

Step 4 – Assign the Privilege

Tracking the Attributes of a Successful Catch Share

Key Attributes	Definition
Secure	Tenure length of shares is sufficiently long for participants to realize future benefits.
Capped	Catch limits or geographic areas are set at scientifically-appropriate levels.
Accountable	Share holders regularly comply with catch limits.
Limited	Shares include all sources of mortality (landed and discarded) and when combined do not exceed the catch limit or total geographic area.
Exclusive	Secure privileges are assigned to an entity (individual or group) and are clearly recognized and defensible by law.
Scalable	Management units are set at the appropriate biological level, taking into consideration social and political systems.
Transferable	Privilege holders can buy, sell and/or lease catch shares.

The fourth step in designing and implementing your catch share is to assign the privilege via an initial allocation process. This will determine who receives initial shares of the catch and in what quantity, effectively setting up the starting point for a catch share fishery. Because the number of shares that can be allocated in any fishery are of limited supply, and therefore valuable, participants feel that much is at stake in the distribution of shares.

Allocation has often been the most difficult and controversial step along the path towards a catch share program and it warrants extra attention. Even though this process can be contentious, it should not deter you from pursuing a catch share. The good news is that initial allocation only happens once and many catch share fisheries have successfully navigated the process. Furthermore, common practices that highlight fairness have emerged.

The first step in the allocation process is to establish a decision-making body that will determine initial allocation. Then it must be determined when allocation will occur, whether there will be an appeals process, who will be eligible to receive shares, whether initial shares will be auctioned or granted, how many shares eligible participants will receive and what data are available for allocation decisions.

By completing the steps of Assign the Privilege, your fishery will address the key catch share attribute **Exclusive**. Allocation decisions also impact the attribute **Limited**.

4.1 WHAT DECISION-MAKING BODY WILL DETERMINE INITIAL ALLOCATION?

Different countries have used various decision-makers to determine allocations, including fishery managers, fishery stakeholders and independent third parties. First and foremost, allocation processes must comply with existing law and many countries already have legal requirements or legal precedents regarding the allocation of catch shares. For example, US processes must comply with federal law, including the Magnuson-Stevens Fishery Management and Conservation Act, the Administrative Procedures Act, the National Environmental Policy Act, among other policies. However, within the defined legal process there is generally some flexibility regarding who can participate and so you can be creative in your approach.

Fishery managers are generally responsible for developing policy, analyzing options and implementing decisions, and therefore hold the ultimate responsibility for developing and implementing the catch share program including allocation. Managers have played a central role in many allocation decisions. For example, New Zealand's national fisheries management body, the Ministry of Fisheries, led the allocation and implementation process for catch shares in 1986 when they created the Quota Management System (QMS) and 27 species came under catch share management. The Ministry has continued to oversee allocation as more species enter the QMS (New Zealand Ministry of Fisheries, 2007a). In the United States, regional fisheries management councils have largely presided over the process, with input and assistance from NOAA and final approval by the US Secretary of Commerce.

Fishery stakeholders, particularly fishermen, have participated substantially in the allocation process. Stakeholder participation in the allocation process is expected, and even advisable, because of fishery participants' extensive knowledge about the fishery. However, allocation decisions also directly impact stakeholders' businesses and livelihoods and it may be challenging for fishermen with a financial stake to remain neutral decision-makers. In order to ensure fairness it is advisable that catch share recipients do not have disproportional representation and influence over the allocation decisions.

Independent, third party panels have also been used for catch share allocation decisions. For example, Australia has used independent panels almost exclusively to develop allocation processes and formulas. The panel has generally been comprised of three participants: a retired judge, a fisherman with no direct stake in the fishery and an economist or policymaker (Shotton, 2001). The panel is directed by the managers and receives guidance about the goals and objectives for a catch share program. They are then directed to solicit input from a variety of sources to develop a fair and equitable process. Participants have generally viewed the approach as favorable and except for one instance where a decision was rushed, (see Step 4 in Practice – Allocation in Australia's Southeastern Trawl Fishery), the results have held up in court (Shotton, 2001).

In the case of group-based catch shares managers only need to determine overall allocations across the various cooperatives, sectors, communities or companies (assuming there are multiple groups within one fishery) and then each group can decide on the appropriate way to divide and hold catch shares among themselves. This may be one benefit of a group-based catch share. However, the group must have a process and structure that is able to handle such a contentious process or it is also likely to run into fairness issues (NOAA, 2007).

