

# FOOD & WATER WATCH

January 17th, 2013

## Why Catch Shares Can't Save the Oceans

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By [Meredith Moore \(http://www.foodandwaterwatch.org/about/who-we-are/\)](http://www.foodandwaterwatch.org/about/who-we-are/)

[\(http://www.foodandwaterwatch.org/fish/fair-fish/\)](http://www.foodandwaterwatch.org/fish/fair-fish/) A recent blog at Mother Jones [asks the question \(http://www.motherjones.com/blue-marble/2013/01/fishers-evolving-thoughts-seafood-sustainability/\)](http://www.motherjones.com/blue-marble/2013/01/fishers-evolving-thoughts-seafood-sustainability/), “Can a fish-sharing program save the oceans?” Since the program in question is catch shares, the answer is, “No.” You’re probably asking the next obvious question: why? Catch shares really do look artificially positive until you look at the whole picture.

### [Catch shares programs](#)

[\(http://www.foodandwaterwatch.org/fish/fair-fish/\)](http://www.foodandwaterwatch.org/fish/fair-fish/) privatize our nation’s fisheries, divvying out the privilege of catching fish to a limited number of individuals, and letting them trade, sell, and lease these rights in unregulated, closed markets. In the process, hundreds to thousands of smaller-scale fishermen are cut out of the industry entirely.

What we end up with is a sharecropper system, which was [well-described in a Seattle Weekly feature \(http://www.seattleweekly.com/2013-01-09/news/sharecroppers-of-the-sea/full/\)](http://www.seattleweekly.com/2013-01-09/news/sharecroppers-of-the-sea/full/) on one of the halibut and sablefish catch shares programs in the North Pacific. This catch shares program, which has been in place since 1995, has devolved into a system where boat captains compete against each other to offer the latest in at-sea entertainment and luxury to the wealthy owners of those catch shares, just so they can get some fraction of the profits for themselves and their crew. Many of those catch shares owners have never baited a hook in their lives.

Catch shares are thus essentially an economic management system rather than an environmental one, but the claims made about how catch shares can also ensure sustainability are exaggerated and poorly supported.

All catch share programs operate under a catch limit, which sets the maximum number of fish of that species or species group that can be caught in a fishing year. This is really the only sustainability measure inherent in a catch shares program, and these limits can and have been set independently of catch shares management in numerous fisheries.

In fact, one of the co-authors of the 2008 study published in Science that the Mother Jones blog cites as finding catch shares as “highly effective” in recovering fishery sustainability [has cautioned against interpreting their results that way \(http://www.sciencemag.org/content/321/5896/1678.abstract\)](http://www.sciencemag.org/content/321/5896/1678.abstract), as the study was not sufficient to establish a cause and effect relationship between catch shares and fishery health. This was, in part, due to a [failure to distinguish between \(http://www.sharonlevy.net/PDFs/BioSci%20Catch%20Shares.pdf\)](http://www.sharonlevy.net/PDFs/BioSci%20Catch%20Shares.pdf) the influence of setting catch limits and implementing catch shares.


Once we distinguish between catch limits and catch shares, the only essential conservation idea behind catch shares is “kick a bunch of fishermen out and let the remaining, wealthy few handle the sustainability for us.” Implementing catch shares typically removes other measures to protect vulnerable spawning areas and other critical fish populations, and



their rigidity fails to respond to both natural and dramatic stock fluctuations. And catch shares have been shown to increase bycatch and discard issues in fisheries.

A study out just this week in PNAS confirms what we've intuitively known for a long time - [saving the fish is going to be a lot more complicated than just not catching some of them](http://www.pnas.org/content/early/2013/01/15/1214879110.abstract) (<http://www.pnas.org/content/early/2013/01/15/1214879110.abstract>). Climate change, ocean acidification, pollution, expanding human competition for ocean resources, and natural changes in oceanic states are all going to increase the pressure on our fisheries. And the government's plan to abdicate responsibility for creating sustainable fisheries by ceding all their authority to closed, shadowy private markets is possibly the worst possible situation we could be in to tackle those enormous problems.

