and gutted pollock into China where it is hand filleted and marketed as twice frozen fillets (Choy 2005).

The third mothership, the *Excellence*, was a 367-foot foreign vessel reflagged in 1990 by an Alaska company with investors that included Bill Phillips, former aide to Senator Stevens, and the Japanese company Taiyo (now Maruha-Nichiro Holdings). In 1991, its first full year of production, the *Excellence* processed nearly 60,000 t of fish. It rotates out 100-person crews, working two months on and two months off. The *Excellence* was 100% owned by U.S. citizens, but was chartered to Maruha, an entity not owned by U.S. citizens, when the AFA was signed (B. Myhre, personal communication). There were also ownership/operational links to five of the catcher boats (*Alyeska*, *California Horizon*, *Misty Dawn*, *Papado II*, and *Pacific Alliance*) that delivered to it at the time the mothership cooperative was established (NMFS 2002). Ownership is currently through U.S. investors and Maruha (less than 25%), with primary management responsibilities handled by a Maruha subsidiary, Supreme Alaska Seafoods (B. Myhre, personal communication).

In late 2009, Supreme Alaska Seafoods and the Phoenix Processor Limited Partnership announced their merger. Supreme Alaska Seafoods' owners now own a 50% stake in the Phoenix Processor Limited Partnership. This merger was likely a result of the reduced TAC in 2008, which allowed the two companies to reduce management and operational costs. Furthermore, it allows the quota to be fished by the more efficient *Ocean Phoenix*; the *Excellence* has not participated in the pollock fishery since the latter half of the 2008 fishing season (Sackton 2010).

## Inshore Sector

The AFA allows six land-based and two floating processors to participate in the inshore sector of the Bering Sea and Aleutian Islands (BSAI) pollock fishery. Three of the land-based processors, Alyeska, UniSea, and Westward are located in Unalaska/Dutch Harbor. The communities of Akutan, Sand Point, and King Cove are each home to one land-based processor. The two floating processors in the inshore sector are required to operate in a single BSAI location each year, and at the time of the passage of the AFA, they anchored in Beaver Inlet in Unalaska to do their processing. Under terms of the AFA, the inshore processors can

take BSAI pollock deliveries from a maximum of 97 catcher vessels. The shore-based processors produce surimi, fillets, roe, fishmeal, mince, oil, and some additional byproducts. They also process a variety of species, including other groundfish, halibut, and crab, but have historically processed very little salmon (NMFS 2002).

The AFA allocated 50% of the DPA to the inshore sector, representing an increase of 42% over their share of the DPA under Inshore/Offshore I and Inshore/Offshore II. It also represented a 28% increase over the share granted in Inshore/Offshore III, which was never implemented due the passage of the AFA. This represented an increase in shares of the total TAC from 32.4% in 1998 to 42.8% in 1999 (Figures 6.1, 6.2). In return for the increased allocation and reduction in factory trawler capacity, the inshore sector agreed to take on a $75 million loan. The terms of the loan commits members of the inshore sector to pay back the loan through a tax of 0.006 cents on every pound of pollock processed till the loan is paid off (American Fisheries Act 1998). Even with the increased allocation in 1999, the actual amount of pollock harvested by the inshore sector has varied through the years, with their 2009 catch the lowest under the AFA (Figure 6.7).

Under the AFA, fishery cooperatives are authorized to form in the inshore sector of the BSAI pollock fishery. However, unlike the PCC, HSCC, and MFC, cooperatives that must form at the sector level, inshore cooperatives may form around each AFA-qualified processor. If an inshore catcher vessel cooperative forms around a specific processor and meets certain qualifying criteria, NMFS is required to issue that inshore cooperative an exclusive allocation of BSAI pollock. Catcher vessels that join inshore cooperatives must then deliver 90% of their allocation to the processing plant tied to their cooperative. Switching cooperatives is potentially difficult, as it requires vessels to fish in an open access pool for one full year before they can join a new cooperative. This exposes them to the hazards of the race-for-fish both for target catches of pollock and for small amounts of bycatch (American Fisheries Act 1998; NMFS 2002).

The six land-based and two floating processors are owned by four companies and organized as seven cooperatives. The largest company, Trident Seafoods, is primarily owned by Chuck Bundrant and Kaare Ness. Trident owns land-based pollock processing facilities in Akutan and Sand Point and the floating processor *Arctic Enterprise*. Trident's largest plant is in Akutan. Following passage of the AFA, the company shifted pollock production from Sand Point and the *Arctic Enterprise* to the Akutan plant, which has capacity to process 1,400 t of pollock per day (J. Plesha, personal communication). In 2009, Trident received 32.8% of the inshore quota through two cooperatives, the Akutan Catcher Vessel Cooperative and Arctic Enterprise Association.

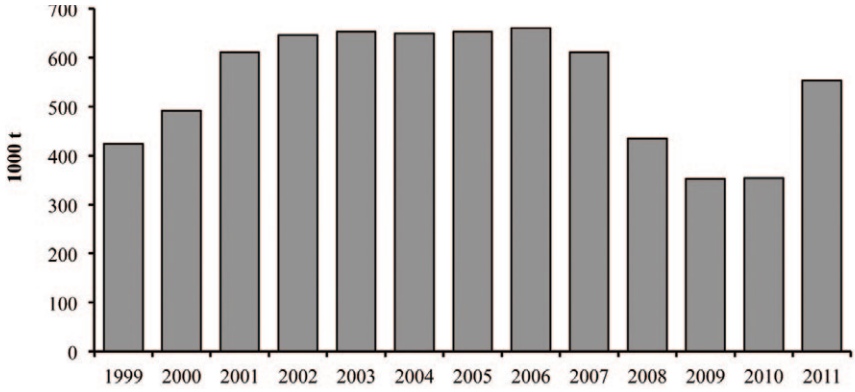


**Figure 6.7. Pollock harvested by the inshore sector, 1999-2011. Source: NMFS 2011c.**

The Arctic Enterprise Association initially included five vessels, four of which transferred their catch history to the cooperative. The fifth vessel, the *Intrepid Explorer*, fishes the cooperative's entire allocation. The Akutan Catcher Vessel Cooperative is much larger, with 36 vessels, 32 of which fished in 2008. In 1999, 19 of these catcher vessels were owned directly by Trident or through parties related to Trident, giving Trident the ability to vertically coordinate fishing and processing activities (NMFS 2002). This number has likely increased since the passage of the AFA because catcher vessel owners often sell their ownership interest to the processor they deliver to when they decide to divest their interest (J. Dooley, personal communication).

Three inshore processors are owned by Maruha-Nichiro, a partnership formed in October 2007 through the merger of two of Japan's largest seafood companies. Maruha-Nichiro controls 33.97% of the inshore quota through three cooperatives: the Peter Pan Fleet Cooperative, the Westward Fleet Cooperative, and the Unalaska Cooperative. The Peter Pan Fleet Cooperative delivers to the Peter Pan facility located in King Cove. In addition to pollock, Peter Pan processes king crab, bairdi and opilio tanner crab, Pacific cod, salmon, halibut, and sablefish. Peter Pan receives 5.75% of the inshore pollock quota. The Peter Pan Fleet Cooperative includes ten catcher vessels, only five of which fished for pollock in 2008. The cooperative left 23% of their quota unfished in 2008, presumably due to a combination of high fuel prices and soft product prices that summer (NMFS 2002, 2011c).

The second Maruha-Nichiro plant, Westward Seafoods, is located in Unalaska. Westward focuses on pollock but also processes Pacific

cod, halibut, crab, and salmon. The Westward Fleet Cooperative is composed of 12 vessels that receive 18.91% of the inshore quota. Only nine of Westward Fleet Cooperative catcher boats fished in 2008 (NMFS 2011c; D. Boisseau, personal communication). The processor held direct interest in at least five of the catcher vessels at the time of the passage of the AFA, and in addition provided a guarantee on loans for three of the vessels. Westward has since developed ownership interests in additional vessels (J. Dooley, personal communication). Westward has set up a separate corporation, specifically for the purpose of buying catcher vessels from owners looking to divest their interest.

Alyeska Seafoods, the third Maruha-Nichiro plant, is also located in Unalaska. The Unalaska Cooperative that delivers to Alyeska receives 12.19% of the inshore quota, shared among eleven catcher vessels, eight of which fished in 2008. At the time of the AFA, Alyeska Seafoods held ownership stakes in at least six of the catcher vessels. Alyeska typically processes 400 t of pollock per a day, but has peak capacity to process up to twice that much. In 2011, Wards Cove, which was a partial owner of Alyeska Seafoods, sold their share to a joint partnership of the Coastal Villages Region Fund and Norton Sound Economic Development Corporation.

The UniSea processing plant in Dutch Harbor is owned by Nippon Suisan. The plant receives 24.26% of the inshore quota from the UniSea Fleet Cooperative, a cooperative of 14 vessels, one of which did not fish in 2008. UniSea has capacity for up to 1,100 t of pollock per day. Although the quantity varies from year to year, pollock normally makes up 80% of the seafood processed at the plant, with a combination of crab and other groundfish making up the balance.

The *Northern Victor*, a floating processor owned by Icicle Seafoods, was bought by Paine & Partners, a San Francisco–based private investment firm, in September 2007. The Northern Victor Fleet Cooperative receives 8.96% of the inshore quota. The *Northern Victor* has surimi equipment but focuses on fillets. In 2008, catcher vessels delivering to the *Northern Victor* were paid full price only for fish large enough to process as fillets; smaller fish were processed into fishmeal.

## Slower Fishing Pace

An immediate benefit of the AFA cooperatives was the ability to spread harvests over longer seasons. Fishermen no longer had to race for fish; instead, they knew the amount of fish they were entitled to catch before the season started. They were able to coordinate a slower fishing pace, which allowed processors to maximize their returns on the fish and increase what they were willing to pay for the fish. In addition, fishing effort could be marshaled in periods of the season when the fish provided a higher oil and flesh content. For example, the B season started

in June, which is a period when oil and flesh recovery is near its lowest because the pollock had depleted their energy reserves during spawning. Before AFA, the individually sensible but collectively irrational strategy was to begin fishing as soon as the season opened. Under the AFA, owners could choose to fish later in the B season when there was an opportunity for better recovery rates, allowing for increased returns for the harvesters and processors.

Since 1998, pollock catch per week has declined steadily in concert with a steady increase in the number of weeks fished; the overall pace of pollock removals has declined from a season peak of about 13,000 t per week in 1997 to a season peak of approximately 6,000 t per week in 2000 (NPFMC 2002). While this slowing of the overall pace of pollock fishing in the Bering Sea may be partially due to Steller sea lion conservation measures imposed in 1999 that were designed to disperse the fishery over time and space, the elimination of the race-for-fish is probably the largest contributing factor (NMFS 2002; Wilen and Richardson 2008).

## Safety

Another benefit of harvesting under the AFA is increased safety. Commercial fishing has always been a dangerous occupation. From 1991 to 1998, occupational fatality rates in groundfish fishing off of Alaska were 46 per 100,000, an occupational fatality rate that is about 10 times the national average (Lincoln and Conway 1999). Part of the reason is that fishermen who compete in a race-for-fish are often impelled to fish at times and places that are not very safe. Additionally, the higher costs and lower revenues in a race-for-fish fishery lead to lower profits margins and, indirectly, to less investment or attention to issues of safety. This includes postponing maintenance and delaying equipment upgrades (GAO 2000).

The harvesting cooperatives allow fishermen more flexibility in their choice of when to fish, permitting them to be more conscious of safety issues. Even in the first two years following the introduction of the AFA, reports indicate that the pollock fishery was being conducted in a safer manner under co-ops (GAO 2000). GAO (2000) concludes that the safety improvements can be attributed to the fact that under the AFA, vessels can afford to put off fishing in dangerous weather conditions because they know their fish will still be there at the end of a storm.

Another safety benefit arises when older vessels are retired from the fleet. When a cooperative chooses to tie-up some of their vessels, the older and least seaworthy vessels are the first to be eliminated. For example, when the UniSea Fleet Cooperative retired the 165 foot *Pacific Monarch*, John Iani, vice-president of UniSea, reported that:

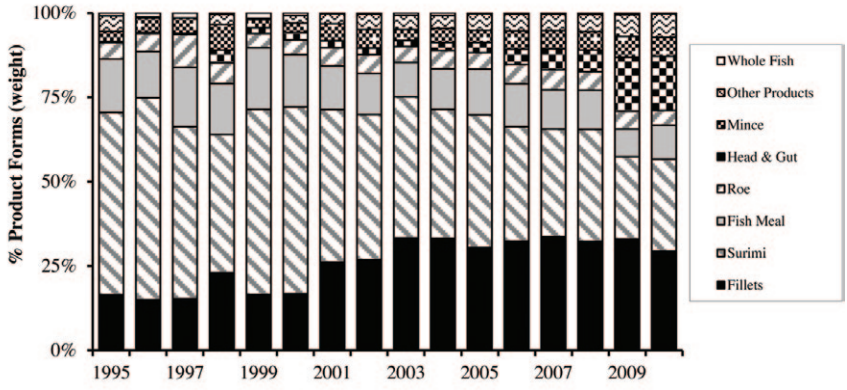


**Figure 6.8. Pollock production mix for Bering Sea and Aleutian Islands pollock production, 1995-2010. Source: NMFS 1999d, 2005, 2011c.**

> It was a neat deal.... The *Pacific Monarch* was old and kind of run down and a little bit dangerous to be fishing. (Loy 2001)

An additional benefit is the increased profit vessel owners receive as a result of the cooperatives. Vessels that were only very close to breaking even under the race-for-fish are earning greater revenues while enjoying reduced costs. As a result, increased money is potentially available for maintenance and repairs.