4.2 WHEN WILL ALLOCATION OCCUR?

Initial allocation can occur at any point in the catch share design process and in reality, decisions impacting allocation will occur at multiple stages of the process. Often, managers and stakeholders are comfortable with the concept of catch share management, and perhaps even eager to pursue a program, but stakeholders may have specific concerns about their personal outcome under a catch share. In this case, it may be advisable to focus on allocation upfront to reduce uncertainty and bolster support. For example, when managers in the Gulf of Mexico calculated fishermen's projected initial shares, fishermen were more supportive of a catch share for red snapper.

In addition, calculating different allocation scenarios upfront can shed light on the appropriateness of different design options. For example, general category sea scallop fishermen on the US Atlantic coast could see clearly that any catch share plan that provided equal access would eliminate many businesses (NMFS, 2008), making the allocation of catch shares based on individual catch histories the most viable option.

On the other hand, some fisheries have found it beneficial to wait until the end of the design process to make allocation decisions. Some theorize that waiting until the end will help ensure the fairest, most equitable design of a catch share because participants will not be lobbying to increase their personal gain throughout the design process.

4.3 WILL THERE BE AN APPEALS PROCESS?

It is not always possible to achieve consensus on something as challenging and contentious as the initial allocation of catch shares—even with substantial planning and effort. To address concerns and dissension, many fisheries have found it helpful to develop an appeals process. To ensure neutrality, the process or institution should be separate from that which made initial eligibility and share determinations. You may find it helpful to determine upfront that there will be an established process to handle complaints in order to help participants move forward.

There have generally been two cases for appeal; first when the process itself was unfair or inequitable and second when the information used to determine allocation was inaccurate. Some countries already have established appeals processes that should be followed.

Appeals processes have been implemented extensively in Australia and New Zealand. In many cases the appeals process was hardly used, if at all, but because of its presence participants' perception of fairness and equity in the process increased (Shotton, 2001).

Generally, appeals processes hear cases in which fishermen claim data on their landings or income reports were inaccurate or missing. If fishermen can make a compelling case by showing corroborating data, then appeals processes are likely to change their initial allocation share.

Rule of Thumb – You should establish an appeals process. Appeals should be focused on the information used to determine allocation, rather than the eligibility criteria or allocation formula.

Importantly, there have been two examples in which the appeals process dramatically changed the outcome of allocation. The first occurred in the New Zealand Quota Management System program when traditional Maori fishermen used existing treaties to challenge the legality of the program. Maori now control or influence more than 30% of commercial fishery and are allocated 20% of all new species brought into the QMS (New Zealand Ministry of Fisheries, 2007b). The second occurred in Australia when so many participants presented compelling arguments the original allocation process was deemed to be unfair. While time was lost in developing a new allocation scheme, the appeals process ensured all arguments could be heard and an appropriate process was implemented (Shotton, 2001).

While an appeals process is important for fairness, they should not be used as an excuse to delay difficult decisions about allocation. Rather, those issues should be worked out through the identified initial allocation process and appeals should be reserved for extreme or unordinary cases.

4.4 WHO IS ELIGIBLE TO RECEIVE SHARES?

Determining eligibility is an important step for your fishery's initial catch share allocation. Decisions made in previous steps will certainly influence this determination. Identifying the target fishing sectors in Before You Begin is a natural starting place to understand who might be eligible and going through the process described in Step 2 – Defining the Privilege, will also provide input. For example, individual catch share programs such as Individual Transferable Quotas (ITQs) or Individual Fishing Quotas (IFQs) must distribute initial shares to individuals, whereas group catch shares such as

cooperatives, will allocate shares to a group. If shares are allocated via auction, the auction can either be open to anyone, or it can be required for participants to meet eligibility requirements in order to bid in the auction.

Eligibility can be thought of as two different layers. The first, often a political decision, is determining what categories of stakeholders will be eligible to receive allocation of shares. This is generally driven by social and economic characteristics of your fishery as well as by available data. Catch shares are commonly granted to the same entities that hold licenses to participate in the fishery but it is possible to identify other eligible recipients. For example, the US federal law (Public Law 94-265.16 U.S.C. 1853 et seq.) requires consideration of nine distinct factors of eligibility:

1. Current and historical harvests
2. Employment in the harvesting and processing sectors
3. Investments in, and dependence on, the fishery
4. Current and historical participation of fishing communities
5. Small-vessel owner-operators
6. Captains
7. Crew
8. Entry-level participants
9. Fishing communities

The second layer of eligibility is determining who within those stakeholder sectors will actually receive shares. Not every participant in an eligible group may be allocated shares. See Steps 4.6 and 4.7 for further discussion.

