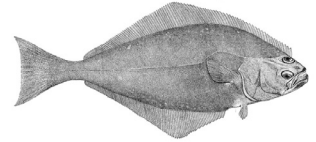


CATCH SHARES IN PRACTICE

Alaska Halibut and Sablefish Fixed Gear Individual Fishing Quota Program



ACKNOWLEDGEMENTS

Environmental Defense Fund gratefully acknowledges the Gordon and Betty Moore Foundation, the Heising-Simons Foundation and the Walton Family Foundation for their generous support of this project. We also thank over 60 experts from around the world for their time and participation during the research and drafting of the Design Manual.

Suggested citation: Bonzon, K., McIlwain, K., Strauss, C.K. and Van Leuvan, T. (2010). *Catch Share Design Manual: A Guide for Managers and Fishermen*. Environmental Defense Fund.



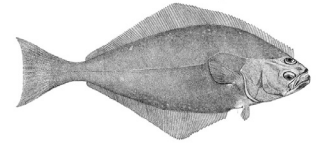
Keith Bell and Buck Laukitis pull aboard a pacific halibut while commercial longline fishing in the Aleutian Islands, Alaska.

SEASALT

- Secure
- Exclusive
- Scaled
- Accountable
- Limited
- Transferable

CATCH SHARES IN PRACTICE

Alaska Halibut and Sablefish Fixed Gear Individual Fishing Quota Program



SPECIAL DESIGN FEATURES



MULTI-SPECIES, INDIVIDUALLY-ALLOCATED AND GROUP-ALLOCATED, SPECIES-BASED, TRANSFERABLE

The Alaska Halibut and Sablefish Fixed Gear Individual Fishing Quota Program (IFQ Program) was one of the first to include a variety of design elements to meet key social goals while also contributing to decreasing overcapitalization and increasing the value of the fishery. Some of the key design elements include low concentration limits, restrictions on trading, strict shareholder eligibility requirements and more. The program also allocates a percentage of the shares to the Community Development Quota (CDQ) program, which includes 65 eligible communities organized into six groups and was designed to ensure fishing access, support economic development, alleviate poverty, and provide economic and social benefits to residents of western Alaska communities (North Pacific Fishery Management Council, n.d, A).

In 1995, managers implemented an IFQ Program for the Alaska halibut (*Hippoglossus stenolepis*) and sablefish (*Anoplopoma fimbria*) fixed gear fishery. The IFQ Program has received significant attention as it was among the first catch share programs to design for explicit social goals in addition to biological and economic goals. Fifteen years after implementation, the catch share program is meeting its goals.

The fishery occurs in federal waters off Alaska in the Bering Sea, Aleutian Islands and Gulf of Alaska. Fishermen use fixed gear vessels ranging in length from less than 35 feet to over 60 feet, including longline catcher vessels and catcher-processor vessels. In 2008, fishermen landed approximately 74 million pounds worth U.S. \$245 million (NOAA Fisheries Service, 2009f).

The fishery is managed by the National Marine Fishery Service (NMFS), with consultation by the North Pacific Fishery Management Council (NPFMC), and the International Pacific Halibut Commission (IPHC), which sets the catch limit and coordinates the management of the Pacific halibut fish stocks for Canada and the U.S. (Hartley and Fina, 2001).

SYNOPSIS

Road to a Catch Share

The commercial hook and line fishery for halibut began on a small scale in the 1880s. It grew greatly in the 1920s with the introduction of diesel-powered engines and mechanical longline equipment (Hartley and Fina, 2001), and soon after landings increased and stocks began to decline. From the 1920s through the 1980s, more and more vessels entered the fishery (many vessels entering part-time due to declining crab and salmon stocks) and effort continued to increase. Managers responded with various regulations and Canada and the U.S. coordinated efforts through the International Pacific Halibut Commission.

By the 1980s, overcapitalization had hit an extreme. The high number of vessels in the fishery led managers to implement stricter and stricter regulations causing an Olympic race for fish. In the final years before the catch share program, the halibut season was only open for a few days out of the calendar year, in which the commercial sector landed their entire catch limit, approximately 43 million pounds of fish (Pautzke and Oliver, 1997). While the stocks were not overfished, fishermen consistently exceeded the catch limits. Gear conflicts, ghost fishing (due to gear that is cut loose during the race for fish and left in the water continuing to kill fish), concerns regarding safety including deaths at-sea, low catch per unit of effort, declining product quality, and low ex-vessel prices were the norm (NOAA Fisheries Service, 2009f). In addition, regulations prohibited sablefish fishermen from landing halibut and vice versa, leading to significant discards of marketable fish.