## 7 Comments on *Why Catch Shares Can't Save the Oceans*

1.  *Greg Taylor* says:  
[January 18, 2013 at 12:27 PM](#)

Having been involved in the introduction and operation of several catch share programs in British Columbia I can agree that there are challenges with these programs. They include transition costs, intergenerational inequity, reduced employment, “armchair” quota holders, high least costs for fishermen who do not own quota, and economic barriers to entry. But my experience is that they do produce conservation benefits, marketing (value for fishermen) improvements, increased safety, better monitoring and control, cooperation between management/scientists and fishers, and vastly reduced bycatch.

In balance, if the aforementioned problems are addressed in the planning and implementation phase, catch share fisheries can produce conservation and fishery management benefits, improve the economics for remaining owners and crews, and lead to a more ecologically and economically sustainable fishery.

The question my post raises is if these same benefits could be achieved through the modification of an existing large industrial open access fishery in the US or Canada. I have worked with many people over three decades who said that this should be the objective. The difficulty was that we were unable to develop a rational plan that was embraced by all the interests involved in the fishery. Hence, the status quo persisted with its problems: TAC busting, intense political pressure against change, high bycatch, dominance of processors, and poor incomes for all fishermen.

Catch shares are not perfect and require careful planning but they are much better than the status quo in many existing open access fisheries in a developed, western context.

As you can see I am very careful about describing the context where the benefits of catch share fisheries might be achieved. In my work with First Nations fisheries I don't pursue catch share fisheries, largely because a form of catch shares is inherent in many traditional management systems that evolved well before contact.

2.  *Meredith Moore* says:  
[January 18, 2013 at 4:41 PM](#)

Thank you very much for your thoughtful comment and for sharing your experience.

British Columbia's catch share programs are something of an anomaly, as they provide 100% observer coverage on boats and comprehensive dockside monitoring. These provisions have allowed those catch shares fisheries to reduce their discards successfully. But observer coverage is not something inherent to a catch shares fishery; it is a tool available to all fishery managers (albeit an expensive one that many fisheries can ill afford without significant federal aid), which can be applied in many different fishery management schemes.

Most catch shares fisheries do not have comprehensive monitoring programs. In those programs, high-grading and discarding have been called “an almost inevitable outcome of quota-managed fisheries”. (Gibbs, Mark T. 2008) Around the world, catch shares managed fisheries continue to see the health of fishery stocks fluctuate, and even decrease, after decades of catch shares management. We documented these and other environmental problems in our report, Fish Inc. (<http://www.foodandwaterwatch.org/reports/fish-inc/>)


My point is there is really nothing inherently conservationist about a catch shares program, and that they often incentivize wasteful practices. Catch shares remove fishery managers' ability to use all of the tools available to them to flexibly respond to environmental and economic conditions. The idea that giving away the rights to fish to a smaller group of people will somehow engender sustainability simply hasn't been shown to work.

On top of that, the economic and social justice costs that accompany most catch share programs simply are really unupportable. In British Columbia's catch share fisheries, Pinkerton and Edwards (2009) documented that quota lease prices are driving a large portion of the remaining fishing boats into bankruptcy, that the market for quota does not function well and does not overcome the imbalance from the initial distribution of quota, and that crews are receiving significantly less in wages. They conclude, “the efficiency achieved for quota owners comes with a

cost in the lack of public benefits created by the [catch shares] system.”

I appreciate your caution in the application of catch shares to fisheries, and your struggle to confront the large problems of environmental and economic health for fisheries. But it's a bit of a false dichotomy to compare the attributes of a catch share program to an open access fishery - at least in the United States, there are very few truly open access commercial fisheries remaining. There are many ways to manage a fishery, using input and output controls as well as, as you suggested with your first nations work, looking to communities to manage fisheries equitably and sustainably.

We must find a way to confront our problems without giving away our fisheries to shadowy markets and losing our ability to proactively incentivize ecologically sound practices and social justice in the process. Perhaps an extremely well-designed catch share program that does not privatize our fisheries may be one method of doing that, but we've yet to see one that even comes close to solving more problems than it creates.