## Optimized Product Mix

Implementation of the AFA made it easier for fishermen and fish processors to tailor their output to satisfy the demands of diverse markets. Under the race-for-fish, many processors focused on surimi production because it is the fastest way to process large quantities of fish. Because the AFA cooperatives could guarantee each member a predictable amount of fish, participants were able to invest in machinery capable of producing pollock fillets and could slow down fishing to produce higher value products (Figure 6.8; GAO 1999). Processors with the ability to produce fillet and surimi were better able to determine the product mix that would allow them to maximize the use of fish and generate the greatest profit (Wilen and Richardson 2008). The increased flexibility also allowed companies to respond to short-term market changes. This was an advantage for the catcher/processor sector; in early 1999 their flexibility allowed them to respond to increased demand and rising fillet prices by increasing fillet production, while decreasing surimi

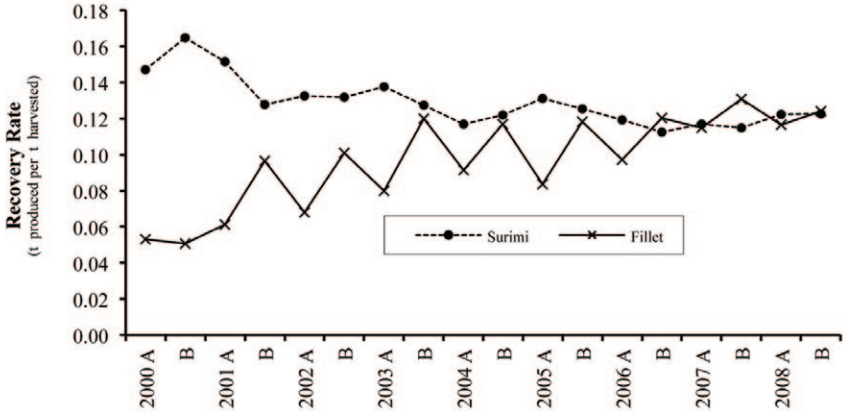


**Figure 6.9. Surimi and fillet recovery rates (t produced per t harvested) for Bering Sea and Aleutian Islands pollock seasons, 2000-2008. (These are not true recovery rates for a load of fish; rather, this is the overall ratio of quantity produced to the total retained harvest, which does not account for factors such as discards.) Source: NMFS 1999d, 2005, 2011d; NOAA 2010.**

production (GAO 1999). Another instance was in 2008; when surimi prices soared, processors were able to focus on producing more surimi in order to meet the increased demand (Figure 6.9; S. Wilt, personal communication).

## Increased Product Value

The AFA has also allowed harvesters and processors to focus on maximizing the value of the fish they harvest. This happens in a couple of ways. First, there has been a reduction in the fish taken per tow in the catcher/processor sector. The reduced throughput has allowed catcher/processors to better match fish landings with their processing capacity. This suggests that freed from the race-for-fish, operators harvest fewer fish per tow. Smaller tows reduce bruising and contribute to improved roe quality. The slower processing pace has also permitted greater specialization within the processing lines, since it allows equipment to be more precisely tuned to the various sizes of fish harvested. Processors were able to maximize returns through increased recovery of higher value products, by increasing the percentage of pollock to be used for fillets (Figure 6.8; GAO 2000; NPFMC 2002).

In addition, freedom from the race-for-fish has allowed harvesters to more closely target their catches to fish of a desired size. By slowing

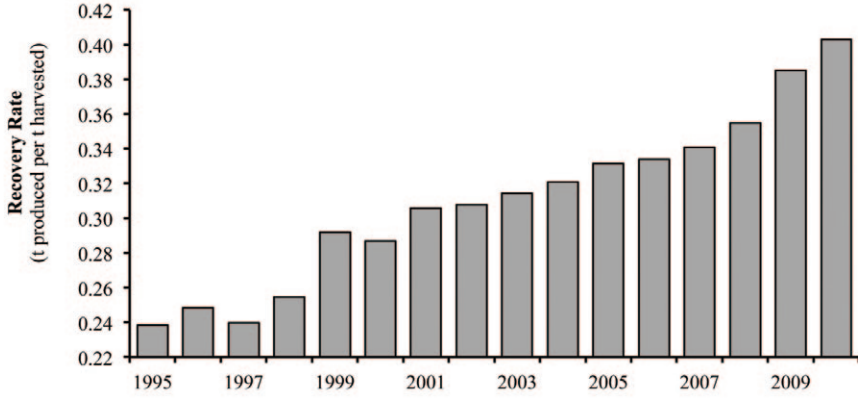


**Figure 6.10. Recovery rate (t product per t retained catch) for Bering Sea and Aleutian Islands harvested pollock, excluding whole fish and headed and gutted, 1995-2010. Source: NMFS 1999d, 2005, 2011d.**

down fishing, vessels can spend more time searching for fish of the desired size (GAO 2000; NPFMC 2002; D. Abbasian, personal communication). Processors who have focused on surimi production are able to work with fish as small as 200 grams. On the other hand, processors who focus on fillet production may be willing to make it worthwhile for vessels to deliver partial loads of large fish (D. Abbasian, personal communication).

## Increased Utilization of Raw Fish

The AFA has allowed pollock companies to focus on maximizing their recovery of marketable product from their catches. Elimination of the race-for-fish has allowed companies to increase the yields from pollock harvests (GAO 1999, 2000). Processors are able to devote attention to using scraps, frames, and trimmings to produce salable, albeit low-value, products such as oil, fishmeal, milt, and bone meal. Under the race-for-fish, vessels could not afford to waste scarce storage space on low-value products when the same space could instead be used to store fillets and surimi. They also could not afford the time to travel to a port to offload low-value products; doing so would have reduced their total catches.

In 1999, the first year of the Pollock Conservation Cooperative, catcher/processors increased pollock utilization by about 20% (GAO 1999, 2000). Further gains following the passage of the AFA have been evident throughout the fishery. The recovery rates of pollock harvests

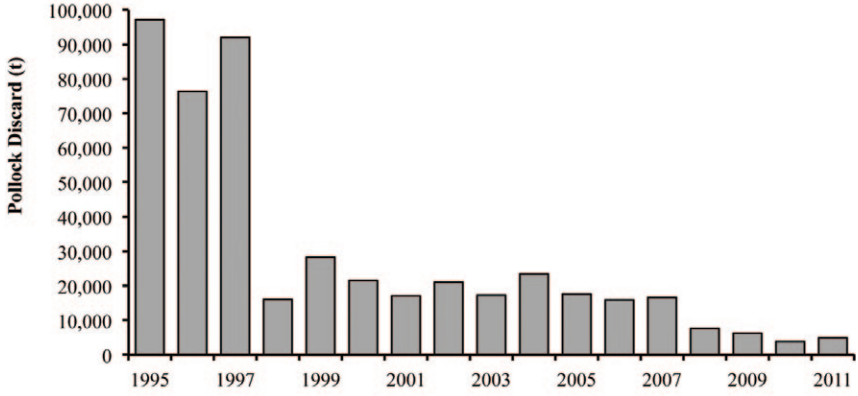


**Figure 6.11. Discarded pollock catch in the Bering Sea and Aleutian Islands, 1995-2011. Source: NMFS 2011d.**

in the BSAI have increased from 0.25 t product per metric ton retained catch in 1998, to over 0.40 t product per metric ton retained catch in 2010 (Figure 6.10). One reason for these gains is a large reduction in discards, which decreased from 91,982 t in 1997 to 4,857 t in 2011 (Figure 6.11). A majority of processors report the ability to produce fillet, surimi, roe, fishmeal, mince, and oil with recovery rates of over 40% and are able to process everything except eyes, skin, bones, and water. Previously, any part of the fish not used for fillets or surimi was turned into fishmeal and oil, or ground up and discharged as effluent. Pollock processors have increased flesh (fillet and surimi) recovery rates at an even faster pace than overall recovery rates, with gains of 56% from 0.17 t product per metric ton retained catch to over 0.26 t product per metric ton retained catch over 1998-2010 (Figure 6.12). Thus processors have been able to not only increase their overall recovery rates, but also increase the portion of the fish devoted to high value flesh products through improved cutting techniques and slower throughput.

These gains are largely due to increased long-term planning, which is another result of cooperatives. Companies that were once looking to make it through the season are now able to plan for the future, able to justify purchases of equipment that may take several years to amortize. Fishmeal machinery requires a significant investment, and under the race-for-fish, it was impossible for most companies to justify spending the money if they weren't even sure they were going to make it through the season. Allowing companies secure rights to shares of the pollock total allowable catch gave them the confidence needed to support

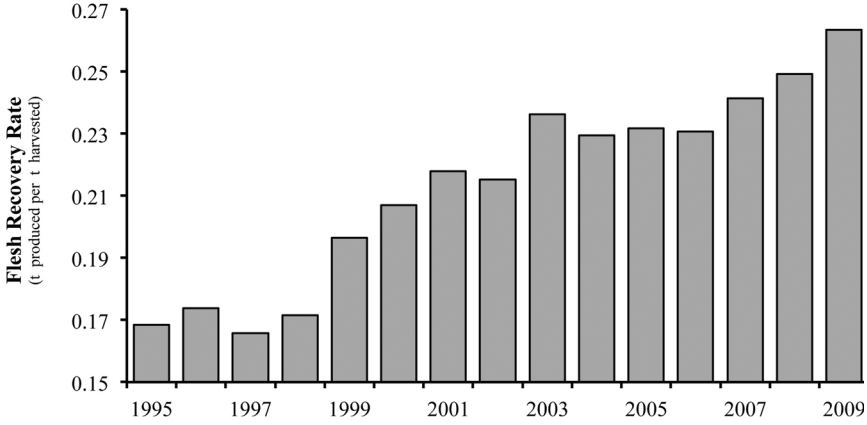


**Figure 6.12. Flesh recovery rate (metric ton product per metric ton retained catch) for Bering Sea and Aleutian Islands harvested pollock excluding whole fish and headed and gutted, 1995-2010. Source: NMFS 1999d, 2005, 2011d.**

investments that increased utilization rates (Felthoven 2002; Felthoven and Paul 2004).

## Decreased Costs

The AFA cooperatives allow increased economic efficiency through decreased costs. For example, operations can trade quota allocations between vessels within a given cooperative. This makes it possible for vessels with low operating costs to harvest the allocations of less efficient vessels. A good example of this is Trident's factory trawler fleet. Of Trident's five AFA-qualified factory trawlers, only three are used to catch and process pollock; the *U.S. Enterprise* and the *American Enterprise* have sat in port for years and will likely be scrapped (J. Plesha, personal communication). Another opportunity for cost savings occurs near the end of a season, when vessels do not have enough remaining quota for a full trip; instead they can pool their quota shares onto a single vessel. Vessels also have been able to reduce fuel consumption by slowing their cruising speed to and from fishing grounds. For example, the C/V *Pacific Prince* is able to halve fuel costs per mile when speed is not imperative (J. Dooley, personal communication).

Operational efficiencies available under cooperatives are another reason companies may experience reduced costs. Processors can choose to shift the timing of their participation in the BSAI pollock fishery

to avoid overlap with peak production periods in other fisheries. For example, pollock processing may be accelerated or delayed to allow processing facilities to be redirected to processing salmon or crab. Another operational benefit under the AFA is that B season catches can be delayed to late summer or early fall when fillet yields are higher and oil content is higher. Fish oil can be used in burners to supplement diesel, allowing significant fuel savings (Alaska Energy Authority 2005).

## Expanded Markets

Since the passage of the AFA, the U.S. pollock companies have been able to turn their attention to new markets. In particular, processors have focused on developing the European market for pollock products. Falling cod catches, combined with increased marketing of surimi products, has strengthened the demand for Alaska whitefish such as pollock. As a result, the European market for pollock fillets now exceeds that of the United States. New global markets allow pollock processors to capitalize on exchange rate fluctuations, thereby increasing revenues by capturing higher prices. Additionally, the growth in popularity of surimi products within Europe has freed pollock producers from being wholly dependent on vagaries of the Japanese surimi market. In fact, exports of pollock to Europe now exceed pollock surimi exports to Japan. The combination of less variability in pricing and demand allows for increased stability and for long-term planning that was unthinkable under the pre-AFA race-for-fish.

## Marine Stewardship Council Certification

Harvesting cooperatives have also benefited the pollock fishery by fostering a new spirit of cooperation. Under the race-for-fish, companies were in constant competition with each other, but since implementation of the AFA, pollock operations have been more willing to work together for the benefit of the fishery as a whole. A prime example of this was seeking sustainable seafood certification under Marine Stewardship Council (MSC) standards. The MSC fishery certification program uses a third party to review the current condition and management of a fishery. Fisheries that meet the certification criteria are authorized to mark their products with the MSC logo. The certification process is arduous and costly. The pollock industry began the certification process in 2001, and after four years obtained MSC certification.

MSC certification provides buyers with what many regard as an independent assessment of how well a fishery is being managed. Some buyers value credence attributes such as “organic,” “free-trade,” “shade-grown,” and “certified sustainable,” and are willing to pay price premiums for otherwise undifferentiable products (Wessells et al. 1999;

Johnston et al. 2001; Wessells 2002). MSC certification provides Alaska pollock preferential access to western European and North American markets. In contrast, pollock from Russia faces consumer concerns about the efficacy of monitoring and enforcement of harvest limits and the basis for determination of those limits (Gudmundsson and Wessells 2000; Van Zile 2005). MSC certification is particularly important in western European markets, where households are concerned with the sustainability of their seafood and do not trust national or European Union reports on the condition of fish stocks or the sustainability of fisheries management. As the premier fisheries eco-label, MSC certification has allowed Alaska pollock producers to exact a price premium over otherwise comparable Russian product.

The number of international fisheries that have met MSC standards and certification has grown enormously over the past several years, in part because many European retailers and brand owners have made public commitments to sourcing from sustainable fisheries (EU Fish Processors' Association 2008). Birds Eye has launched the Sustainable Fish Finger, an Alaska pollock product that is set to compete and replace some cod products in the British market. In the U.S. market, MSC certification also gives Alaska pollock an extra boost. Wal-Mart has set a 100% sustainable fish target for North America, and carries Alaska pollock in its frozen section. McDonald's has declared a commitment to sustainable fish products, using Alaska pollock in all their fish sandwiches. The cutbacks in the pollock total allowable catch in 2009, however, have forced McDonald's to look elsewhere; they announced that their European restaurants have converted to haddock in order to preserve their Alaska pollock for the U.S. market (Marine Stewardship Council 2006, 2007; Eurofish 2009).

# Chapter 7. Western Alaska Community Development Quota Program

The Western Alaska Community Development Quota (CDQ) program was instituted as part of Inshore/Offshore I (57 FR 54936, 1992; Federal Register 1992) and continued with minor changes under Inshore/Offshore II (60 FR 63654, 1995; Federal Register 1997) and under Amendment 45 to the Bering Sea and Aleutian Islands (BSAI) groundfish management plan (NPFMC 1998a). The goals and purpose of the program were to:

> ...provide the means for starting or supporting commercial fishery activities that will result in ongoing, regionally based, commercial fishery or related businesses. (62 FR 43866, 1997)

That is, the CDQ program was designed to increase economic opportunity in impoverished western Alaska communities by overcoming the lack of infrastructure and dearth of investment capital (Ginter 1995). To do so, the program allocated 7.5% of the BSAI pollock total allowable catch to six nonprofit entities representing 56 (now 65) western Alaska communities (Figure 7.1).