Additional Considerations

Your fishery's goals will help drive eligibility decisions. If your goal is to limit disruption to the existing fleet structure, then current and historical harvest levels may be important criteria. Whereas if your goal is to ensure those most dependent on the fishery receive shares, then income generated by fishing activity may be most important information. You can also select multiple criteria and assign various levels of importance to them.

While focus tends to be on allocation to individuals, there is precedent in the United States for groups to receive allocation. Community Development Quotas in Alaska and the Georges Bank Hook and Fixed Gear Sectors are good examples. While group catch shares, in which allocation is to a group as a whole, differ from an individual catch share program, in which shares will be distributed to eligible individual entities (people, vessels or companies), at some point in nearly all catch share fisheries allocation to an individual is considered. Within a group-based catch share, members of the group often choose to allocate specific shares among themselves down to the individual level. Recognizing this, the rest of this chapter will focus on allocation down to the individual level.

Furthermore, the Magnuson-Stevens Fishery Management and Conservation Act identifies Fishing Communities (FCs) and Regional Fishing Associations (RFAs) as eligible entities to hold shares. However, Fishing Communities are allowed to receive an initial allocation of shares, whereas RFAs cannot. RFAs can be formed after a catch share is in place and participants within them can pool, purchase or lease shares. FCs and RFAs are new and untested entities, but hold significant promise for addressing some of the community concerns around catch shares (NOAA, 2007). For further information on RFAs and FCs, please see the Magnuson-Stevens Fishery Management and Conservation Act and NOAA's Technical Memo, *The Design and Use of Limited Access Privilege Programs* (2007).

See Table 10 for a list of eligibility requirements from select catch share fisheries.

4.5 WILL INITIAL SHARES BE AUCTIONED OR GRANTED?

There are two main forms of initial share distribution: auctioning and granting. Auctions require participants to pay for the shares, whereas granting gives the shares free of charge to an identified set of participants at program initiation (although following initial allocation shares are generally purchased). Participants could also be granted a share and be required to pay a set fee. There are a number of policy reasons to consider all approaches.

It may be helpful to look at other allocations of other public resources to inform your fishery allocation decisions. Both auctioning and granting of shares have been used to allocate public resources in the US. For the allocation of resources with a strong tradition of local users, such as fields for grazing or water, granting has been more common. Resources that are newly "discovered" and without a strong history of use, such as radio waves and the electromagnetic spectrums, often are allocated through auctions (White, 2006). To date, fisheries have used granting to allocate initial shares almost exclusively.

Auctions

Under auctions, eligible recipients pay upfront for the privilege to use a public resource. The revenues generated through auction can be distributed back to the public, used to cover management costs, such as the cost of research or enforcement, or used to meet other objectives. If shares are initially allocated via auction, it should occur at the end of the catch share design process so that bidders know the attributes of the privileges.

Granting

Under a granting system, eligible recipients receive allocations of catch shares without payment. Granting is the most common method for distributing shares initially. Many catch share programs may still require an annual participation fee, such as a license fee, but the catch shares are granted without fee. Fishermen and fishing communities with a long history of reliance on, and participation in, a fishery favor granting as the most fair

and equitable approach (Le Gallic, 2003). Furthermore, granting does not require capital upfront and therefore likely accommodates more participants.

Fee

Allocating shares for a required, standard fee is another approach to consider. This approach may achieve benefits of both auctions and granting without fee. With this mechanism, allocation may be more widely accepted by participants, while requiring a fee payment may also reduce some of the concerns over participants receiving a valuable asset free of charge. However, we have not yet encountered a fishery in which this has been used.

Trade-offs

Auctioning and granting each have their own benefits and challenges. Granting of initial allocations requires the development of formulas (discussed below) for determining allocation among participants, and these are often highly contentious and require significant data. In addition, some argue that granting undermines the public trust doctrine, as public resources are allocated for free to fishermen who will ultimately profit from them. But the challenge of gaining support from the fishermen who will operate within the program often can be overcome by through granting in initial allocation.