- o  *Greg Taylor says:*  
[January 20, 2013 at 2:07 AM](#)

Meredith

I don't want to come off as an apologist for all catch share programs. I have been involved in egregious examples and others that may have saved a fishery. What it has shown me is that there is a place for carefully designed catch share fisheries that incorporate effective incentives and disincentives.

In my experience the reason fishermen are forced to embark upon a catch share program is found in the complex and competitive interactions of stakeholders. These forces render the fishery relatively inflexible and resistant to change, often precipitating an economic or conservation crisis. Typically, the only consensus position industry can put forward to address the crisis is to demand increased access, reduced restrictions, and government intervention. This is not particularly helpful or timely when there is a conservation concern and governments are resistant to increased management costs or dictating solutions.

You are correct. There is nothing inherently conservationist about giving someone special rights. Commercial fishermen in relatively unregulated, open access, competitive fisheries are allocated fishing "rights" in the form of commercial licences. These fisheries often have significant conservation challenges that demand increased management controls and monitoring. Concentrating rights into a smaller number of owners, in itself, does little. In fact, it can be harmful for conservation as it concentrates power and calcifies interests.

The introduction of catch shares can result in all the problems you cite. But it does not follow that catch shares must inevitably have these problems. Many of the impacts you cite can be addressed by incorporating appropriate incentives/disincentives and regulations targeted at addressing the identified problems. The impact that cannot be addressed - because it is an inherent outcome of catch shares - is the reduction in the number of fishermen and the concentration of shares.

I won't be caught up in defending catch share programs without scientifically defensible monitoring and compliance systems paid for by the fishery. Catch share fisheries that do not incorporate such provisions fail to internalize the conservation and economic externalities common in many fisheries. Such systems most often concentrate benefits without addressing the costs to the public, the resource, or stakeholders who are disenfranchised.

You have identified a key issue in your first paragraph. When faced with an economic or conservation crisis the question often becomes one of who should be responsible for, or pay the costs of, managing the fishery in a manner that alleviates the dysfunction. In the BC groundfish, halibut, and black cod fisheries governments established objectives for the fishery and insisted that industry meet the objectives and internalize the additional costs. Governments told industry that the additional management, monitoring, and compliance costs could not be downloaded onto the public. In order to pay for these additional costs industry has to drive value into the fishery. This translates into fewer boats catching more fish and spreading the fishery over a greater period of time to increase the market value. Increased revenues went

to quota holders and paying the cost of the management system.

It is at this point I see one of the greatest weaknesses of catch share programs. The additional net “rents” produced go largely to quota holders. There is often little consideration of utilizing a portion of the rents to address the transition and social costs you have identified.

The authors you refer to, along with many others, criticize catch share programs and describe alternatives, including state administered input and output controls. My experience, however, is that input and output controls were either not working, or hopelessly inadequate, often precipitating the crisis in the first place.

Stakeholders and managers, unable to extract themselves from the morass of politics, competing interests and philosophies, or allocations are unable to address the problems. Asking the state to resolve the issue is not productive because if they could have, or wanted to; they would have done so long before.

In the three fisheries I refer to above governments made continued access contingent on industry addressing identified conservation, monitoring, and compliance problems. Governments had little interest in incremental adjustments to address the rampant misreporting and overfishing, and leading stakeholders were unwilling to risk the more revolutionary initiatives proposed by academics and NGOs. Underlying industry’s response was the risk of losing their investment in the fishery on one hand, and potential increased incomes from improved access, better market value, and concentration of benefits for current participants, on the other.


The above is a substantial challenge in developing catch share fisheries. Successful fishermen, often from larger centers, along with processing interests (but not necessarily as catch shares are not necessarily beneficial for processors), and managers with strong ties to interests active in advisory processes dominate the development of catch shares. The resulting catch share program can successfully address the conservation, monitoring, and compliance challenges but often to the disadvantage of other interests.