The six CDQ entities are the Aleutian Pribilof Island Community Development Association (APICDA), the Bristol Bay Economic Development Corporation (BBEDC), the Central Bering Sea Fishermen's Association (CBSFA), the Coastal Villages Region Fund (CVRF), the Norton Sound Economic Development Corporation (NSEDC), and the Yukon Delta Fisheries Development Association (YDFDA).

Although the CDQ entities initially lacked the capacity to fish their CDQ pollock, they could lease their shares to catcher vessels in the inshore or at-sea sectors or to catcher/processors. Royalties from leasing CDQ pollock and earnings from investments based on those royalties let CDQ entities create workforce development, employment, and scholarship programs to prepare community residents for careers

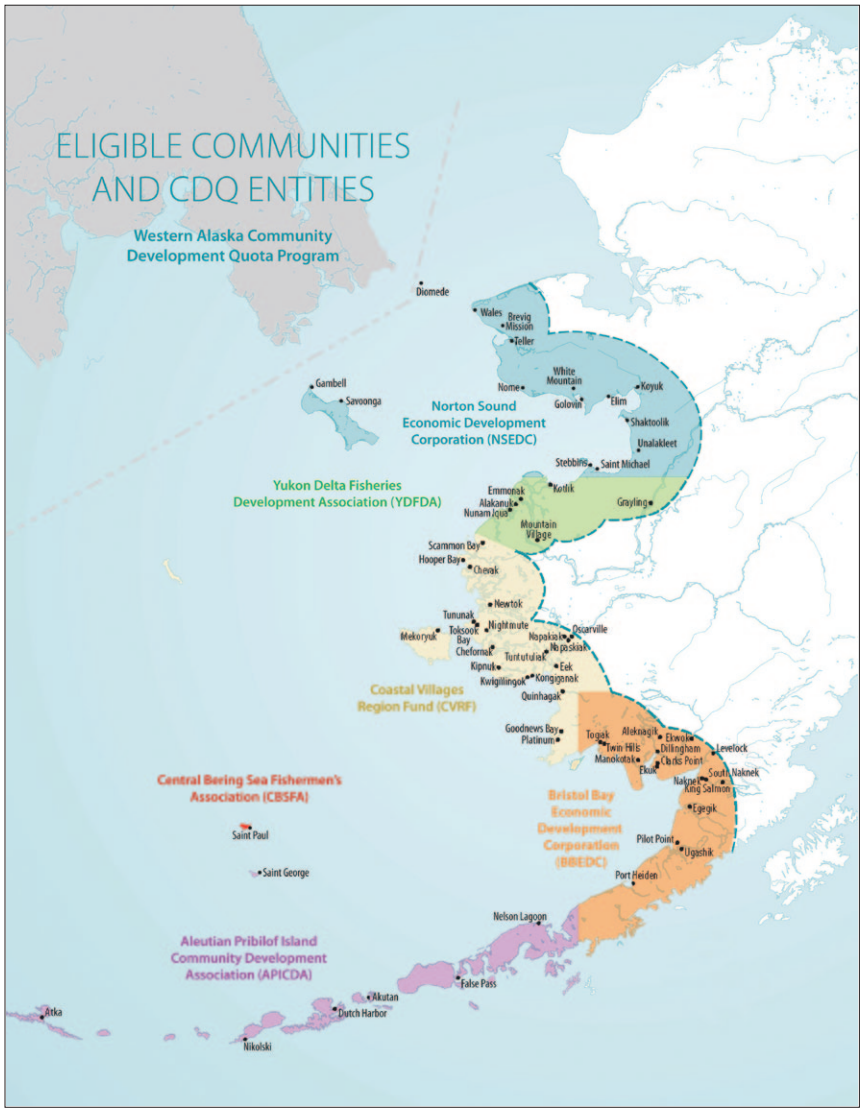


**Figure 7.1. CDQ communities and regions. Source: WACDA 2010b.**

in the pollock fishery and in management of community development programs. ADCCED (2009) notes that:

> Involvement in Alaska's groundfish fishery operations requires considerable investment and expertise. Factory trawler companies are multimillion-dollar operations. Their employees must possess sophisticated business and technical skills to compete in the industry. These companies not only employ seasoned captains, engineers, plant managers, maintenance crews, deckhands and processors, but headquarters are staffed with accountants, human resource professionals, administrators, lobbyists, marketing arms and sales forces.

CDQ pollock royalties also fueled investments in vessels, processing facilities, and other fisheries-related infrastructure that have promoted opportunities for residents to increase their participation in a variety of fisheries that had been inaccessible to them, due to a lack of shore-based infrastructure and a lack of access to capital. CDQ royalties and non-royalty income have also helped support social programs and infrastructure projects in the communities (National Research Council 1999a).

Under Inshore/Offshore I, Inshore/Offshore II, and Amendment 45 to the BSAI Fishery Management Plan, the CDQ program was subject to a 3-year review and renewal cycle. The AFA eliminated the sunset provision and increased the pollock CDQ allocation to 10% (American Fisheries Act 1998). CDQ rights were extended to include allocations of 10% or more of the annual total allowable catch for other groundfish species, sablefish, halibut, king and Tanner crab, as well as the Prohibited Species Catch (PSC) limits under the 2006 MSFCMA reauthorization as amended by the Coast Guard and Maritime Transportation Act of 2006 (NMFS 2007).

As initially designed, the six CDQ entities submitted annual proposals to the Alaska Department of Commerce, Community and Economic Development (ADCCED), wherein they requested shares of the CDQ allocation and specified a suite of fishery-related investments and activities that would be supported by royalties generated from leasing the shares. Based, in part, on recommendations of the Blue Ribbon Committee on CDQs (2005), the 2006 MSFCMA reauthorization gave NMFS responsibility for program administration and gave CDQ entities authority to use up to 20% of their annual royalties to support projects unrelated to fisheries or fisheries infrastructure. For example, the CDQ entities could use royalties to match grants or leverage dollars from other agencies, foundations. or nonprofit projects, to support economic development within their region.

The CDQ entities experienced many growing pains during their first decade (Northern Economics Inc. 2001, 2002). CDQ was reapportioned among the six entities based on periodic performance assessments by ADCCED. Because the assessment criteria were ill-defined and addressed short-term performance, the CDQ entities invested in projects that looked good on paper to ensure they did not lose their percentage of quota. This created a level of uncertainty that negatively affected investment strategies. The "beauty contest" to meet arbitrary guidelines, along with some struggles with finding strong leadership, set the stage for failures during the initial years of the program (National Research Council 1999a, Blue Ribbon Committee on CDQs 2005).

In years prior to passage of the AFA, CDQ entities also suffered from the lack of stability within the pollock fishery. With many pollock companies operating at a loss, CDQ investments in the pollock fishery often ended poorly. For example, Coastal Villages Fishing Cooperative (CVFC) formed a partnership with the owners of the C/P *Brown's Point* to provide their CDQ pollock quota for harvest in exchange for half-ownership in the vessel. The joint venture over 1992-1997 proved to be hugely unprofitable. In 1997, when it was found that *Brown's Point* was headed into foreclosure proceedings, ADCCED recommended that CVFC lose its CDQ allocation entirely unless the partnership with *Brown's Point* was dissolved (National Research Council 1999a). CVFC appealed the decision, stating that they had agreements in place to dissolve the partnership and pay off $1.5 million in debt through sale of the *Brown's Point* to American Seafoods. The state agreed to reinstate the allocation but required additional oversight. CVCF later renamed itself the Coastal Villages Region Fund, and American Seafoods scrapped the *Brown's Point* under buyout terms of the AFA (National Research Council 1999a, NPFMC 2002).

## CDQ Financial Performance

Initially, CDQ entities derived their revenues almost entirely from royalties obtained from leasing quota to catcher boats and factory trawlers. The real value of a metric ton of pollock rose through the 1990s as the value of the pollock grew, but has remained fairly stable between 1998 and 2008 (Figure 7.2). As a result, differences in pollock royalties from year to year since 1998 have been largely a function of changes in the BSAI pollock total allowable catch rather than changes in the royalty price of pollock. The exception to this rule is APICDA, which has a market-based agreement with its CDQ partner *Starbound*. Although this agreement has created some volatility in its pollock royalties compared to other CDQ groups, it has allowed APICDA to share in increases of pollock value. In 2008, for example, when the value of pollock rose sharply,

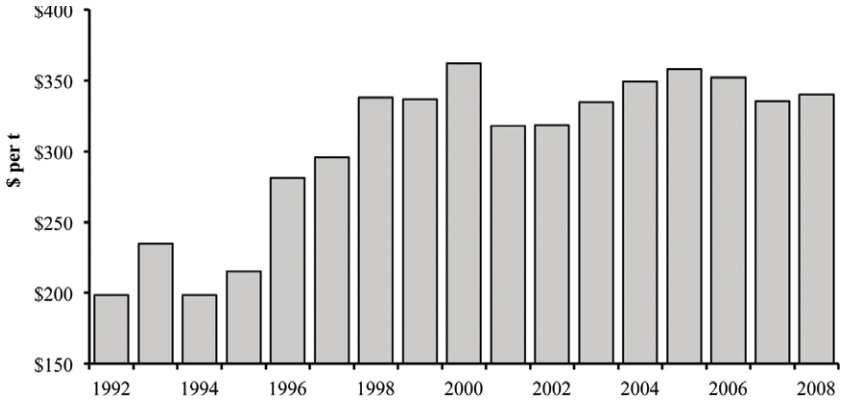


**Figure 7.2. CDQ pollock royalty price, 2009 dollars, 1992-2008. (The 1992-2005 data are based on all six CDQ entities. Data for 2006-2008 data exclude YDFDA data. APICDA, CVRF, and NSEDC are the implied prices from annual reports. BBEDC and CBSFA prices are based on CVRF information since their quota was pooled with CVRF for lease to American Seafoods in 2006-2008.) Source: ADCCED 2009; APICDA 2009; CVRF 2009; NSEDC 2009.**

APICDA received over $400 per metric ton versus the CDQ average of $341 per metric ton (L. Cotter, personal communication).

Over time, CDQ entities came to generate more and more revenue from investments and other business activities. These non-royalty revenues totaled over $1.1 billion for 1992 through 2010 (Figure 7.3). The dramatic increase in CDQ revenues in 2004 was due, in part, to investment payouts to several CDQ groups and high pollock and crab prices. That year marked an important milestone; it was the first year in which CDQ entities earned more from investment and business activities than they did from royalties, a pattern that has continued in subsequent years (Figure 7.3). Combined data from CDQ annual reports indicate that total revenues were over $168 million in 2007, and in spite of the global downturn, CDQ revenue rose to over $186 million in 2008 and to $864 million in 2010 (WACDA 2008, 2009, 2011).

While the overall increase in revenues is significant, the increase of non-royalty earnings as a fraction of total revenues is particularly important (Figure 7.3). Non-royalty revenues derive from investments, such as ownership stakes in factory trawlers, motherships, and catcher boats. The CDQ entities have also invested in local shore-based processing facilities and infrastructure, which are typically less profitable than

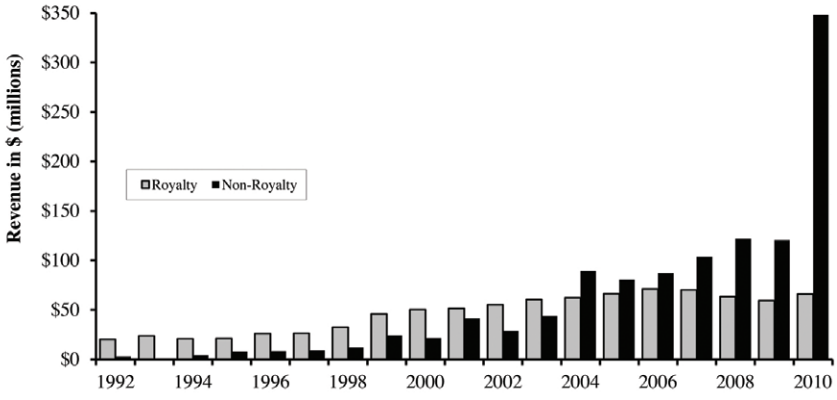


**Figure 7.3. CDQ royalty and non-royalty revenue, 2009 dollars, 1992-2010. (The large increase in revenue in 2010 resulted from CVRF redeeming its equity in American Seafoods in exchange for fishing assets.) Source: WACDA 2011.**

their investments in the industrial fisheries, but generate important social capital. APICDA CEO Larry Cotter describes his responsibility as:

> It is my job to balance the company's portfolio between investments that generate revenue, and the projects that benefit our communities through jobs but normally lose money. (L. Cotter, personal communication)

Earnings have differed among CDQ entities in part because of differences in allocations of CDQ pollock shares (Figure 7.4) and in part to differences in investment in revenue generating and social capital generating activities.

In 2010, CVRF earned $218 million in revenue, NSEDC earned nearly $34 million, BBEDC earned $33.6 million, APICDA earned $29.1 million, YDFDA earned $32.7 million, and CBSFA earned $34.2 million (Figure 7.5).

With the increase of both royalty and non-royalty related revenue, the CDQ entities have seen a substantial increase in their net assets. The CDQ entities as a group have never seen a decrease in their net assets, although on occasion individual CDQ entities have experienced annual losses. The net assets of the CDQ entities increased from about $132.2 million in 2000 to $737.6 million in 2010 (Figure 7.6). One difficulty in increasing assets year after year is that there are limited options for investment in western Alaska communities. Although companies are now allowed to invest 20% per year in non-fishery related business, they

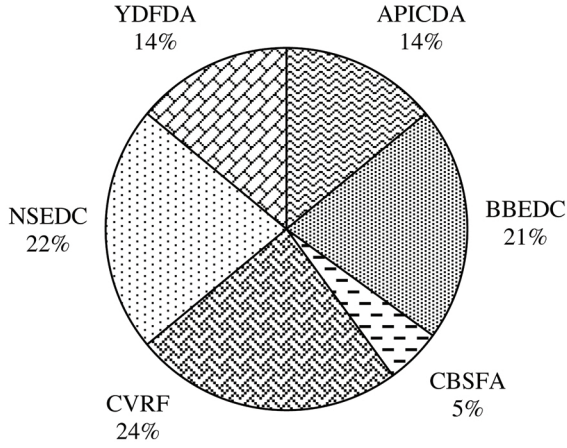


**Figure 7.4. Allocation of CDQ pollock shares among CDQ entities, 2010.**

are still restricted to investments within their regions. This restriction is in contrast to the Alaska Native Regional Corporations that were granted legal authority to invest assets however and wherever they choose. Nevertheless, the CDQ entities have generated favorable returns on assets.