Designing an auction method can also be tricky, especially when trying to meet various social and equity goals. One reason that auctions have not been more widely used for allocation of fisheries is a common misconception that participants need cash and liquidity up-front to finance the purchase of catch shares, which could result in a shift in shares going toward wealthier entities and individuals. However, there are many ways in which to conduct auctions to meet social goals and desired distributional outcomes. These methods include tiered auctions based on income or boat size, reverse bids, revenue neutral auctions, royalty auctions and more.

It is possible to combine auctioning and granting approaches. Fisheries can allocate a certain percentage of shares for free while holding a portion back for auction. Many fisheries have contemplated holding back some shares for adaptive management or to make it available to a specific group, such as new entrants or fishermen who meet certain conservation objectives. The government could thereby generate some revenue through the auction, while also winning support among existing fishermen, and achieving specific program goals.

4.6 HOW MANY SHARES WILL ELIGIBLE PARTICIPANTS RECEIVE?

If your fishery decides that granting of catch shares is preferable, then you must develop a protocol for distributing the shares. Fisheries that have opted to grant without fee have used a variety of formulas to determine share holdings. Formulas usually include the use

data on catch history, and/or level of investment, or uses equal sharing to divide shares. Within a formula, you can also give variables different weights.

Historical Landings

Overwhelmingly, the most common initial allocation criterion has been historical landings. Historical catch is often the most complete data set available and the best representation of recent fishing patterns (Huppert, 1986). To calculate historical catch landings for an individual fisherman are collected for a specific time period, summed and compared to the total of all other eligible recipients. Each participant's catch history is expressed as a share or percentage of the total. This identifies the individuals "catch share" or percentage share.

A common regime has emerged for initial allocation processes with regards to using landings data. See Table 8 for further description.

Table 1 – Catch Share Formulas

Feature	Definition	Goal
Catch History	Calculation of a fisherman's historical participation in the fishery based on their landings as a percentage of the fishery's total landings.	To ensure a fair and equitable distribution of shares that is based on past patterns of participation.
Control Date	A fixed date, after which landings are not counted towards an individual's standing. A date is often set for a period prior to discussions about catch shares.	To prevent fishermen from increasing effort to improve their landings in the period leading up to catch share implementation.
Base Years	Years used to calculate landings. It is generally a 3-5 year period.	To accurately represent participation in the fishery over a sustained period of time.
Excluded Years	The year(s) of lowest individual landings may be discarded from the calculation.	To include the best representative years of participation and account for years of non-participation.

Level of Investment

You may choose to use fishermen's level of investment as an indication of an individual's potential catch capacity and commitment to a fishery. Factors indicating investment might include vessel length or size or value of other capital investments. Investment may be an especially important factor if participants in your fishery have recently made investments in new boats or if landings are not an accurate account of participation due to constraining trip limits or other regulatory measures.

Equal Shares

Alternatively, it is possible to simply divide the shares evenly among all participants. For example, if there are 300 participants in a fishery, and the fishery will allocate 100% of the catch limit, each participant would get 0.33% of the catch. Administratively, this is very simple to determine and to carry out. It works especially well if participants are relatively homogenous.

Auction Caps

If an auction is used to allocate initial shares, it may also be important to set a limit to how many shares eligible participants can purchase in the auction. See Step 3.2 for a more in-depth discussion of concentration limits.

See Table 10 for a description of allocation formulas for select fisheries.

Additional Considerations

While catch history and investment are the most commonly used formula components, they are by no means your only options. You can develop a formula to balance a number of different goals and accommodate a wide variety of participants.

For example, it may be possible to include a “conservation variable” that reflects bycatch or discard rates for individual fishermen, catch rates of endangered species, other infractions, and/or the gear type and their relative bycatch rates.

You can also create categories that each use different formulas. For example, if a mixed gear fishery has three gear types and your goal is to initially retain all gear types at equal levels, then each gear group could divvy up 33% of the total shares, and each gear type could use a different formula. This approach is possible for different size vessels, different locations of fishermen and more.

One common question is whether allocation formulas should consider a specific measure of fishing dependence, such as a percentage of income. This approach has not commonly been used, but catch history may be considered proportional to dependence.