I find that those unsupportive of catch shares proposals put forward by industry often simply say “no” and quickly abandon the process or are ignored as being counter productive. The best catch share fishery I have participated in is the BC Groundfish fishery. Unions, Provincial governments, communities, and NGOs all participated along with fishermen, processors, and managers. The participation of multiple interests led to the introduction of a more balanced catch share program.

Yes, there may be alternatives to catch share programs to address the conservation, monitoring, compliance, and economic problems experienced by many mature fisheries in developed countries. But the worldwide expansion of catch share programs suggests that while the alternatives may be attractive to academics and NGOs; stakeholders invested in the fisheries, as well as governments, have shown little interest.

I therefore believe that if catch share programs are to be introduced into a fishery; they are more robust, and can address many of the problems you cite, if NGO’s, academics, and other stakeholders interested in the fishery actively engage during the development of the program.

I enjoyed our exchange. Thank you for the opportunity to think through the issues with you. Take care.

3.  *Brent Paine* says:  
[January 18, 2013 at 7:11 PM](#)

I have been involved in the development and management of a couple of catch shares programs, including the Bering Sea Pollock and crab fisheries and most recently the West Coast Trawl fishery (Whiting and non-Whiting groundfish) and disagree with your belief that catch shares programs do not have conservation benefits, and creates more problems than they solve. Rather, I know, based on the experience of these three catch shares programs, that there are a number of very important environmental and economic benefits associated with managing commercial fisheries via a catch shares program.

One benefit is improved catch monitoring and catch accounting, at the individual vessel level. In the Bering Sea pollock fishery, the boat owners pay 100% of the cost of having their harvest observed 100% of the time at sea

while fishing. The fleet proposed this requirement because they need real-time fishery data to help them monitor their fishing activities. This also includes real-time, voluntary bycatch reduction and bycatch avoidance programs that are developed and used by the fleet and not some government required regulation. Catch Share programs allow fishermen to target and harvest the fish they want to sell, but more importantly, to avoid bycatch and unmarketable fish.

In the case of the West Coast trawl fishery, the old management system limited effort by a two-month trip limit allocation. Under that old program, a fishermen could discard fish if they reached their trip limit, with no at-sea observer onboard. This resulted in really poor accounting of harvest, along with an amazing amount of unreported discarding at-sea of valuable fish. Under the new catch share program over the past two years, fishermen bring in and sell 97% of the fish harvested and have to stay under their individual species quota. If they go over, they have to go to the quota market and find available quota. They are not allowed to harvest more fish than they have quota. The benefit is no over-harvesting of an annual allocation (TAC or ACL). This is a benefit to the fish stocks. It was the old Open Access management programs that incentivized fishermen into wasteful practices and drove many of the West Coast groundfish species into an 'Overfished' status. How can you say that catch share programs "often incentivize wasteful practices"?

Prior to ITQs in the Alaska halibut and black cod fisheries, fishermen had to discard halibut when fishing for black cod and discard black cod when fishing for halibut. The result was an amazing amount of fish killed at sea and discarded, called 'regulatory discards'. Under the ITQ program, fishermen have to have their own quota for both species and can retain both species. How is does this program "incentivize wasteful practices"? The opposite is true.

In the West Coast Whiting trawl fishery, the biggest problem was the incidental catch of three rockfish species. Without a Catch Shares program, fishermen would trigger a closure to the Whiting fishery if any one of the hard caps of these incidental species was reached. Under the new Catch Shares program, Fishermen have the incentive to cooperatively work together to minimize the catch of these limited rockfish species. They do this by sharing real-time, at-sea harvest rates of these bycatch species and encouraging the fleet to stay away from "hot spot" zones or areas where these rockfish are located. The Whiting fishermen also have agree to pre-season closures of known areas where high rates of rockfish bycatch. Catch Share program incentivize fishermen to work cooperatively to minimize the catch of bycatch species.

In the Bering Sea Pollock fishery, the biggest program is the incidental catch of Chinook and chum salmon. Under the old management system, the government would set a hard limit of salmon taken and once that limit was reached, the fishery closed. Under the Catch Shares program, fishermen got together and developed an incentive program that rewards fishermen when they avoid salmon bycatch. This is a voluntary program and is very effective at minimizing salmon bycatch. Fishermen would not have the desire or ability to agree to a salmon bycatch incentive program if they did not have a Catch Share program because they worked independently as they had no incentive to work cooperatively.