## Other Measures of CDQ Performance

CDQ entities are directed to foster economic development within their regions, so their performance should not be judged simply in terms of asset growth. Additional performance dimensions include workforce development through internships, scholarships, and vocational training, as well as direct employment and wages. CDQ entities also support economic development through loans for residents to purchase fishing vessels and permits, and through investment in infrastructure to increase the value of local fish catches. For example, BBEDC operates an ice barge that allows local fishermen to increase the value of their salmon harvests. They have also created a program that provides financial assistance to enable residents to buy fishing permits (BBEDC 2009). The CBSFA has directly purchased crab harvesting and processing quota, as well the vessels to harvest their non-pollock CDQ (DeMarban 2009).

All six CDQ entities fund scholarships for local residents. For example, BBEDC spent over $750,000 to support scholarships and vocational training programs in 2010 (BBEDC 2011). ADCCED (2009) reports

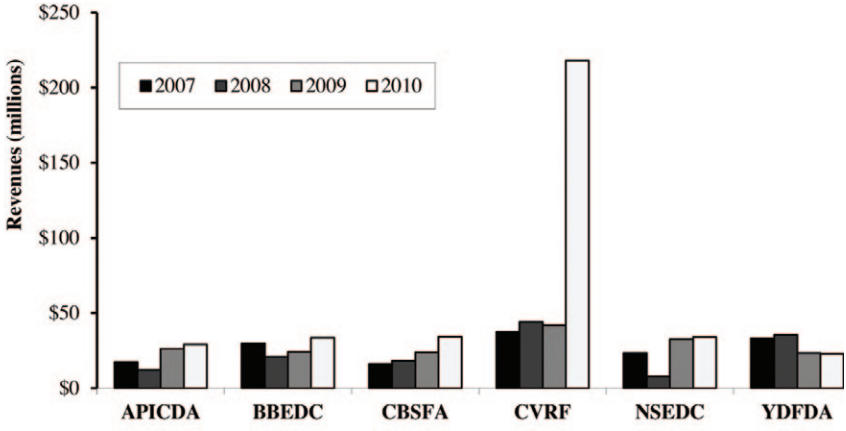


**Figure 7.5. Annual revenues for CDQ entities in 2007-2010. (The large increase in revenue in 2010 resulted from CVRF redeeming its equity in American Seafoods in exchange for fishing assets.) Source: APICDA 2008, 2009, 2010, 2011; BBEDC 2009, 2010, 2011; CBSFA 2008, 2009, 2010, 2011; CVRF 2008, 2009, 2010, 2011; NSEDC 2008, 2009, 2010, 2011; YDFDA 2008, 2009, 2010, 2011.**

that funds provided by CDQ entities provided training to over 13,000 people[8] between 1993 and 2005 (Figure 7.7).

The training, in turn, supports what may be considered to be the primary goal of the CDQ entities: increased economic opportunity for the communities through increased employment. Contracts between CDQ entities and the companies that lease their quota shares often include guarantees of positions aboard vessels as well as royalty payments. The CDQ entities have played a significant role in providing employment and providing funding for projects that have increased regional employment. Employment related to CDQ entities has grown from 317 jobs in 1993 to over 5,600 jobs in 2010 (Figure 7.8). For example, CVRF has been successful at creating local jobs through building local processing facilities and other income generating businesses. The CVRF processing facility at Quinhagak processed 2.3 million pounds of salmon in 2008. In 2009, CVRF completed construction of a $25 million salmon processing facility in Platinum, the largest-ever CDQ project. In 2010, CVRF's 786 employees earned $10.4 million. When CVRF direct employees were combined with the 760 fishermen who worked on CVRF-

8 This estimate may include some double counting because individuals can take advantage of more than one training program.

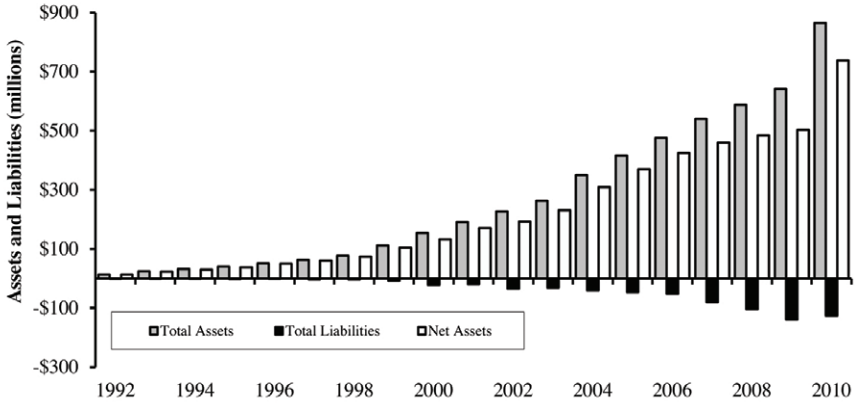


**Figure 7.6. CDQ assets, liabilities, and net assets, 1992-2010. Source: ADCCED 2009; WACDA 2011.**

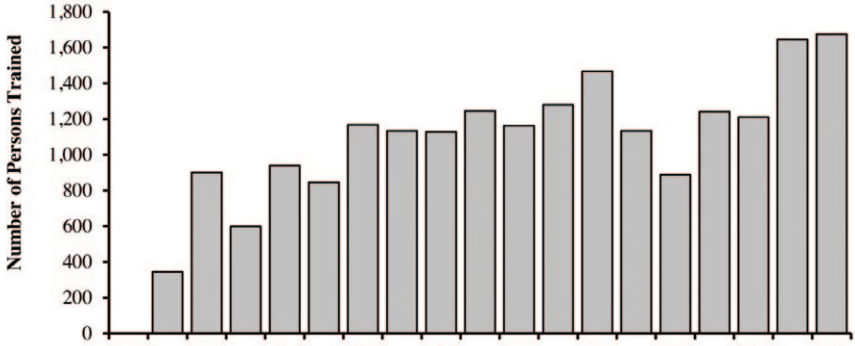


**Figure 7.7. CDQ training and scholarships, 1993-2010. (Data for 2006 may be underestimated due to a time gap between ADCCED and WACDA reports, and are instead based on the 2006 annual reports for the six CDQ entities.) Source: ADCCED 2009; WACDA 2008, 2009, 2010a, 2011.**

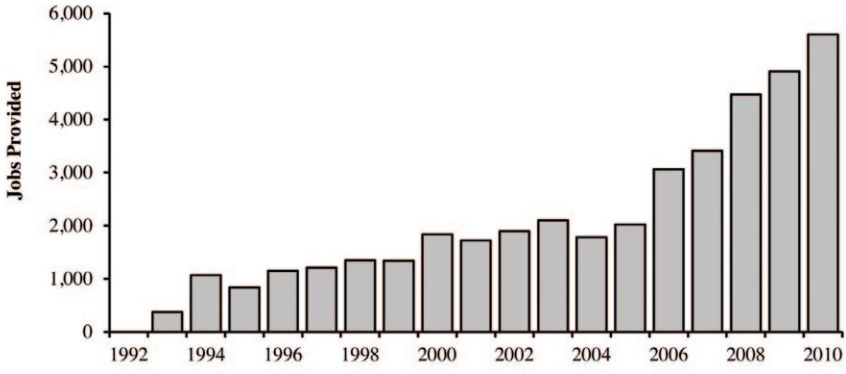


**Figure 7.8. CDQ employment, 1993-2010. (1993-2008 data include employment attributed to crewmembers, as well as wage and salary employees. 2006-2010 data additionally include commercial permit holders paid.) Source: ADCCED 2009; WACDA 2008, 2009, 2010a, 2011.**

supported vessels, or delivered to CVRF processing facilities, CVRF became the largest private-sector employer in its region.

The wages associated with the CDQ-associated employment have been a boon for their respective regions. Jobs that were generated by the CDQ program include work aboard catcher and catcher/processor vessels, internships with fishing industry partners and government agencies, work in processing facilities, and management/administrative positions, resulted in over $350 million in wages between 1993 and 2010 (Figure 7.9). These numbers may seem modest until it is recognized that this is an economically disadvantaged and lightly populated region. Total population in the 65 CDQ communities was only 27,702 in the 2010 census. Residents of these communities have a median per capita personal income less than $15,000, compared to a statewide average of $40,000. In addition, over 27% of the region's residents live below the poverty level, compared to a statewide average of only 9.6% (WACDA 2011). Thus, the jobs and wages created by the CDQ entities provide much needed employment and income.

## CDQ Partnerships

Western Alaskans are not alone in benefiting from the CDQ program. Pollock operations, particularly factory trawlers, have enjoyed benefits from business ties to CDQ entities. Each CDQ entity has chosen different

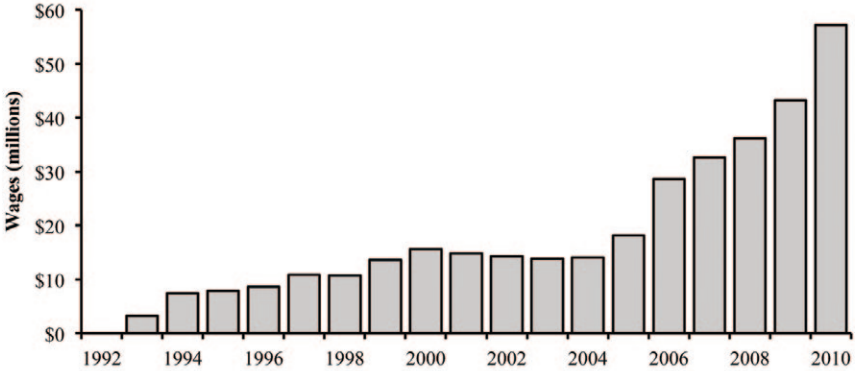


**Figure 7.9. CDQ payroll, 2009 dollars, 1993-2010. (Data from 1993 to 2008 include wages and salaries. 2006-2010 data include payments to fishermen.) Source: ADCCED 2009; WACDA 2008, 2009, 2010a, 2011.**

ways to involve itself with the pollock fishery, other groundfish and crab fisheries, and regional fisheries for salmon and halibut.

CVRF receives 24% of the CDQ for pollock, other groundfish, sablefish, crab, and halibut, which it has used to finance substantial investments in the fisheries. CVRF purchased a 23% stake in American Seafoods in 2000 when Røkke sold out to conform to AFA ownership requirements (American Seafoods Group LLC 2002). CVRF extended its ownership stake in American Seafoods in 2006, when it participated in the $81.75 million buyout of Centre Partner's 23% equity interest in American Seafoods (American Seafoods Group LLC 2006). This brought CVRF's ownership stake to over 46%. In 2008, CVRF was paid around $330 per metric ton by American Seafoods for their CDQ pollock. CVRF, in partnership with BBEDC, CBSFA, and YDFDA (for their B season share), pooled their allocations of pollock quota and leased the shares to American Seafoods. By aggregating their shares, they were able to leverage their bargaining position and pool the associated bycatch allowances. In 2009, however, CVRF did not renew their longstanding lease agreement with American Seafoods and instead entered into a lease agreement with the Arctic Storm Management Group. In May 2010, CVRF split ties with American Seafoods. In exchange for the CVRF's ownership share, American Seafoods transferred ownership of the *Northern Hawk* and 1% of the directed pollock allocation along with three cod freezer-longline vessels (*Lilli Ann*, *Deep Pacific*, and *North Cape*) and their catch histories. Full ownership of the *Northern Hawk* permitted CVRF to harvest CDQ pollock and receive full benefits from harvesting

and processing pollock and other species. In 2011, CVRF made another large investment, this time in the inshore sector. In partnership with NSEDC, CVRF purchased Wards Cove's share of Alyeska Seafoods and the catcher vessels that Wards Cove owned that delivered to the Alyeska Seafoods plant in Unalaska. This acquisition included nearly 4% of the directed pollock allocation and seven vessels: *Arctic Rose, Bering Rose, Destination, Great Pacific, Messiah, Ms. Amy,* and *Sea Wolf*. CVRF also owns four crab vessels (*Arctic Sea*, *Bering Sea*, *North Sea*, and *Wassilie B*) and eight small craft, tenders, and transport vessels used to support salmon and halibut fisheries and communities within the coastal villages region.

NSEDC receives 22% of the CDQ allocation, the second largest share among CDQ entities. It also has been very successful, acquiring a 50% ownership stake in the Glacier Fish Company (F/T *Pacific Glacier* and F/T *Northern Glacier*). When Glacier Fish acquired the *Alaska Ocean*, Nippon Suisan gained a 25% ownership stake in the Glacier Fish Company and NSDEC's ownership stake declined to 37.5%, albeit of a now larger company. In addition, with CVRF NSEDC owns a share of Alyeska Seafoods and seven catcher vessels that deliver to it. NSEDC owns two crab vessels (*Pacific Star* and *Aleutian No. 1*) and five vessels that fish, tender, or transport within the Norton Sound region. NSEDC has invested back into the community in a variety of ways, including $1.2 million in energy subsidy for qualified Norton Sound households and $7.9 million in wages to 648 people in 2010 (NSEDC 2011).

BBEDC receives 21% of the pollock CDQ allocation. BBEDC awarded $2.3 million in block grants to the 17 regional communities to help finance economic-growth projects in 2010. BBEDC owns 30% of the *Arctic Fjord* and *Neahkahnie*, which are managed by the Arctic Storm Management Group. BBEDC also has invested in several catcher vessels, including the *Morning Star*, which delivers to Alyeska Seafoods and to the Peter Pan cooperative; 50% of the *Dona Martita* and *Arctic Wind*, which participate in the Westward Fleet Cooperative; and 50% of the *Defender*, which delivers to UniSea. BBEDC leased their pollock CDQ shares to American Seafoods in 2008 (BBEDC 2009; DeMarban 2009). BBEDC owns 50% of five freezer longliners (*Alaskan Leader*, *Aleutian Leader*, *Bering Leader*, *Bristol Leader*, and *Kodiak Leader*) and their management and sales companies. In addition, BBEDC has substantial ownership positions in nine crab vessels: *Alaskan Mariner*, *Aleutian Mariner*, *Arctic Mariner*, *Bristol Mariner*, *Cascade Mariner*, *Nordic Mariner*, *Pacific Mariner*, and *Western Mariner*. BBEDC is also invested in Ocean Beauty Seafoods and Bristol Bay Ice.