4.7 WHAT DATA ARE AVAILABLE FOR ALLOCATION DECISIONS?

What data are available will impact the method of your fishery's initial allocation. If data are very robust, then it will be possible to develop an allocation system that depends heavily on information. However, if there are little data or the data are inaccurate, alternative methods should be developed.

Most fisheries transitioning to catch shares have been under some form of permitting or licensing program and the management body usually has administrative records on participants and their key characteristics. These are:

- License holder characteristics (e.g. length of tenure and number of licenses held),
- Vessel characteristics (e.g. length or type of vessel) and
- Participation characteristics (e.g. number of years with landings and landing history).

Any and all of these can be important factors for determining initial share allocation. The more accurate the data, the less contentious the process will be.

In most jurisdictions, managers have used predetermined criteria to calculate eligibility and initial shares, and then dispersed information to participants. In some fisheries, individuals have instead been responsible for the calculation and submitting applications to the fisheries managers for review against administrative records. The managers then have final determination on eligibility and share holdings. In either case, some data were required to generate or verify the allocation process.

Additional Considerations

Available records can also influence participant eligibility. For example, one challenge with the allocation of catch shares to crews is that in most cases there is not adequate administrative information on the identity of crew members on particular vessels or on particular trips. The Bering Sea Aleutian Island Crab Rationalization Program was able to allocate share to crab skippers because there were legal documents, fish tickets, identifying the amount of catch and the name of the vessel skipper (NMFS Alaska Regional Office, 2008). Many fisheries do not have such data available.

Step 4 in Practice – Allocation in Australia’s Southeastern Trawl Fishery

Australia’s South East Trawl Fishery is, along with three other fisheries, part of the Southern and Eastern Scalefish and Shark Fishery (SESSF). The South East Trawl Fishery, which is now known as the Commonwealth Trawl Sector, is a multi-species, multi-gear fishery with the most commonly used gear types being otter trawls and Danish seines. Before combining with the other fisheries to create the SESSF, it contained more than 100 species, 17 of which accounted for over 80% of the total harvest (Shotton, 2001).

In 1992, the South East Trawl Fishery transitioned to a multi-species Individual Transferable Quota (ITQ) system in which a total allowable catch was determined for 16 species or species groups. A committee designed to oversee the allocation process met eight times from 1990 to 1991 and conducted two meetings involving fishery stakeholders. Despite this, there was significant industry discontent during and following the allocation process. Industry members felt there was a lack of transparency in the objectives of the allocation formula, insufficient engagement and consultation of industry stakeholders in the allocation process and lack of sufficient time to review the final management plan, which was only made available one month prior to implementation. The ITQ was implemented amid these complaints, and a formula based on catch history and investment in the fishery was used to allocate shares.

Unfortunately, the industry’s dissatisfaction did not recede and a lengthy and costly appeals process ensued. The entire process included an internal review, the establishment of a review committee (upon a political request), an appeal to the Administrative Appeals Tribunal (an independent body that conducts appeals hearings), two federal court cases, and a review by the Australian Senate of the Commonwealth. The court cases, reviews and appeals eventually resulted in the creation of a new allocation formula and a limited government buyback program, with purchased shares being redistributed to the remaining participants.

Allocation can be extremely contentious. Many countries may have already determined processes for both allocation and appeals. The lesson here is that regular engagement with stakeholders and attempts to address concerns are vital. Had the fishery managers addressed original concerns by engaging fishery participants in the creation of an allocation system deemed fair and equitable, perhaps the lengthy and expensive appeals process would not have taken place (Shotton, 2001).

Status: Based on available science, only 4 out of 34 species are overfished. Australia Fisheries Management Authority (AFMA) has developed stock rebuilding strategies to manage these stocks (AFMA, 2009a).

Step 4 in Practice – Allocation in the Bering Sea and Aleutian Island Crab Rationalization Program

The Bering Sea and Aleutian Islands (BSAI) Crab Rationalization Program began in 2005, as an Individual Fishing Quota (IFQ) program. It was designed based on North Pacific Fishery Management Council's experience with the Pacific halibut and sablefish Individual Fishing Quota (IFQ) program, combined with the need to balance the interests of several groups who depend on these fisheries. Five crab species, managed as multiple fish stocks, from the Eastern Bering Sea to the southern Aleutian Islands, are caught within this program (NMFS Alaska Regional Office, 2008).