In response to the severe failures of traditional management, managers and fishermen implemented a catch share program. The British Columbia halibut and sablefish fisheries had recently implemented a successful IVQ Program that provided a model for Alaska (see **Catch Shares in Practice: British Columbia Integrated Groundfish Program**). Alaska fishermen and managers identified a variety of goals that were important for their fishery, including biological goals outlined in the National Standards of the Magnuson-Stevens Fishery Conservation and Management Act and additional economic and social goals.

Performance

Fifteen years later, the program is successfully meeting its goals. Since fishing under the IFQ Program, fishermen rarely exceed their catch limits: No stocks are overfished and overfishing is not occurring. Bycatch has declined and ghost fishing has decreased substantially. Due to longline gear, seabird bycatch (including short-tailed albatross, Laysan albatross, northern fulmars, and shearwaters) had historically been a big problem in the fishery. However, with the slower seasons fishermen have been able to innovate, and the introduction of seabird excluder devices, such as streamer lines, has significantly improved the rate of seabird bycatch.

Dockside revenues have also increased under the IFQ Program. Under race conditions, fishermen would deliver the entire year's catch in very short windows of time, creating a glut and requiring processors to freeze most of the fish. Under the IFQ Program, fish are now landed over eight months and processors can deliver a fresh product to customers. By avoiding a glut and delivering a higher quality product, fishermen's dockside revenues have increased. In combination with decreased costs, fishermen now have more stable, profitable jobs.

Safety has also improved substantially since fishermen have more flexibility around when to go fishing. Just prior to the catch share program, search and rescue cases numbered in the 20s and 30s. By 2007, there were only five search and rescue cases, and in 2008, only three cases occurred (NOAA Fisheries Service, 2009f).

While some fishermen and crew have left the fishery following the IFQ Program, this outcome was expected due to the extreme overcapitalization under traditional management. Importantly, overcapitalization has been reduced while still meeting the program's goals in regard to maintaining historic fleet and participant structure (NOAA Fisheries Service, 2009f). Low concentration limits have prevented corporate ownership of the fleet and owner-on-board provisions for new participants have encouraged owner-operators (NOAA Fisheries Service, 2009f). Short-term, unstable, often low-paying jobs have been replaced with more stable, long-term, better-paying jobs. And, if the fishery had not transitioned to a catch share, it would have continued to face shorter and shorter seasons and potentially closures.

STEP 1 IN PRACTICE

Define Program Goals

Alaska fishermen and managers identified a variety of catch share program goals. These included meeting legal requirements of the Magnuson-Stevens Fishery Conservation and Management Act regarding stock sustainability and additional ecological, economic and social goals.

Biological goals prescribed in the National Standards (NS) One, Three and Nine of the Magnuson Stevens Fishery Conservation and Management Act (16 U.S.C. 1851):

- NS1 - Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.
- NS3 - To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.
- NS9 - Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

The final ruling on the program said “The IFQ program is intended to resolve various conservation and management problems that stem from the current ‘open access’ regulatory regime, which allows free access to the common property fishery resources and has resulted in excess capital investment in the fisheries” (National Marine Fisheries Service, 1992). Additional goals of the IFQ Program were to keep the historic fleet structure of the fishery, limit and discourage corporate ownership, limit windfall profits to participants granted quota, discourage speculative entry, and reward participants who invested in the fishery (long-time participants and active participants) (Hartley and Fina, 2001). Furthermore, the NPFMC wanted to prevent quota from being owned strictly by large vessels that could possibly harm the smaller communities dominated by small boats (Pautzke and Oliver, 1997).

STEP 2 IN PRACTICE

Define and Quantify the Available Resource

Defining and quantifying the available resource was largely driven by pre-existing management structures, as laid out by the International Pacific Halibut Commission and the previously established Fishery Management Plan.

Halibut (*Hippoglossus stenolepis*) and sablefish (*Anoplopoma fimbria*) are the target species of this multi-species program. Both of the species are long lived (50 years for halibut and 90 years for sablefish), demersal species that live near the seafloor. Fishermen tend to target either halibut or sablefish in a trip, but can frequently encounter both species. Prior to the IFQ Program, fishermen targeting halibut were not allowed to land sablefish and vice versa. Since the species habitats do overlap, fishermen were discarding significant amounts of each species. In particular, halibut was the main discard species for sablefish fishermen. Grenadier, spiny dogfish and skates are also caught as bycatch in the sablefish fishery (Danner, 2008). What little bycatch there is in the halibut fishery consists mostly of groundfish species.