APICDA receives 14% of the pollock CDQ allocation. In 2008, APICDA invested $5 million to complete the Bering Pacific Seafoods plant in False Pass. In 2011, APICDA completed an additional shore-based processing facility in St. George and a gear and vessel storage facility in Nelson


**F/V *Golden Dawn*, Unalaska, July 2009. Keith Criddle**

Lagoon (APICDA 2012). These are in addition to the Atka Pride Seafood processing plant, which APICDA built and has owned and operated with the Atka Fishermen's Association since 1994. Among its other activities in 2010, APICDA provided $162,876 in higher education scholarships, $600,000 in block grants to member communities, over $1 million in community infrastructure grants and donations, and $151,000 for schools and outreach programs. APICDA owns 19 seafood harvesting and catcher/processor vessels directly or through joint ventures with other companies, including 20% of the *Starbound* which fished 75% of APICDA's pollock CDQ in 2008. APICDA also has a 50:50 partnership with Trident Seafoods in ownership of the pollock catcher vessel *Golden Dawn*. APICDA has invested in several non-fishing ventures: Kayux Development, for upland development near St. George harbor; Nelson Lagoon Storage Company, a storage facility for vessels and fishing gear; and Ugludax Lodge, a sportfishing and hunting lodge on Umnak Island.

YDFDA receives 14% of the pollock CDQ allocation. Primarily through Kwik'pak Fisheries, a wholly owned seafood processor, YDFDA pumped $5 million into the region and employed over 1200 resident fishermen, processing plant workers, and other staff in 2010. YDFDA has provided financial support to the Alaska Department of Fish and Game for various projects, including the operation of the Pilot Station sonar project that is used as an index of the number of salmon returning to the Yukon River. YDFDA's regional fisheries manager, Eric Olson, chairs

the NPFMC, giving YDFDA and the other CDQ groups an important voice in Council decisions. In 2000, YDFDA bought into the mothership *Golden Alaska*, of which it currently owns 30.3%, and the catcher vessels *American Beauty* and *Ocean Leader*, of which it owns 75%. Both of these catcher vessels deliver to the *Golden Alaska*. In 2008, YDFDA leased its A season CDQ pollock share to the *Golden Alaska*, and its B season CDQ pollock share to American Seafoods. This has varied throughout the 2000s, as YDFDA has typically leased between 70% and 100% of its pollock CDQ to the *Golden Alaska* (YDFDA 2009; DeMarban 2009). YDFDA also has large ownership stakes in three crab/longline vessels: C/P *Baranof*, C/P *Courageous*, and F/V *Kiska Sea*. In addition, YDFDA is sole owner of Kwik'pak Fisheries, a salmon processor; Yukon Marine Manufacturing, a skiff fabricator; and Yukon Towing, a regional transporter.

CBSFA is the smallest CDQ, representing only the community of St. Paul, population 479. CBSFA receives 5% of the pollock CDQ allocation, and spent $442,620 on education and outreach activities in 2010. CBSFA has an ownership stake in American Seafoods of slightly more than 4%, and has partnered 75:25 with UniSea in ownership of the catcher vessels *Starward* and *Starlite*. CBSFA also holds a 30% share of the catcher vessel *Fierce Allegiance*; all three of these vessels deliver pollock to UniSea (American Seafoods Group LLC 2002, 2006). CBSFA also holds crab and halibut quota; it owns 30% of the crab vessel *Early Dawn*, and has 100% ownership of the *St. Paul*, a multipurpose vessel for halibut, cod, and crab.

The many partnerships formed between CDQ groups and pollock fishing companies make sense for several reasons. For CDQ groups, investment in pollock operations was one of the few options available under the initial program constraints. Many of the other local fisheries and associated facilities have lacked the catch share structure of the pollock fishery and have been considerably less profitable. Especially since passage of the AFA, pollock royalties and profits from ownership of AFA-qualified vessels have been strong. Control of CDQ shares provided leverage in negotiations with pollock companies; ownership stakes in those companies have benefited from the security of control of CDQ shares. Another benefit is that members of CDQ communities are typically given hiring preference aboard partner vessels and internships in the companies themselves. For example, current NPFMC chairman Eric Olson was one of the first interns at Arctic Storm Management after the company became involved with the BBEDC CDQ program.

For the pollock operations themselves, partnering with CDQ groups has provided access to financial and political capital. The CDQ entities have typically held large cash positions and must invest 80% into fishery projects; as a result, CDQ entities were willing to pay a premium for ownership in the profitable pollock fishery. When Kjell Røkke needed

to reduce his stake in American Seafoods to comply with AFA requirements, the natural place to turn was to CDQ entities that had leased quota shares to American Seafoods throughout the 1990s. Not only did the CDQs provide financial resources, but there was an expectation that their ownership interest would lead the CDQ entities to provide their partners with priority access to pollock CDQ share leases. Another benefit of ownership is that CDQ partnering provides the pollock fishery with clout when faced with political issues. For instance, when the fishery was under an immense amount of political pressure over salmon bycatch, CVRF brought in large numbers of community members to testify in support of the pollock fleet, under the mantra "Pollock Provides!"

## Viewpoints on the CDQ Program

Western Alaskans and pollock fishing companies have enjoyed many benefits from the CDQ program, but the program also has detractors. Keys (1997) conjectured that the Alaska CDQ program would exacerbate inequality in western Alaska by providing substantial financial resources to a politically connected few. This same theme is echoed in newspaper articles that publicize salaries paid to top CDQ executives (e.g., Jensen 2010.). However, we note that topnotch CEOs and other officers for multimillion dollar companies do not come cheap. Paying for good leadership and business experience reduces the likelihood of poor investment decisions. And perhaps therein lies part of the issue. Is it better to promote entirely regional hires and headquarters, so that wages flow almost entirely to the region, but at the same time risk questionable investments that do little to benefit the community? Or instead, should CDQ groups hire and pay for expertise even if it comes from outside the region and benefit from wiser investments?

Critics have complained that four CDQ entities (CVRF, APICDA, NSEDC, and YDFDA) have their main headquarters outside of their home regions. However, we note that it may make strategic sense for CDQ entities to maintain headquarters or offices in Anchorage, Juneau, and Seattle where they can draw from a larger pool of skilled labor, maintain closer ties to their strategic partners, and have better access to NPFMC members, NMFS and ADFG fisheries managers, and state and federal politicians. On the other hand, BBEDC has been criticized for establishing its headquarters in Dillingham, the regional hub; critics suggest that doing so resulted in lower returns to BBEDC. Such criticisms suffer from two principal flaws. First, underperformance could be the result of poor economic conditions instead of poor financial decisions. Second, the objectives of the CDQ entities are not adequately summarized by growth in revenues, net assets, or returns on investment; there can be a trade-off between simple financial metrics and contributions to regional economic development.

Critics claim that benefits, such as CDQ leases and loans for acquisition of vessels and permits, accrue to CDQ executives, board members, and their confederates. Although board members and executives may have been chosen for their position due to their familiarity with fisheries and success as fishermen, critics perceive conflicts of interest and patterns of cronyism (Jensen 2010). Such charges are easy to assert and difficult to disprove.

Echoing sentiments expressed in opposition to renewal of the CDQ program in Inshore/Offshore II (*Seattle Times* 1996), Alverson et al. (2011) contend that the CDQs are too successful:

> …CDQs were set up as tax-exempt corporations, and the effect of this status was, over time, to allow the CDQs to establish huge financial war chests for expansion of control over vast federal fisheries resources.… CDQs now own and control 40-45% of the pollock factory trawl fleet moored in Seattle, much of the Pacific cod freezer longline fleet, and increasing amounts of Bering Sea crab quotas.… With the advantage of their tax-exempt status, CDQ organizations have become predatory in acquiring fishing opportunities and segments of the industry.… The pattern is clear. The CDQ groups are winning economic benefits that non-Alaskan fishing participants do not enjoy, while at the same time, those groups are spared economic costs imposed on non-Alaskans.

As a remedy, they advocate expanding the NPFMC to include two additional voting members from Washington and another voting member from Oregon. In addition they call for regulatory changes to allow formation of tax-exempt CDQs in Oregon and Washington and the establishment of limits on the length of time that CDQs can operate as tax-exempt entities. Jensen (2011) notes that Alaska's senators have vowed to block any changes to the composition of the NPFMC and regulations governing the operation of CDQs.

CDQ entity involvement with the pollock fishery also has been contentious due to concerns about declining salmon returns to western Alaska rivers and the bycatch of salmon in BSAI pollock fisheries (see Chapter 8). When Chinook salmon bycatch spiked to almost 130,000 fish in 2007, western Alaskans lobbied the NPFMC to impose a hard cap of 30,000 fish. Such a restrictive cap risked shutting the pollock fishery before the entire pollock total allowable catch could be taken. This put CDQ entities in a quandary. They had to decide between supporting populist sentiment for restrictive bycatch caps and ensuring favorable conditions for operation of the pollock fishery and the revenues and employment opportunities it provides. CVRF was roundly criticized

for opposing a restrictive hard cap. Other CDQ entities choose to take a back seat, not wanting to ruffle feathers on either side.

There has been surprisingly little academic attention paid to the CDQ program and its effects on western Alaska. Tryon (1993) provided a brief description of the Alaska pollock CDQ program and speculates that capitalization of the pollock resource will foster economic opportunity for western Alaskans. Ginter (1995) discussed the genesis of the CDQ program and its initial attributes. Criddle and Macinko (2000) described the role that the CDQ program played in shaping the American Fisheries Act of 1998. Townsend (1997), Holland and Ginter (2001), and Criddle (2008) described the Alaska CDQ program as a unique form of catch share based management but did not analyze program outcomes. Wingard (2000) argued that the Alaska CDQ offers the advantages of an individual transferable quota (ITQ) program while minimizing adverse social impacts but did not actually analyze the outcomes of the Alaska CDQ program. Mansfield (2007) focused on the philosophical basis for CDQs as a mechanism for harnessing market power to serve social justice but did not examine the outcomes of the Alaska CDQ program to see if market power is harnessed or social justice served. The National Research Council (1999) examined the empirical performance of the Alaska CDQ program, but did so when the program was in its infancy and operating under tight control of the Alaska Department of Commerce, Community and Economic Development. The program has since expanded and evolved to such an extent that the National Research Council (1999) no longer provides an accurate characterization of the program or its outcomes. Northern Economics Inc. (2001, 2002) undertook the first decennial review of the CDQ program. However, because the program has changed substantially during the past decade and because the mix of royalty and non-royalty revenue has changed markedly and because the net assets available to the CDQ entities have greatly increased, that study is unlikely to provide an accurate characterization of the current status and impacts of the Alaska CDQ program. Moreover that study focused on assessing program performance relative to statutorily stipulated metrics rather than overall economic impacts or the opportunity cost of regulatory constraints. The Blue Ribbon Report (Blue Ribbon Committee on CDQs 2005) examined constraints to the effectiveness of the CDQ program and suggested regulatory changes to relax government oversight, provide longer-term certainty in CDQ allocations, and relax constraints on investment to allow investments in regional enterprises and infrastructure unrelated to fisheries. Those recommendations were reflected in the 2006 reauthorization of the MSFCMA and in the Coast Guard and Maritime Transportation Act of 2006. A second decennial review was completed in 2012.

# Chapter 8. Fisheries Management under the American Fisheries Act

The formation of cooperatives gave members of the pollock fishery an increased sense of ownership not felt under the race-for-fish. In the pre–American Fisheries Act (AFA) fishery, pollock operations supported responsible management, but their attention remained focused on catching as much fish as possible before the total allowable catch for the season was exhausted. They did not know how many fish they were going to catch or how they were to be caught; instead, they knew that if they did not catch them, someone else would. With the AFA, companies received permanent shares of the pollock total allowable catch. This gave them the assurance needed for long-term planning. Companies and their investors could be confident that with proper management, there would be fish to harvest for years to come and that they would have predictable shares of those fish. Companies could confidently enter into long-term contracts with suppliers and customers. They could be more confident of recouping investments in product development and marketing. Companies had a greater vested interest in the health of the pollock resource and the Bering Sea ecosystem that supports it. Changes in the ecosystem affect the pollock fishery directly through changes in the production of pollock and indirectly through changes in predators or co-occurring species. Indirect effects arise from management considerations for these associated species. The pollock fishery is also affected by anticipated and unanticipated changes in input and output prices. Three examples of how the fishery has responded to exogenous stress are discussed in the ensuing sections. Under the AFA, fishing operations have taken a more active role in shaping management responses to exogenous stresses, seeking out areas of concern and actively looking for methods to address them. Pollock fishermen discuss their role as "co-managers of the fishery."

## Steller Sea Lion Closures

One of the first crises for the industry after AFA implementation was occasioned by the need to adapt to fishery management measures mandated under the Steller Sea Lion revised final Reasonable and Prudent Alternatives (NMFS 1999a). Populations of Steller sea lions had been in decline for over 20 years despite numerous actions taken to stem the decline. In 1990, NMFS had published an emergency rule, listing Steller sea lions as a threatened (not endangered) species under provisions of the Endangered Species Act (ESA). This provided greater protection to Steller sea lions and gave them higher priority when determining policies involving their surrounding environment.

Since pollock are a part of the Steller sea lion diet, concern arose that fishing near the sea lion rookeries and haulouts might have contributed to the decline. The 1991 decision to divide the pollock fishery into A and B seasons to spread the harvest out over time was partially motivated by concern for sea lions. The idea was that leaving time between the A and B season, and setting an end date for the B season at 1 November, would prevent compression of pollock fisheries and decrease the chance of localized depletion of prey for Steller sea lions. Another measure, the ban on roe stripping, was passed, in part due to concerns that the discarded carcasses attracted sea lions to the fishing grounds where they were vulnerable to entanglement in fishing gear or to being shot by fishermen. Trawl closures were also implemented in 1991 to reduce fishing and habitat disturbance within 10 nm of 27 rookeries, with some of the trawl closures extended to 20 nm during the pollock A season. In addition, the domestic Bogoslof Island pollock fishery was closed due to resource conservation concerns, although they were again not solely related to sea lions (National Research Council 2003).

It is unclear whether these management actions have had any impact on the trajectory of the Steller sea lion population. By 1996, the sea lion population had declined to 20% of their levels in the 1970s. The National Research Council (2003) report recommended that to reverse declines, fishing effort should be more evenly distributed in time and place. The continued decline also led to the Steller sea lion populations west of 144W being listed as endangered in 1997. By moving the status from threatened to endangered, the priority given to these populations was increased substantially and further action to protect them was required (National Research Council 2003).