The BSAI Crab Rationalization Program sought to address competing interests in the allocation of initial shares. This program allocates BSAI crab resources among harvesters, processors and coastal communities in the form of shares to harvest fish and shares to process landed fish.

First, an initial percentage was set aside for community protection via the Eligible Crab Community (ECC) program, which holds shares and leases IFQs to eligible residents. The Community Development Quota (CDQ) program and the Adak community allocation program are both part of the ECC. There are nine communities that receive crab allocation from this program including Akutan, False Pass, St. George, St. Paul, Adak, King Cove, Kodiak, Port Moller and Unalaska/Dutch Harbor (NMFS Alaska Regional Office, 2008).

Following the initial holdback for the community program, shares were allocated to captains or boat owners and crew. Ninety-seven percent of this harvester shares were allocated to captains/owners and 3% to crew. To be eligible, captains or boat owners were required to hold a permanent license with a qualifying vessel that had eligible crab landings. Crew members were required to have an Interim Use Permit as well as eligible crab landings and signed fish tickets (NMFS Alaska Regional Office, 2008). This program highlights how the availability of good data and records allowed a full array of participants to be considered during the allocation process.

Status: Seven out of ten crab stocks have been assessed in the BSAI Crab Rationalization Program. Six of the stocks are currently not overfished, nor is overfishing occurring. However one stock (Pribilof District blue king crab) is being overfished (North Pacific Fishery Management Council, 2008).

Table 2 – Step 4 Design Options - The table below provides guidance on selecting design options based on your goals. The representative objectives – Ensuring Effective Stewardship, Maximizing Fleet-Wide Economic Benefit and Promoting and Improving Fishing-Related Jobs and Communities – are listed on the left side of the table along with goals within each objective, and all steps are represented across the top of the table. To use the table, review the guidance in the boxes below each step to understand which design options will help you meet your goals.

			Allocation Decision Maker	Timing of Allocation	Appeals Process	Available Data	Eligibility for Initial Allocation	Auctions vs. Grants	Quantity of Shares Allocated				
Outcomes	Ensure Effective Stewardship	End overfishing			An appeals process should not result in an increase in the total amount of shares distributed, i.e. should not exceed 100% of the catch limit.	Use data that indicate high levels of compliance with existing regulations as an indication of stewardship.	Give preference to those who have less impact on stocks, such as certain gear types or participants with identified conservation goals						
		Rebuild stocks											
		Reduce waste and bycatch											
	Maximize Fleet-Wide Economic Benefit Through Increased Asset Value	Increased asset value due to long-term sustainability			See "Ensuring Effective Stewardship" above								
		Address overcapitalization											Narrow the criteria for eligible recipients.
		Leverage the market place and encourage innovation											Allow broad range of stakeholders to receive initial shares.

			Allocation Decision Maker	Timing of Allocation	Appeals Process	Available Data	Eligibility for Initial Allocation	Auctions vs. Grants	Quantity of Shares Allocated
Outcomes	Promote and Improve Fishing-Related Jobs and Communities	Improve Jobs				Use data that include crew and historical captains.	Allow crew and/or historical captains to be eligible.	Granting shares may ensure a broader number of entities can participate.	Broadly distribute shares among participants.
		Support and Promote Fishing Communities				Use data that indicate the importance of fishing to a community and/or the contribution of different communities to the fishery.	Identify communities as eligible recipients.	Grant to community entities and allow them to further distribute shares.	
		Ensuring Fairness	A neutral decision-making body and a transparent process are more likely to be considered fair.	Allocating shares at the end of the design process may encourage stakeholders to advocate for a fairer system overall.	Opportunity for appeal is generally perceived as fair.	Use multiple sources of data and prioritize data with greater confidence.	Develop rules that participants support. Generally, more broadly defined rules are perceived as more fair.	Granting is generally perceived as more fair among fishery industry participants, especially when there is a long history of use.	