Managers designed the multi-species IFQ Program with an eye toward reducing bycatch. Most importantly, sablefish fishermen are permitted to hold halibut shares and keep the halibut they encounter; halibut discards have been substantially reduced under the IFQ Program (Pautzke and Oliver, 1997). In both fisheries, participants are allowed to retain certain amounts of groundfish species as bycatch (Smith, 2004). Community Development Quota (CDQ) fishermen are required to keep all sablefish and legal-sized halibut that they catch. Catcher-processor vessels may discard halibut if they do not have quota shares for it, however the proportion of halibut discarded to sablefish quota shares caught is relatively small and therefore bycatch rates have not been a concern.

The Fishery Management Plan identifies eight halibut zones and six sablefish zones based on biological stocks. Managers set a separate catch limit for each zone based on scientific advice, and the IFQ Program identified and allocated shares based on each zone. Fishermen are only allowed to use stock-specific shares to cover their landed catch in that area (Pautzke and Oliver, 1997).

STEP 3 IN PRACTICE

Define Eligible Participants

Defining eligible participants was an important part of meeting the program goals, including retaining the historical character of the fleet. There are many detailed provisions about who is permitted to participate in the program, and these stipulations informed initial allocation (discussed in more detail below), as well as requirements for new participants.

The program allocates privileges to both individuals and groups. The majority of shares are individually-allocated, but a portion of both halibut and sablefish shares were allocated to groups via the CDQ program, which was established in 1992 to provide western Alaska communities the opportunity to participate in the Bering Sea and Aleutian Islands fisheries. There are six regional organizations of CDQs comprising 65 communities. Every federal catch share program in the Bering Sea and Aleutian Islands is required to allocate shares to the CDQs.

One hallmark of the IFQ Program is the “owner-on-board provision” that requires shareholders to be aboard the vessel during fishing operations. It was designed to promote the owner-operator model prevalent in the fishery prior to the IFQ Program. Recognizing the different business models that existed at the time of implementation, initial shareholders are exempted from the provision and exempted owners may hire skippers to fish the IFQ shares if the skipper owns 20% of the vessel. Individual share owners are also required to be a U.S. citizen and sign the fish ticket (documentation of landings) upon landing (Pautzke and Oliver, 1997).

There are specific rules pertaining to corporations and partnerships. Notably, they can purchase catcher vessel shares only if they received shares during the initial allocation (Pautzke and Oliver, 1997). If new owners join a corporation or partnership, the entity must separate from its catcher vessel quota shares and sell those shares to a eligible individual (Smith, 2004).

Concentration limits are also an important design feature of this program. Many catch share fisheries use concentration limits, but the IFQ Program has identified particularly low caps. Vessels are subject to two different caps: the vessel IFQ cap, which limits how many pounds a vessel may land in a season, and the quota share use cap, which limits how many long-term shares a participant may hold. Some shares are designated as “blocked,” meaning they cannot be subdivided for trading. Participants are not permitted to hold more than two blocked quota shares in a single management area (Smith, 2004).

Each management zone has limits on how much quota an individual is permitted to own, ranging from 0.5% – 1.5% of the total quota shares. Participants who exceeded the concentration cap at the time of implementation were grandfathered in at the levels indicated by their landing history during the eligible years (Pautzke and Oliver, 1997).

New participants can enter the fishery by buying or leasing shares. To be eligible to purchase shares, new participants must apply for and obtain a Transferable Eligibility Certificate issued by the North Pacific Region of National Marine Fisheries Service (NMFS). An applicant must be a U.S. citizen and show documentation of 150 days of commercial fishing experience in the U.S.

There are currently two special programs in support of new entrants: The North Pacific Loan Program, which helps finance new participants and shareholders with low quota holdings (Hartley and Fina, 2001, NOAA Fisheries Service, 2009f), and the Community Quota Entity (CQE) program, which helps select communities acquire shares.

STEP 4 IN PRACTICE

Define the Privilege

The privilege was defined largely to maintain the relative structure of the fleet at the time of program implementation. The program includes numerous classes of shares, each with specified uses. The privilege is species-based, meaning participants are allocated secure shares of the catch limit for halibut and sablefish.

The long-term privileges, “quota shares,” were granted indefinitely to initial shareholders and can be sold to eligible participants. Quota shares may be revoked as a penalty for non-compliance with regulations, and as with any management program, managers may change or end the program through the normal processes set out for management changes. If this occurs, shareholders will receive no compensation.