In April 1998, Greenpeace filed a complaint in U.S. District Court that NMFS had failed to revise the Environmental Impact Statement (EIS) relating to federal groundfish fisheries in Alaska and had violated the Endangered Species Act because the biological opinion regarding the impact of these fisheries on sea lions was inadequate. NMFS released a new biological opinion in December 1998 (known as BiOp I), which

concluded that the groundfish fisheries, except pollock, were unlikely to cause harm to listed species. For the pollock fishery, there was concern based on possible competition between the fishery and sea lions for pollock (NMFS 1998). In response to this finding, a set of Reasonable and Prudent Alternatives (RPAs) was developed in consultation with the NPFMC that spread fishing effort out (NMFS 1999a). Several restrictions were implemented that affected the pollock fishery. In 1999, trip limits were imposed for the pollock fishery in the Gulf of Alaska. In addition, pollock fishing in the Aleutian Islands was prohibited, and pollock catches in other critical areas were further restricted. Four fishing seasons were created for pollock to further spread out the harvest over time (National Research Council 2003).

These restrictions were implemented in the 1999-2000 fishery management plans. After the RPAs went into effect in January 1999, NMFS issued another biological opinion (BiOp II), which examined the effects of the entire groundfish fishery management plan on sea lions and found no danger from the pollock fishery based on a review of the total allowable catch levels proposed for the Gulf of Alaska and Bering Sea and Aleutian Islands (BSAI) management areas (NMFS 1999b). In response, Greenpeace filed suit and on 9 July 1999, U.S. District Court Judge Thomas Zilly found the RPAs to be arbitrary and capricious because there was no explanation of how the proposed restrictions mitigated jeopardy for the Steller sea lion. He also felt that the Environmental Impact Statements were insufficient and directed NMFS to prepare a more comprehensive analysis of the BSAI and Gulf of Alaska groundfish fisheries (National Research Council 2003).

In addition, in January 2000, Judge Zilly ruled that the "no jeopardy" finding in BiOp II was inadequate under ESA because it only considered the total allowable catch levels for individual groundfish fisheries and failed to consider the cumulative impacts of all groundfish fisheries on sea lion populations. Based on that January ruling, Greenpeace filed for an injunction to prohibit groundfish trawling in Steller sea lion critical habitat until a new comprehensive biological opinion was prepared by NMFS. The injunction was granted in July and implemented in August 2000 (National Research Council 2003).

The growing number of Steller sea lion measures impacted when, where, and how the pollock fishery could occur. Many of the areas that were closed to trawling had been prime fishing grounds for the catcher vessels fishing out of Unalaska and Akutan. That left two options: going farther out for fish or increasing effort on areas close to town that were still open. With a lack of hard science either proving or disproving the link between pollock fishing and the decline of the Steller sea lion populations, industry members were concerned that continued pressure from environmental groups would further threaten operations if issues were not scientifically addressed. To address these and other environ-

mental concerns through scientific research, the Pollock Conservation Cooperative formed the Pollock Conservation Cooperative Research Center (PCCRC).

As the pollock industry became more involved in the science of the interactions between fishing activities and sea lion populations, a new biological opinion (BiOp III) was released (NMFS 2000). It concluded that Steller sea lion populations were jeopardized by the Alaska groundfish fisheries, including fishing for Atka mackerel (*Pleurogrammus monopterygius*), Pacific cod, and pollock, due to competition for prey and modification of prey distribution in critical habitat. This revised biological opinion found jeopardy with regard to pollock even under the restrictions imposed by the 1999 RPAs. The opinion included a comprehensive set of new RPAs that incorporated adaptive management to assess the efficacy of the groundfish restrictions. The western population of Steller sea lions was divided into 13 management areas designated as either open—with fishing allowed under the 1999 restrictions, or closed—with no fishing allowed in critical habitat (National Research Council 2003).

The effects of the proposed regulations would have been substantial. A simulation posted in the Federal Register estimated that the impact of implementing the measures would have cost the industry between $225 and $401 million annually, which is an estimated 40% of the annual value of the fishery (NMFS 2001a). With the measures seeming neither reasonable nor prudent, the pollock industry once again turned to their ally, Senator Stevens. His response was swift and effective. He attached an amendment to the December 2000 omnibus appropriations bill that delayed full implementation of the RPAs, and provided the NPFMC with an opportunity to develop an alternative set of RPAs. In addition, the amendment provided $30 million for economic relief to offset losses incurred as a consequence of sea lion protection measures, $28 million for research on the causes of the decline of sea lions, and $2 million for scientific review of BiOp III, including a review by the National Academy of Sciences (National Research Council 2003).

As a result of these actions, in February 2001 the NPFMC appointed an RPA committee to develop alternatives to the RPAs in BiOp III that addressed potential issues of the pollock, Atka mackerel, and Pacific cod fisheries but in a manner that could result in a less severe impact on the fishing industry and fishery-dependent communities. In June, the RPA committee proposed an alternative set of measures that discarded the earlier adaptive management approach and used new telemetry data to justify restricting fishing primarily in the first 10 nm of the 20 nm radius, thereby delineating the highly restrictive critical habitat areas. This decision was based on telemetry data suggesting that sea lions spend most of their time at sea within 10 nm of the rookeries. The revised RPAs assumed that the telemetry data reflected the foraging behavior of sea lions, and therefore a 10 nm zone would create

the desired effect while allowing the fisheries to continue to operate. By moving most fishing activities beyond 10 nm, with some further restrictions between 10 and 20 nm, the RPA committee was able to reach the same theoretical reduction of jeopardy as offered by measures recommended in BiOp III. In August 2001, NMFS released BiOp IV, which evaluated the new RPAs and included a supplemental Environmental Impact Statement that compared the various RPAs. NMFS concluded in BiOp IV that the June 2001 RPAs provide adequate protection for Steller sea lions with regard to the groundfish fisheries (NMFS 2001a; National Research Council 2003).

Although a near disaster for the pollock fleet was averted, the cause of the decline of the western stock of Steller sea lions has continued to be the subject of much speculation and debate despite numerous analyses and many detailed reports. The $30 million spent through Senator Steven's earmark and countless other studies sponsored by the PCCRC and other agencies have left scientists with more questions than answers. The story of Steller sea lion decline, which might otherwise have remained an obscure biological mystery, became an issue of national interest because of the regulatory implications for management of the commercial fisheries in the North Pacific.

## Salmon Bycatch

Managing salmon bycatch in the BSAI pollock fishery has been a perennial challenge. Concern about surreptitious targeting of salmon was, in part, behind the requirement for onboard federal fisheries observers in the foreign and joint venture fisheries. An overall bycatch cap of 55,250 Chinook salmon (*Oncorhynchus tshawytscha*) was set for BSAI area foreign trawl fisheries in 1982 (NPFMC 1982b). Salmon bycatch and concern about salmon bycatch continued during the "Americanization" era, throughout the inshore/offshore debates, and continues in the post-AFA epoch (Witherell et al. 2002).

The trouble with Chinook salmon and chum salmon (*O. keta*) bycatch is that it has varied substantially from very low numbers in some years to very high numbers in other years (Figures 8.1, 8.2) and has even varied substantially from month to month in the same year. In addition, bycatch has varied substantially and unpredictably from one region to the next within and between years. Consequently it has been difficult to predict how much bycatch will occur, or when and where it will occur, let alone design management measures that are likely to be successful without requiring draconian changes in the organization of the pollock fishery.

During the 1980s, the annual overall Chinook salmon bycatch cap was apportioned to foreign nations engaged in the Total Allowable Level of Foreign Fishing (TALFF) and joint venture fisheries; nations

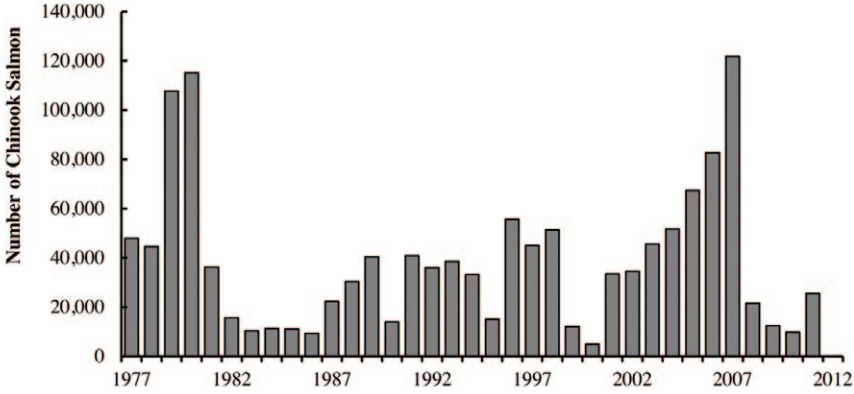


**Figure 8.1. Chinook salmon bycatch by pollock vessels in the Bering Sea and Aleutian Islands. Source: Data for 1977-1990 from Queirolo et al. 1995; data for 1991-2011 from NMFS 2011a.**

that exceeded their cap were prohibited from fishing in large sections of the Bering Sea during the remainder of the year (NPFMC 1983b, 1984; Witherell and Pautzke 1997). As early as the January 1989 NPFMC meeting, Henry Mitchell proposed setting a schedule of ever more restrictive prohibited species bycatch limits on incidental catches of salmon by domestic catcher boats engaged in the fall Shelikof Strait pollock fishery. Beginning in 1992, the Council experimented with an individual vessel incentive program to reduce prohibited species bycatch (NMFS 1993). However, concerns about due process and the accuracy of bycatch estimates left the vessel incentive program so inefficacious that is was rescinded in 2008 (NMFS 2008).

The Council switched to a spatial management approach in 1995 and established the Chinook Salmon Savings Areas (NPFMC 1995b) and the Chum Salmon Savings Area (NPFMC 1995c). These seasonal closure areas encompassed fishing grounds that had a history of consistently high Chinook salmon and non-Chinook salmon bycatch rates. Additional management measures modified the closure areas to depend on total bycatch and bycatch rates (NMFS 1999c).

In 2001, the Pollock Conservation Cooperative and the catcher vessel cooperatives formed an inter-cooperative group to devise a voluntary strategy to reduce bycatch of non-Chinook salmon. The plan excluded vessels with high bycatch rates from fishing for pollock in areas that reported elevated chum salmon bycatch. This program exemplifies the type of voluntary coordination that can occur among the AFA cooperatives and could not have occurred in the pre-AFA fishery

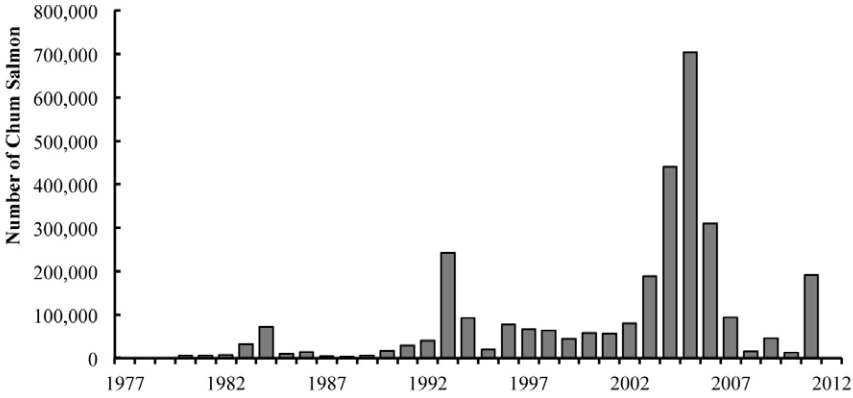


**Figure 8.2. Chum salmon bycatch by pollock vessels in the Bering Sea and Aleutian Islands. Source: Data for 1977-1990 from Queirolo et al. 1995; data for 1991-2011 from NMFS 2011b.**

(NMFS 2002). With this example in mind, and with the observation that bycatch rates outside the salmon savings areas often exceeded bycatch rates inside the salmon savings areas, NPFMC approved a system of dynamic spatial closures that would allow managers to shut off high-bycatch areas in near real time (NPFMC 2005, 2007). An exemption to area closures for vessels participating in the voluntary rolling hotspot system was implemented in 2006 and 2007 through an exempted fishing permit and, beginning in 2008, through Amendment 84 to the BSAI Fishery Management Plan (NPFMC 2008). Nevertheless, despite all of these measures, the bycatch of non-Chinook salmon exceeded 704,000 in 2005 (Figure 8.2) and the bycatch of Chinook exceeded 121,000 in 2007 (Figure 8.1).

The record bycatches of non-Chinook salmon in 2005 and of Chinook salmon in 2007 raised concerns in western Alaska where Chinook salmon runs have declined since 1996. To address these concerns, in 2008 the NPFMC initiated review of an amendment to the BSAI groundfish Fisheries Management Plan to reintroduce binding annual caps on Chinook salmon bycatch and to create an incentive to minimize Chinook salmon bycatch at levels below the bycatch cap (NPFMC 2008). Under the Council's preferred alternative, beginning in 2011 the AFA cooperatives can choose to operate subject to proportionate shares of a simple bycatch cap of 47,591 Chinook salmon, or proportionate shares of a less restrictive bycatch cap of 60,000 Chinook salmon, if they adopt an incentive plan agreement (IPA) structured to create vessel-level incentives to avoid bycatch even when the cap is nonbinding and as long as

actual bycatch is below 47,591 in at least four out of seven years. The bycatch caps are apportioned to the AFA cooperatives or sectors based on a formula that weights past catches of pollock and past bycatches of Chinook salmon, and apportioned 70:30 between the A and B seasons for pollock (NPFMC 2008). The AFA cooperatives have explored several options for structuring one or more IPAs but have not yet established an IPA for salmon bycatch avoidance.

United Catcher Boats and the Pollock Conservation Cooperative have also experimented with technical methods for reducing salmon bycatch. For example, the Pollock Conservation Cooperative has helped support field trials of second-generation flapper-panels. These were tested in the 2008 B season aboard the *Northern Jaeger* and the *Arctic Fjord*. The initial results indicate that there has been an improvement on Chinook bycatch in relation to fishing performance of the nets, though more testing was needed (Pollock Conservation Cooperative 2008). Nevertheless, John Dooley, who has fished BSAI pollock for over 25 years, claims there "are lightning strikes," or times of high abundance. He recalls tows of 1000 salmon, which cannot be avoided if your vessel is the first one on the fishing grounds (J. Dooley, personal communication).