Table 3 – Allocation Formulas for Selected Catch Share Systems

	Fishery	Gear	Implementation Year	Eligibility Criteria	Initial Allocation Formula
United States	1. Mid Atlantic Surfclam & Quahogs	Dredge	1990	~150 vessel owners who reported landings at anytime from 1979 to 1988.	Surfclam 80% catch history from 1979 to 1988. The last four years counted twice and the two worst years were excluded. 20% vessel cubic capacity (length x breadth x depth). Quahog 100% catch history from 1979 to 1988, excluding the worst year.
	2. Atlantic Wreckfish	Hook & Line	1992	90 vessel owners who fished in 1989 or 1990.	50% catch history from 1987 to 1990 and 50% equal shares.
	3. Western Alaskan Pollock CDQs	Trawl	1992	55 eligible communities organized into six groups. Criteria for community to qualify: 1. is within 50 miles of Bering Sea 2. is a Alaska Native Claims Community 3. residents conduct 50% of their subsistence or commercial activities in Bering Sea 4. did not already have significant pollock activity	The State of Alaska recommendation as to how shared among the 6 groups was largely based on population considerations. Each CDQ group has to identify a partner to fish the allocation.
	4. Alaskan Halibut**	Longline	1995	4816 vessel owners who were active at least one year from 1988 to 1990.	100% catch history based on the best five of seven years from 1984 to 1990.
	5. Alaska Sablefish**	Longline	1995	1052 vessel owners who were active at least one year from 1988 to 1990.	100% catch history based on the best five of six years from 1985 to 1990.
	6. Alaska Offshore Pollock Catcher-Processors**	Trawl	1998*	Nine existing companies formed the Pollock Conservation Cooperative.*	Negotiated among member companies.
	7. Bering Sea Cooperative Crab**	Pots	2005	Nine different fisheries each with up to five seasons of qualifying years. Vessel owners and skippers received harvesting “QS” shares, processors received processing “PS” shares.	100% catch history based on the average of the % of TAC caught over (normally) five qualifying years.
Canada	1. Lake Winnipeg	Gillnet	1972	690 individuals who 1) held license in 1968 or 1969 or 2) held a license in 6 of the last 7 years prior to 1968 (the 690 individuals were allocated 1222 area/season shares).	Equal share of each area/season TAC.
	2. Atlantic Offshore Groundfish	Trawl	1984	18 large vertically integrated harvester - processor companies.	Northern cod Arbitration Other Judgmental process largely based on catch history between 1977 and 1980.

	Fishery	Gear	Implementation Year	Eligibility Criteria	Initial Allocation Formula
	3. Pacific Geoduck	Dive	1989	55 "G" vessel license holders at time of implementation.	Equal shares.
	4. Pacific Sablefish	Longline & Trap	1990	48 "K" vessel license holders at time of implementation.	70% catch history based on the best one year catch between 1988 and 1989. 30% vessel length.
	5. Pacific Halibut	Longline	1991	435 "L" vessel license holders at time of implementation.	70% catch history based on the best one year catch between 1986 and 1989. 30% vessel length.
	6. Pacific Groundfish	Trawl	1997	142 "T" vessel license holders at time of implementation.	80% catch history. 10% Groundfish Development Shares (by application judged on community benefits). 10% Code of Conduct (same allocation as the initial 80% unless a complaint is received as to unfair treatment of crews).
Iceland	1. Pelagic Herring	Purse Seine & Trawl	1975		Equal shares.
	2. Pelagic Capelin	Purse Seine & Trawl	1980	52 vessel owners.	Equal shares.
	3. Demersal Fisheries	Trawl	1984		100% catch history based on 1981 to 1983 (upward adjustment if vessel had major repairs or entered fishery after 1981).
	4. Vessels Over 6 GRT in All Fisheries	Variety of gears	1991	1265 vessels.	100% catch history with some exceptions, such as for herring, capelin etc., or for historical reasons.
New Zealand	1. Inshore	Variety of gears	1986	~2560 vessel owners who had permits and who had a combined total of at least five metric tons of shares for all species under the allocation formula.	100% catch history based on the best two of three years from 1982 to 1984.
	2. Offshore		1986	9 companies & consortia that had large "commitment."	100% "commitment" based on either catch history, investment in on-shore processing employment or fishing capital (provided company "commitment" level exceeded 2000 metric tons per year).