Participants’ annual allocations are calculated at the beginning of each season. For each zone, the catch limit is multiplied by the participant’s quota shares (both permanent and temporary holdings) and then divided by the total amount of quota shares held by all participants (Pautzke and Oliver, 1997). From this, shareholders are alerted of the IFQ permit weight, the annual allocation unit, that they are allowed to land during the season.

There are two main types of vessels in the fishery: catcher-processor vessels (also called freezer longliners) and catcher vessels, each with specified quota share categories (Pautzke and Oliver, 1997). Catcher vessels are further divided into size categories.

There are four vessel categories for halibut, including:

1. Catcher vessels less than 35 feet in length
2. Catcher vessels between 35 and 60 feet in length
3. Catcher vessels greater than 60 feet in length
4. Catcher-processor vessels

There are three vessel categories for sablefish, including:

1. Catcher vessels less than 60 feet in length
2. Catcher vessels greater than 60 feet in length
3. Catcher-processor vessels

The catch share program allows both permanent and temporary transfer of shares, but leasing in the fishery has been “very restricted” (NOAA Fisheries Service, 2009f). Quota shares can only be traded within their respective vessel class size, vessel operation mode and region. Each vessel class has particular rules on trading:

- Catcher vessels can only permanently transfer (i.e., sell) quota to “eligible buyers,” which includes participants who received quota shares during initial allocation or people who obtain a Transferable

Eligibility Certificate by documentation of 150 days of commercial fishing experience in the U.S. Temporary leasing is not allowed in the catcher vessel class. Corporations and partnerships can buy catcher boat shares only if they received shares during the initial allocation (Pautzke and Oliver, 1997).

- Catcher-processor vessel quota shares can be temporarily leased and permanently transferred to any U.S. citizen.
- CDQ quota is not transferable; however CDQ quota holders can hire fishermen to fish their quota.
- All quota can be inherited by heirs upon the passing of the owner.

Furthermore, some shares are “blocked,” meaning they cannot be subdivided during transfers. Blocked quota was developed, in part, to keep the price lower and more affordable for smaller shareholders and new entrants, and 15 years after the program, price per unit of blocked quota is slightly lower than unblocked quota (Dock Street Brokers, 2010).

Minimal inter-season trading is also permitted. Participants are not allowed to carry over unused quota, but in the event of overage, they are allowed to borrow up to 10% of the following year's share.

During the first three years of the program, catcher vessel shareholders were only allowed to lease 10% of their shares per year, and were not allowed to permanently sell shares (Pautzke and Oliver 1997). This was intended to prevent major changes to the fleet characteristics while participants began to understand how the program worked.

STEP 5 IN PRACTICE

Assign the Privilege

Initial allocation is often one of the most contentious parts of the catch share design process and requires careful attention. Following a thoughtful design process, in 1991 the North Pacific Fishery Management Council voted to implement the IFQ Program for the Alaska halibut and sablefish fishery. Upon approval, NMFS created the Restricted Access Management Division (RAM), comprised of approximately nine staff members, to determine the initial allocations for eligible participants and to administer the IFQ Program (Hartley and Fina, 2001). The allocation process took about one year to complete and occurred in 1994, a year prior to program implementation.

Vessel owners or leaseholders who made at least one commercial landing in 1988, 1989 or 1990 were eligible to receive initial share allocations (multiple years were chosen to accommodate disruption due to the Exxon Valdez oil spill). Eligible participants were granted shares based on catch history. Halibut share allocations were calculated based on participants' highest landings in five of seven years from 1984 to 1990; sablefish share allocations were calculated based on the best five of six years from 1985 to 1990.

RAM used landings data from existing NMFS records to calculate each eligible participant's share and mailed eligible recipients his/her estimated initial allocation and a quota application. The eligible participants were required to confirm the recorded data, complete the application, and send it back to RAM.

Eligible participants were allowed to appeal their estimated quota allocations by supplying RAM with proper documentation of the data in question. Acceptable documentation included fish tickets, leases or ownership papers (Hartley and Fina, 2001). Once RAM received the documentation, it went under technical review and the owner would be alerted of any changes in quota allocation within 45 days. If the RAM technical review did not result in any changes, participants could request a hearing with a NOAA officer in which they presented documentation in support of their cause. If the participant was still dissatisfied with the NOAA decision, they had the option to appeal to the federal court within 30 days.