Another benefit is less impact to the marine environment. The amount of lost gear in the black cod and halibut fishery, and the Bering Sea crab fishery during the derby days was amazing and resulted in a whole lot of unknown fish mortality due to 'ghost fishing' of lost gear. Under catch shares, fishermen are intent on minimizing their operational costs and thus are very aware of not losing gear when fishing. Under Catch Shares, fishermen can take the time to set their gear exactly where they want, where there is good catch rates and known habitat conditions.

The regional fishery councils have the ability to design catch share programs to meet social and community objectives. For example, in the West Coast trawl program, the Pacific Fishery Management Council was intent on not allowing consolidation of the fleet and required very conservative ownership limits and vessel use limits (around 1.5%) for individual species.

I realize your article focuses on the effect to the marine environment, but the primary benefit of a catch share system is measured in economic terms. Catch share programs grew out of the situation where a fishery had too many participants (boats and permits) and too few fish resulting in a fishery where fishermen were spending more money than they were making. In all three fisheries: Bering Sea pollock, Bering Sea crab, and West Coast trawl, fishermen were going broke chasing fewer and fewer fish due to the Open Access management structure and

fishermen in all three fisheries begged the government to switch to a different form of management.

Brent Paine  
Seattle, WA

4.  *Tommy Ancona says:*  
[January 18, 2013 at 8:03 PM](#)

“In the process, hundreds to thousands of smaller-scale fishermen are cut out of the industry entirely.:

Speaking specifically of the west coast trawl catch share system, that statement couldn't be further from the truth. There seems to be a basic misunderstanding of how our catch share system works.

Without getting into too much detail, the only fish quota that is allocated to our catch share system is that tonnage that was caught by the active participants in that fishery. The remainder is allocated to all other user groups, and that amount more often than not far exceeds their annual catch combined. Our Pacific Council went through an extensive allocation process with the goal of insuring ample opportunity now and into the future for all those other fishermen outside the trawl catch share system.


Food and Water Watch has continued to complain about the privatization of the fisheries without having a full understanding of the systems, I know since I've been subjected to their repeated testimony in that vain.

The catch share system has virtually eliminated bycatch and discards, and provides full accountability in the fishery. These were some of the environmental and conservation goals of the system.

As with any new program, it will take some time before fishermen realize the full potential of the program, however fishermen on the west coast are learning fast and coastal communities will also benefit from the economic incentives catch shares could provide.

Inherent in our program are several requirements that go to preventing, in as much as possible, armchair fishermen, while providing the flexibility to maximize the value of the fishery, which becomes a net benefit to the nation as a whole.

There is much more that could be said on the subject.

5.  *Greg Taylor says:*  
[January 20, 2013 at 1:24 PM](#)

Meredith

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6.  **Rob Seitz says:**  
[January 21, 2013 at 5:49 PM](#)

Being human we are incapable of designing a perfect anything, fisheries management plans included. That being said, we always have the responsibility of doing better.

As a participant in the West Coast Groundfish Trawl fishery for the last twenty something years, I believe our ITQ program is better than what we had. I would like to respectfully suggest, rather than condemning the whole quota share management scheme, lets work to make it better.

I am one of those participants who recieved no allocation, but that isn't the point at which, I became a sharecropper, that was back in 92' when the fishery went limited entry. Quota shares give me the ability to buy in incrementally.

In our catch share program the council has set aside 10% of the quota, to be used to deal with the problems of keeping quota anchored in small communities/getting the bodies on the water ownership in thier fishery. If you feel strongly about these issues, stay informed, make sure that quota gets used like it should.

I am involved with a program involving a group of fishermen, The City of Morro Bay, and The Nature Conservancy with exactly these same goals, pay attention and help if you can.

From what I've seen, the conservation benefits are there in the catch shares model, now lets make it sustainable for the humans involved. Instead of finger pointing, do some sleeve rolling.

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