Although bycatch can be thought of as a biological or technological issue, it has important social and economic ramifications. Setting a bycatch cap for salmon involves implicit and uncertain trade-offs between fisheries for salmon and fisheries for pollock. Liberal bycatch allowances increase the magnitude of likely losses to the directed salmon fishery, and small bycatch allowances may prevent full exploitation of the pollock fishery. In addition, bycatch caps can have different impacts on different segments of a fishery. For example, to the extent that bycatch rates are inversely related to distance from Unalaska and Akutan, they have a larger impact on the inshore fleet than they do on the offshore fleet. Similarly, within the inshore fleet, salmon bycatch caps can have a larger effect on smaller vessels with limited operating ranges or on vessels that focus on harvests of large pollock for fillet production.

## Changes in Russian Stocks

While AFA cooperatives have had an important impact on the fishery, their success was aided in part by a sharp reduction in pollock biomass in Russian waters. The Russian fleets had depleted the resources off their coast through overfishing, much of it unreported. As a result, the reported harvests of pollock in Russia had been decreasing steadily since 1988, when catches were over 3.3 million metric tons. By 2002, Russian catches had dropped to less than 25% of their 1989 level, with reported catches of less than 0.85 million metric tons (Figure 8.3). Russia had historically produced a majority of the global supply of pol-

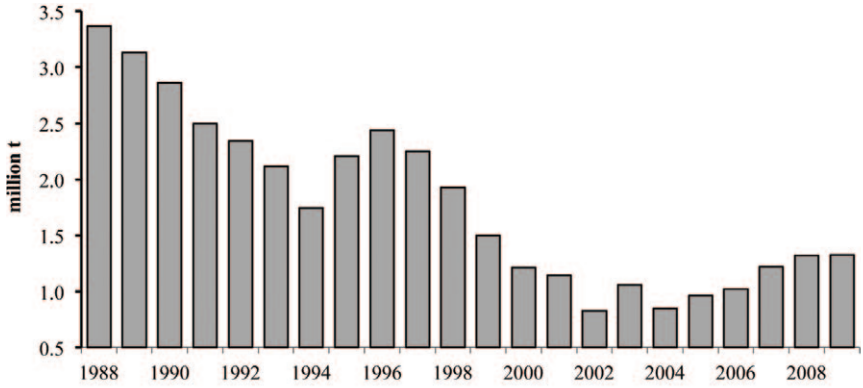


**Figure 8.3. Annual Russian catches of pollock (million metric tons), 1988-2009. Source: UN FAO 2009.**

lock fillets, but the drop in catch combined with declining cod catches created a shortage that drove prices up. Between 1998 and 1999, the first year of the AFA, average pollock fillet prices increased by 41% to 74%, depending on the type of fillet (GAO 1999). The increase in prices corresponded nicely with the passage of the AFA, which further increased the value of the pollock fishery to its participants.

# Chapter 9. The Future of the Pollock Fishery

The passage of the American Fisheries Act (AFA) has proven to be a boon for the U.S. pollock industry, providing both improved management stability and increased economic benefits for fishery stakeholders. Pollock companies, once engaged in a Hobbesian struggle for catches, are now able to focus on harvesting and processing. Pollock operations have been able to maximize their revenues by focusing on the most profitable product forms demanded at the time. Global markets have expanded, allowing firms to look beyond Japan for roe and surimi sales, and the United States for fillet sales. Increased demand from Europe and other markets has allowed pollock processors to maintain a diversified portfolio of buyers, allowing operations to maintain profitably when prices remain low for one product or in one region. Additionally, pollock operations have been able to afford much needed capital investments, and when necessary they have been able to turn to capital markets to provide needed financing.

The U.S. pollock fishery also has been able to respond to environmental and management concerns related to their fishery since the AFA was passed. From issues that include Steller sea lion population declines and salmon bycatch, the pollock industry has responded to concerns from affected parties. The increased profitability within the pollock industry has allowed members to sponsor studies from impartial third parties that provide scientific answers to issues facing the eastern Bering Sea. Furthermore, the industry has been able to comply with management actions that resulted in increased expenses.

The future of the pollock fishery, however, holds many questions. Although the fishery is in an unparalleled period of stability, where fishing operations have been given increased flexibility and have responded with increased responsibility, the future under the AFA as it is currently structured is less clear. One of those looming issues may be the geographic distribution of the Alaska pollock biomass. Pollock populations appear to have shifted farther north toward Russian waters, enough so that Andrei Kraini, the chief of the Federal Agency for Fishery in Russia has declared that:

> The warming of the climate will be to our advantage.... Because of this, 35 percent of Alaska pollock will migrate from the U.S. part of the Bering Sea to colder waters, towards our coasts. So the U.S. plans to lower the catches, while we have sizably increased the fishing quota. (Sackton 2009)

The spatial shifts in pollock biomass may have contributed to stock assessment findings that led to the historically low total allowable catch of 0.815 million metric tons in 2009.

The principal effects of shifts in pollock biomass are changes in the distance U.S. pollock vessels must travel to catch fish. The farther the center of biomass shifts toward the boundary between U.S. and Russian EEZs, the farther pollock fishermen have to journey to catch their fish, thereby increasing the costs associated with harvesting the fish. Furthermore, these travel distances can also be increased by management actions, and with recent and future fishery management actions related to salmon bycatch and Steller sea lions, there is little hope that fishing vessels will be spending more time fishing near shore.

These current and future management actions may go beyond just increased travel distances. It remains to be seen how the Chinook salmon bycatch incentive plan (implemented in 2011) will affect the fishery, with future management actions aimed at reducing chum salmon bycatch also in development. The debate continues on how pollock affect Steller sea lion populations, since the sea lions have failed to rebound as biologist had hoped. With increased public debate on both topics, the pollock fishery continues to provide a popular scapegoat for concerned parties. It remains to be seen how the pollock fishery will be affected by potential management actions going forward.

These issues, combined with rising fuel costs, will continue to pressure the pollock fishery. The average real (2009 dollars) price of #2 marine diesel in Dutch Harbor has increased by an average of $0.19 per year, from $1.28 in 1999 to $3.53 in 2011 (Figure 9.1). This negatively affects all three sectors through increased operation costs, but disproportionately affects inshore catcher vessels because of their limited hold capacity and need to deliver their catch to a processor within 24 hours. As they steer clear of Steller sea lion closure areas, attempt to avoid salmon bycatch, and seek areas of high pollock catch per unit effort, inshore catcher vessels are traveling farther and farther from the shore to the fishing grounds during the B season. The average distance to the fishing grounds for an inshore vessel was 70 nm in 2003. That distance had increased to 196 nm in 2008 (Figure 9.2).

In response to high fuel costs, low catch per unit effort, and no offsetting increase in the price of pollock products, the inshore sector left 10% (37,991 metric tons) of their 2007 B season quota in the ocean, even as the at-sea sector continued to pay over $300 per t to harvest

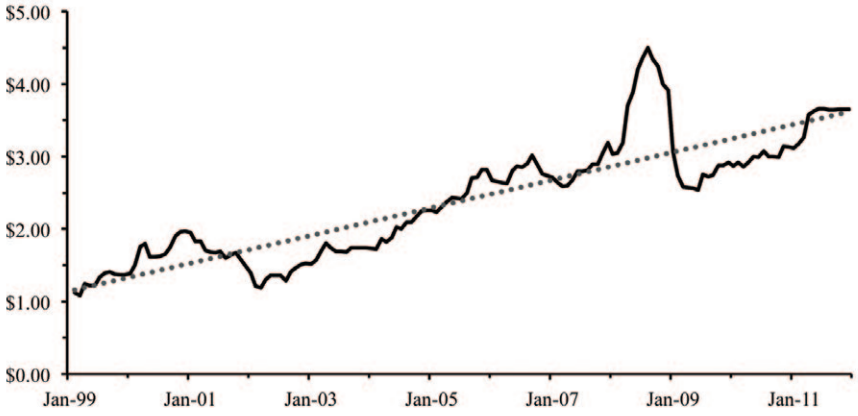


**Figure 9.1. Monthly average price ($ per gal) of #2 marine diesel in Unalaska and Akutan, February 1999–December 2011 (2009 dollars). Source: Fisheries Economics Data Program 2011.**

community development quota (CDQ) fish. Despite particularly high fuel costs in 2008, all three sectors harvested their share of the substantially smaller pollock total allowable catch (TAC) (Figure 5.1). The pollock TAC was also low in 2009 and 2010, and was fully harvested (Figure 5.1). However, in 2011, the pollock TAC was increased from a little over 0.8 million t to just less than 1.3 million t and 62,980 t was left unharvested. In 2011, all three sectors left portions of their share of the TAC in the water. The inshore sector left 33,655 t (6.1%), the catcher/processor sector left 18,518 t (4.2%), and the mothership sector left 694 t (0.6%). The biggest losers in 2011 were the CDQ entities. Their partners left 10,113 t, 8% of the CDQ pollock allocation, unharvested. This represents a loss of about $3 million in royalties.

Differences in profitability across sectors expose shortcomings of the AFA and lead to conflict with MSFCMA National Standard 1 and National Standard 5. The AFA has provided an immense amount of flexibility within sectors but no flexibility between sectors. While the National Standards do not mandate maximization of net economic revenues to participants in the fishery, rules that prevent willing participants from harvesting portions of the TAC that others are unwilling to harvest are inherently contrary to the MSFCMA. While it may be mutually advantageous for pollock operations to transfer or lease fish between sectors, rather than leaving it in the water, such a change to the AFA is outside the authority of the NPFMC and would instead require congressional action. And although large amounts of fish have

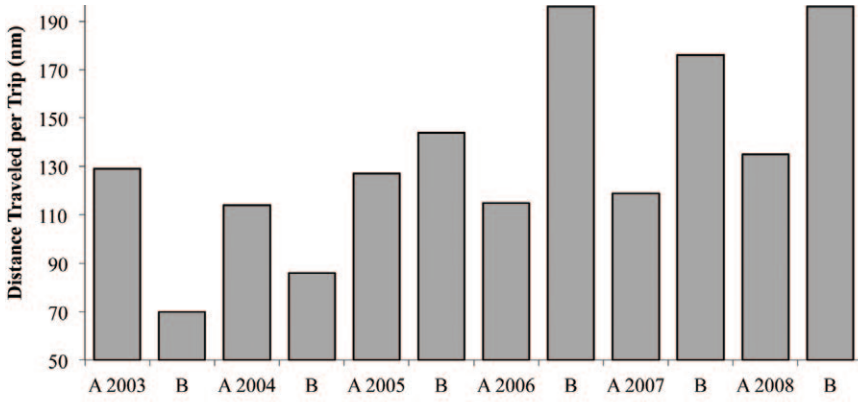


**Figure 9.2. Average distance traveled per inshore catcher vessel trip, 2003-2008. Source: S. Lewis, NOAA, personal communication.**

not been left in the water since 2007, increasing Russian catches, rising fuel prices, and management actions intended to facilitate Steller sea lion recovery or reduce salmon bycatch increase the likelihood that portions of the B season inshore sector allocation may be left unharvested. Salmon bycatch measures combined with anticipated increases in fuel costs will continue to squeeze the profitability of pollock fishing, especially in the inshore sector during the B season, potentially forcing the sector to leave fish in the water in future seasons. (The A season is at much less risk due to roe production.)

If history is a guide, one might assume that if the inshore and at-sea sectors desired to add flexibility to the AFA, they could importune Congress. But the titans who crafted the AFA are no longer around and none have risen to fill the resulting void. Moreover, the sectors have become comfortable with the predictability and profitability of the status quo and are reluctant to risk reopening old wars. For example, John Dooley notes that there are several components of the AFA that he would change, but he adamantly opposes opening the door for any changes to the current legislation (J. Dooley, personal communication). It seems that even after more than a decade, the battle that preceded the passage of the AFA remains fresh. The at-sea sector would be expected to oppose changes to the AFA, unless the changes allowed for an increased share of the TAC or the at-sea sector felt it more beneficial to lease quota from the inshore sector than to leave portions of the inshore quota unfished. That is, the at-sea sector might benefit more from increased product value and larger market share if a portion of the

inshore sector's B season quota were left unfished than it would gain from leasing the unfished quota shares. But to intentionally foster that type of price effect would risk violating the limited exemption that the AFA affords to antitrust laws. Moreover, the inshore sector would likely strongly oppose any changes that didn't protect their current allocation of fish, making any industry-sponsored changes unlikely.

There are also numerous other factors outside the control of the AFA fisheries that could play into any possible AFA changes. For instance, although one sector may not care if some fish from another sector are left in the water, it could be expected that if pollock allocation were consistently left unfished and no changes were implemented, it would be a violation of the MSFCMA standard that requires fisheries be managed in a manner "which will provide the greatest overall benefit to the nation with particular reference to food production." Another issue that would have to be considered is the impact of any action on other fisheries, since a shift in the overall profitability of the inshore sector would affect more than just the pollock operations. Economies of scale and prosperity founded on the pollock fishery have allowed shore-based processors to continue processing other species that often barely cover their costs, and are sometimes even subsidized by pollock profits (L. Cotter, personal communication). This is especially true for some of Alaska's salmon fisheries, such as Trident's salmon operations (D. Abbasian, personal communication).

With the NPFMC and pollock operations lacking both the motivation and legal authority to institute changes to the AFA, the pollock fishery may see change instigated from a new source. In the same way that the FCMA paved the way for "Americanization" of the BSAI groundfish fisheries, creation of the CDQ program has paved the way for "Alaskanization" of these fisheries. The Inshore/Offshore amendments were proxy battles between Seattle-based Japanese and Norwegian interests; the inshore sector won the battles and the at-sea sector won the peace. The AFA armistice secured the inshore sector's gains but gave both sectors opportunity to thrive. In contrast to the AFA, the CDQ program was designed to transfer benefits to actual Alaskans. In the early 1990s, Alaska ownership in the BSAI pollock fishery was negligible; owners were either foreign, with a majority from Japan, Norway, and Korea, or residents of the contiguous United States, especially Washington, Oregon, and California (NPFMC 2002; Hornnes 2006; J. Dooley, personal communication). Both inshore and offshore sectors hired their fishing and processing crews from the Pacific Northwest or from outside the United States. Most companies in both sectors purchased supplies in the Pacific Northwest and shipped them to storage facilities in Unalaska and other ports near the fishing grounds. Nearly all revenues generated in the fisheries flowed out of the state (Miller et al. 1992; NPFMC 1992; Herrick et al. 1994).