Out of 9,000 applications for quota, about 8,000 were allocated shares (Hartley and Fina, 2001). Six hundred and fifty appealed their allocation calculation citing errors such as improper vessel category determination, basic eligibility to receive quota, size of allocation, etc. (Hartley and Fina, 2001). Following the technical review by RAM, 179 further appealed their cases and ultimately only 10 cases went to the federal court system for a final decision.

STEP 6 IN PRACTICE

Develop Administrative Systems

The RAM Division of NMFS administers the IFQ Program. RAM responsibilities include: determining eligibility and issuing permits, processing transfers, collecting landing fees and related activities. The systems used to administer the catch share program have evolved over time, especially as technology and access to the internet have improved.

Participants are held accountable for their landings and fishery information is largely collected via dockside monitoring. Shareholders are required to hail in/out and complete logbooks for each trip. At 16 main ports, NMFS agents perform comprehensive dockside monitoring of all landings, checking the actual landings against the shareholders' logbooks. At smaller ports, NMFS agents perform random checks. Fish buyers are required to have a permit and to report all purchases made from IFQ and CDQ vessels.

On average, the monitoring program requires 30% onboard observer coverage. Vessels smaller than 60 feet and halibut vessels do not require observer coverage. Coverage levels for other vessels vary by vessel size, type and gear. Vessels larger than 125 feet are required to have observer coverage 100% of the time (North Pacific Fishery Management Council, n.d., B.)

Participants use eLandings (landings.alaska.gov), an interagency electronic reporting system for all commercial fishery landings in Alaska, to record and track halibut and sablefish landings. The website is the preferred system for administration and will soon replace the landing reporting function on the NMFS web application. The website is managed by Alaska Department of Fish and Game, the International Pacific Halibut Commission

and NOAA fisheries. Access to both of the systems is free and available to any vessel owner with an IFQ permit. Websites are housed in the NMFS Alaska Regional Office website.

Throughout the year, participants enter information on the NMFS web application, which deducts the trip landings from their annual quota pounds. The system is also used to track vessel quota balances, print receipts for past landings, create an ex-vessel value and volume report, renew buyer permits, check permit balances, pay cost recovery fees, review IFQ landing ledger reports, review registered buyer landing ledger reports, and produce a quota share holdings report (NMFS Alaska Regional Office, n.d.B).

If a participant exceeds his/her shares by 10% or less, they may “borrow” shares from the following year to cover their overage. If a shareholder exceeds his/her quota by more than 10% on the last trip of the season, they may be subject to fines and suspensions. In severe cases, the government may revoke a participant’s shares.

Design and implementation of the IFQ Program cost approximately \$2 million and was paid for by the NMFS budget (Hartley and Fina, 2001). In 2001, a cost recovery fee program was implemented as authorized by the Magnuson-Stevens Fishery Conservation and Management Act. The program requires shareholders to pay a maximum of 3% of the ex-vessel value of IFQ landings to cover the incremental administrative management costs due to the catch share program, such as facilitating transfers, enhanced enforcement, etc. Cost recovery fees are calculated annually, and fishermen have never paid more than 2% of the ex-vessel value of the landings. Enforcement for the fishery costs about \$2.3 million per year and in 2008, \$1.1 million was spent on administration of the fishery (NOAA Fisheries Service, 2009f; Hartley and Fina 2001). When the cost recovery program was initially implemented, some collected revenues funded the North Pacific Loan Program; however, all collected fees now pay for management costs. Fishermen who are required to have an onboard observer pay those costs directly.

STEP 7 IN PRACTICE

Assess Performance and Innovate

The program has gone through numerous innovations over the years. In fact, the program has been officially modified 39 times since initial implementation (NMFS Alaska Regional Office, 2010b). These have included modifications to trading restrictions, eligibility rules, administrative catch accounting systems and more.

One notable innovation occurred in 2004, 13 years after program implementation. The Council created the Community Quota Entity (CQE) program, which authorizes non-profit organizations to purchase and use annual IFQ for a council-approved list of 42 communities, including Old Harbor, Craig, and Sand Point (Smith, 2004). This program is designed to provide these communities with secure access to the fishery and a valuable asset (North Pacific Fishery Management Council, 2010). CQEs must comply with specific rules including restrictions on concentration. For example, CQE is not subject to vessel class sizes, but there are limitations on how much quota they can hold. Each CQE is responsible for determining the use of their quota shares including eligible fishing participants. It is still too early to assess the performance of this special program, but it shows how managers and fishermen were able to innovate over time.