Fishery		Gear	Implementation Year	Eligibility Criteria	Initial Allocation Formula
Australia	1. Southern Bluefin Tuna	Troll	1984	143 licensed vessel owners who met one of three criteria: 1) landed at least 15 metric tons in any of the three years from 1980/81 to 1982/83, 2) people who would have qualified above and who could demonstrate that they bought another boat before September 1984 and 3) people who purchased a boat before July 1984 and worked at least two complete fishing seasons on a boat that took 15 metric tons.	75% catch history based on the highest catch in three years from 1980/81 to 1982/83. 25% capital investment or the value of individual's boat as estimated by contracted independent marine surveyor.
	South Australia Abalone	Dive	late 1980's	The 35 existing operators.	Equal allocation.
	SE Trawl	Trawl	1992	~140 existing operators.	Varied by species. 50% to 80% catch history based on the best four years from 1984 to 1989. 50% to 20% investment - based on vessel's cubic number (length x breadth x depth) & engine power.
	South Australia Southern Zone Lobster	Pots	1994	187 existing operators.	Operator chose one of three formulas: 1) 100% catch history in the previous 3 years, 2) current pot entitlement or 3) 50:50 catch history & pot entitlement.

*at the time there was a moratorium on new ITQ programs

**also had "set asides" for CDQs

Design Worksheet

Step 4 – Assign the Privilege

USE THIS SHEET TO RECORD YOUR NOTES AND DESIGN DECISIONS AS YOU WORK THROUGH THE DESIGN MANUAL

What are your goals?

1. What decision-making body will determine initial allocation?

2. When will allocation occur?

3. Will there be an appeals process? **CIRCLE ONE**

YES

NO

4. Who is eligible to receive shares and what % of the overall total allocation will each of the eligible groups receive?
CIRCLE ANSWERS and FILL IN %

Current and
Historic License
Holders

Skippers &
Captains

Crew

Entry Level
Participants

Community

Processors

Adaptive
Management

Other

5. Will initial shares be auctioned or granted?

6. How many shares will eligible participants receive?

7. What data are available for allocation decisions?



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At a Glance - Assign the Privilege

The fourth step in designing and implementing your catch share is to assign the privilege via an initial allocation process. This will determine who receives initial secure shares of the catch and in what quantity, effectively setting up the starting point for a catch share fishery. Because the number of shares that can be allocated in any fishery are of limited supply, and therefore valuable, participants feel that much is at stake in the distribution of catch share privileges.

Allocation has often been the most difficult and controversial step along the path towards a catch share program and it warrants extra attention. The contentiousness of this process should not deter a catch share from being adopted. The good news is that initial allocation only happens once and all catch share fisheries have successfully navigated the process. Furthermore, common practices that highlight fairness have emerged.

1. What decision-making body will determine initial allocation?

Different countries have used various decision-makers to determine allocations, including fishery managers, fishery stakeholders and independent third parties. First and foremost, allocation processes must comply with existing law and many countries already have legal requirements or legal precedents regarding the allocation of catch shares.

2. When will allocation occur?

Initial allocation can occur at any point in the catch share design process and in reality, decisions impacting allocation will occur at multiple stages of the process. Often, managers and stakeholders are comfortable with catch share management and eager to pursue a program, but stakeholders may have concerns about their personal outcome under a catch share. In this case, it may be advisable to focus on allocation upfront to reduce uncertainty and bolster support.

3. Will there be an appeals process?

Despite significant effort, it is not always possible to achieve consensus on something as challenging and contentious as the initial allocation of catch shares. To address concerns and dissention, many fisheries have found it helpful to develop an appeals process. To ensure neutrality, the process or institution should be separate from those that made initial eligibility and share determinations. It may also be helpful to determine upfront that there will be an established process to handle complaints in order to help participants move forward.

4. Who is eligible to receive shares?

Eligibility can be thought of as two different layers. The first, often a political decision, is determining what categories of stakeholders will be eligible to receive allocation of shares. The second layer of eligibility is determining who within those stakeholder sectors will actually receive shares. Not every participant in an eligible group may be allocated shares.

5. Will initial shares be auctioned or granted?

There are two main forms of initial share distribution: auctioning and granting. Auctions require participants to pay for the catch share privilege, whereas granting gives an identified set of participants the privilege free of charge. Participants could also be granted a share and be required to pay a set fee.

6. How many shares will eligible participants receive?

If a fishery decides that granting of catch shares is preferable, then it must develop a protocol for distributing the shares. Fisheries that have opted to grant without fee have used a variety of formulas to determine share holdings. Formulas usually include the use of catch history and/or level of investment data or employs equal sharing to divide shares. Within a formula, you can also give variables different weights.

7. What data are available for allocation decisions?

What data are available will impact the method of initial allocation. If data are very robust, then it will be possible to develop an allocation system that depends heavily on government information. However, if there is little data or the data is inaccurate, alternative methods should be developed.