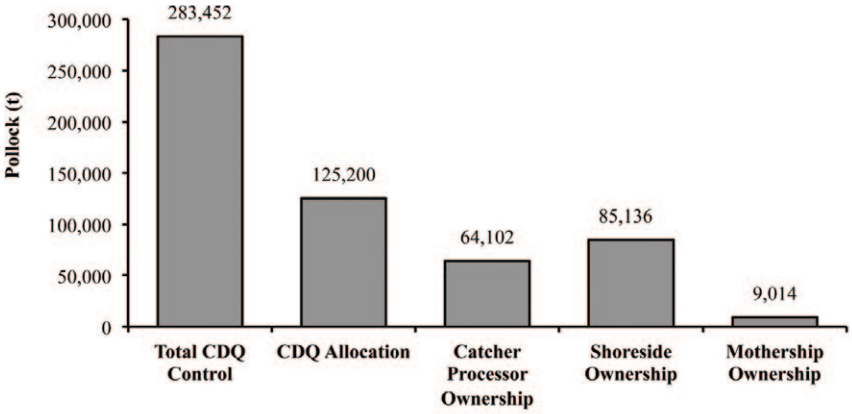


**Figure 9.3. CDQ ownership in the pollock fishery in 2011 (t). Source: APICDA 2011; BBEDC 2011; CBSFA 2011; CVRF 2011; NSEDC 2011; YDFDA 2011.**

With their steadily increasing ownership positions, CDQ groups may have the incentives and clout to advocate for changes to the AFA. CDQ entities, through their 2011 CDQ allocation and their ownership stakes in AFA-qualified factory trawlers, motherships, and catcher vessels, controlled around 0.292 million metric tons—over 23%—of the 1.252 million metric tons pollock TAC in 2011 (Figure 9.3). CDQ ownership shares represent 16% of the catcher/processor DPA, 9% of the mothership DPA, and 17% of the inshore DPA (Figure 9.4). If CDQ pollock harvested by the catcher/processor sector is included for 2011, the percentage of CDQ control in the sector increases to 32%, giving CDQ entities control of almost a third of the catcher/processor sector pollock harvested. The royalties and profits earned by CDQ entities flow back into western Alaska, benefitting the communities closest to the fishing grounds.

CDQ entities have a longer history of establishing equity positions in the at-sea sectors than in the inshore sector. They hold major equity shares in every Pollock Conservation Cooperative company except Trident and they have a similarly large equity position in one of the three mothership fleets. Until their investment in Alyeska Seafoods in 2011, CDQ stakes in the inshore sector had been limited to ownership of a few catcher vessels; shore-based pollock processors have not solicited investment from the CDQ entities and there has been little opportunity for the CDQ entities to aggressively pursue unsolicited ownership positions. Moreover, because the inshore sector has been unable to match the high prices that the at-sea sector has offered for CDQ pollock

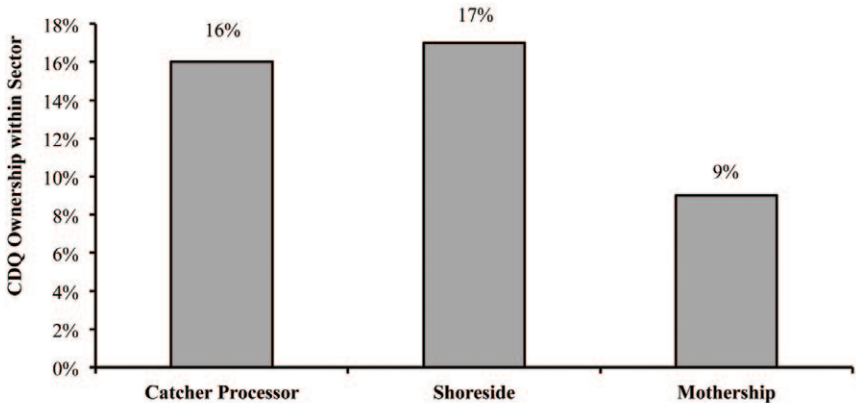


**Figure 9.4. Percentage of harvest owned by CDQ groups, 2011. Source: APICDA 2011; BBEDC 2011; CBSFA 2011; CVRF 2011; NSEDC 2011; YDFDA 2011.**

leases, the CDQ groups have had little incentive to offer their pollock CDQ as assets to be tied to an ownership stake with the companies in the inshore sector. However, the inshore sector represents important market opportunities for fisheries based on non-pollock CDQ, which is becoming an increasingly important source of royalties, revenues, and employment for western Alaskans.

As CDQ groups continue to look for new investments, the opportunities available within the fishery sector continue to shrink. With few opportunities in the inshore sector, it may be advantageous for the CDQ groups to push for the expansion of offshore allocation, thereby opening access to a larger portion of the TAC. This would not only benefit their operations from increased royalties and investment returns in the at-sea sector, but it may increase investment opportunities in both sectors. In turn, it would likely continue to increase the Alaskanization of the pollock fishery through increased ownership and employment opportunities, and expanded revenues. The NPFMC remains dominated by an Alaska majority, which means potential decisions affecting the fishery are likely to swing in favor of a CDQ-owned at-sea sector that was disadvantaged during the inshore/offshore wars. The largest difficulty CDQ groups would face is changing the AFA, which has to come from an act of Congress. Although Congress has often acted favorably on issues pertaining to Alaska Natives, CDQ groups lost their number one ally in Senator Stevens. It will be interesting to see what, if any, actions take place regarding this issue in the future.


***Gun-Mar* offloading at UniSea, Unalaska, September 2009. Keith Criddle**

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# Acronyms and Abbreviations

| | |
|---|---|
| ABC | Allowable Biological Catch |
| AFA | American Fisheries Act |
| AFTA | Alaska Factory Trawler Association (currently American Factory Trawler Association) |
| AP | Advisory Panel (North Pacific Fishery Management Council) |
| APICDA | Aleutian Pribilof Island Community Development Association |
| BBEDC | Bristol Bay Economic Development Corporation |
| BSAI | Bering Sea and Aleutian Islands |
| CBSFA | Central Bering Sea Fishermen's Association |
| CDQ | Community Development Quota (Western Alaska CDQ Program) |
| C/P | Catcher Processor |
| CPC | Comprehensive Planning Committee (North Pacific Fishery Management Council) |
| CRP | Comprehensive Rationalization Plan |
| C/V | Catcher Vessel |
| CVOA | Catcher Vessel Operational Area |
| CVRF | Coastal Villages Region Fund |
| DAP | Domestic Annual Processing |
| DPA | Directed Pollock Allocation |
| EEZ | Exclusive Economic Zone |
| EIS | Environmental Impact Statement |
| FCMA | Fishery Conservation and Management Act |
| FMP | Fishery Management Plan |
| F/T | Factory Trawler |
| GOA | Gulf of Alaska |
| HSCC | High Seas Catchers' Cooperative |
| ICA | Individual Catch Allowance |
| IFQ | Individual Fishing Quota |
| IPQ | Individual Processor Quota |
| JVP | Joint Venture Processing |

| | |
|---|---|
| MFC | Mothership Fleet Cooperative |
| MFCMA | Magnuson Fishery Conservation and Management Act (also Magnuson Act) |
| MSFCMA | Magnuson-Stevens Fishery Conservation and Management Act |
| MS | Mothership |
| nm | nautical mile |
| NMFS | National Marine Fisheries Service |
| NOAA | National Oceanic and Atmospheric Administration |
| NPFMC | North Pacific Fishery Management Council (also Council) |
| NSEDC | Norton Sound Economic Development Corporation |
| PCC | Pollock Conservation Cooperative |
| PCCRC | Pollock Conservation Cooperative Research Center |
| PMP | Preliminary Fishery Management Plan |
| SS | Inshore ("shoreside") |
| SSC | Science and Statistical Committee (North Pacific Fishery Management Council) |
| t | metric tons |
| TAC | Total Allowable Catch |
| TALFF | Total Allowance Level of Foreign Fishing |
| USCG | United States Coast Guard |
| YDFDA | Yukon Delta Fisheries Development Association |

# Interviews and Correspondence

**Dave Abbasian** is the plant manager of the Akutan processing plant for Trident Seafoods. He has worked his way up the company ladder and has been employed with Trident for over 25 years. Mr. Abbasian provided a tour of the Akutan processing plant, interviews, and email and phone correspondence.

**Dave Boisseau** was the plant manager for Westward Seafoods in Unalaska. He provided an interview in Unalaska in August 2009.

**Alec Brindle** is the former owner of Wards Cove, a major seafood processing company that operated in Alaska for 75 years. Wards Cove partnered with two Japanese companies to form Alyeska Seafoods Corporation, a large pollock processing plant, and has maintained ownership in several vessels that delivered to it. He was involved in the Council process and testified for the inshore sector on numerous occasions. Mr. Brindle was interviewed at a United Catcher Boat luncheon in Seattle.

**John Bundy**, a Seattle attorney, has been involved with Glacier Seafoods since its inception in 1982. He originally represented the company as an attorney during the construction of the *Northern Glacier*, joined full time in 1993, and continued as president. He worked to establish the Pacific Whiting Conservation Cooperative in 1997 and the Pollock Conservation Cooperative in 1998, and was a voting member of the NPFMC from 1999 to 2008. Mr. Bundy provided an interview in March 2009.

**Doug Christensen** is president of Arctic Storm Management Group. He started with Arctic Storm, Inc. at its inception in 1986, became president in 1995, and remained president when the company became Arctic Storm Management Group after the passage of the American Fisheries Act. He has been the president of the U.S. Surimi Commission since 1995. Mr. Christensen provided a personal interview in March 2009 and responded to numerous emails.

**Larry Cotter** is the chief executive officer for the CDQ group Aleutian Pribilof Island Community Development Association. He served on the Advisory Panel to the NPFMC for six years during the transition from foreign fishing. After that, he served as a voting member of the Council for an additional six years in the 1990s during the inshore/offshore debates. During that time he was chair of several committees including the Bycatch Committee and Crab Management Committee. Mr. Cotter provided an interview and a review of an early draft of the manuscript.

**John Dooley** is an owner and captain of two pollock catcher vessels, the *Pacific Prince* and the *Caitlin Ann*. He was involved in the original joint venture operations with the Russians off the coast of Oregon, before moving to the pollock fishery where he has fished since the early 1980s. Mr. Dooley invited James Strong to ride along on a pollock fishing trip in summer 2009 and provided numerous interviews throughout that trip.

**John Gruver** is the inter-coop manager for United Catcher Boats. He fished for pollock in joint ventures in the 1980s, and was a part owner of the CV *Sea Wolf*, which he captained from 1986 through 1999. After 25 years of fishing, he took a position as manager of American Fisheries Act catcher vessel cooperatives. His duties include oversight of fleet compliance to pollock and sideboard limits, and development of bycatch reduction solutions that involve both contractual agreements and fishing gear modification. Mr. Gruver was interviewed at a United Catcher Boat luncheon in Seattle.

**Jan Jacobs** is director of government affairs for American Seafoods Company. He has been working in the fishing industry since 1984, has been a member of the NPFMC Advisory Panel since 2004, is president of the Pacific Whiting Conservation Cooperative, and is a board member and officer for a variety of different industry associations. Mr. Jacobs provided two interviews for this project, numerous correspondences through email, and a detailed review of an early draft of this manuscript.

**Frank Kelty** has been involved in Unalaska-based fisheries since 1971. He has served five terms as mayor of Unalaska during the 1990s and since 2000, and was the natural resource analyst for the City of Unalaska. He provided an interview in Unalaska in August 2009.

**Bob King** is a staff member for U.S. Senator Mark Begich, whom he advises on fishery issues. Mr. King spent 20 years as news director in Dillingham, and then moved to Juneau where he was press secretary for Governor Tony Knowles. He wrote a history of Alaska's fisheries for the Alaska Department of Fish and Game for the state's 50th anniversary (King 2009). Mr. King provided a peer review of a complete draft of this manuscript.

**Stephanie Madsen** is executive director of the At-sea Processors Association, where she tracks fisheries management and policy issues statewide, regionally, and nationally. Ms. Madsen has been involved in fisheries off the coast of Alaska for over 20 years. She served with the NPFMC in a variety of roles: on the Advisory Panel from 1993 to 2001; as a voting member of the NPFMC from 2001 to 2007; and NPFMC chair from 2003 to 2007. Ms. Madsen provided an interview and email correspondence for this project.

**Paul MacGregor** is a partner in the Seattle law firm of Mundt MacGregor. He has represented a number of pollock catcher/processor companies and related trade organizations for more than 25 years, and has regularly attended and spoken at NPFMC meetings since 1978. Mr. MacGregor provided an interview in March 2009.

**William Myhre** is a Washington, DC, attorney who has worked closely with the pollock fishery since the 1980s in a variety of ways. He has represented the pollock mothership and catcher/processor sector on issues such as vessel registration, ownership requirements, and foreign rebuilt vessels. He has testified before Congress on the Anti-Reflagging Act and American Fisheries Act, among other topics. Mr. Myhre provided a phone interview and various email correspondences.

**Brent Paine** is executive director of United Catcher Boats, a trade organization for pollock catcher vessels from Alaska, California, Oregon, and Washington. He formerly worked for the NPFMC and played an integral role in defending the rights of catcher vessels during the American Fisheries Act debate. Mr. Paine provided an interview at a United Catcher Boat luncheon in Seattle.

**Dr. Wally Pereyra** is chairman of the Arctic Storm Management Group. He was a groundfish scientist with the National Marine Fisheries Service before becoming a general manager of the Marine Resources Company, a joint venture between the United States and the Soviet Union in 1977. Dr. Pereyra served for nine years as vice chairman of the NPFMC, during the inshore/offshore debates and the passage of the American Fisheries Act. He provided a detailed peer review of a full draft of this manuscript.

**Gregory Peters** is responsible for environmental compliance and quality assurance for the Alyeska Seafoods processing plant in Unalaska. He provided an interview in Unalaska in August 2009.

**Joe Plesha** worked as counsel to the Senate Commerce Committee for Ocean Issues during the mid-1980s and has been general counsel and chief legal officer at Trident Seafoods Corporation since 1987. He was involved with passage of the Anti-Reflagging Act, NPFMC adoption of the inshore/offshore pollock allocations, and passage of the American Fisheries Act. Mr. Plesha provided access to company documents and personal notes regarding these events, along with sharing his recollections through email and multiple interviews.

**Joe Sullivan** is a partner in the Seattle law firm of Mundt MacGregor. He has been involved in Alaska fisheries as a fisherman, mayor, and, currently, in a legal capacity. He provided an interview in March 2009.

**Sinclair Wilt** is the plant manager for Alyeska Seafoods, a pollock processing plant in Unalaska. He provided an interview in Unalaska in August 2009.

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Rögnvaldur Hannesson, Norwegian School of Business and Economics, Bergen

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