



A Closer Look at Catch Shares in the United States

The Gulf of Mexico



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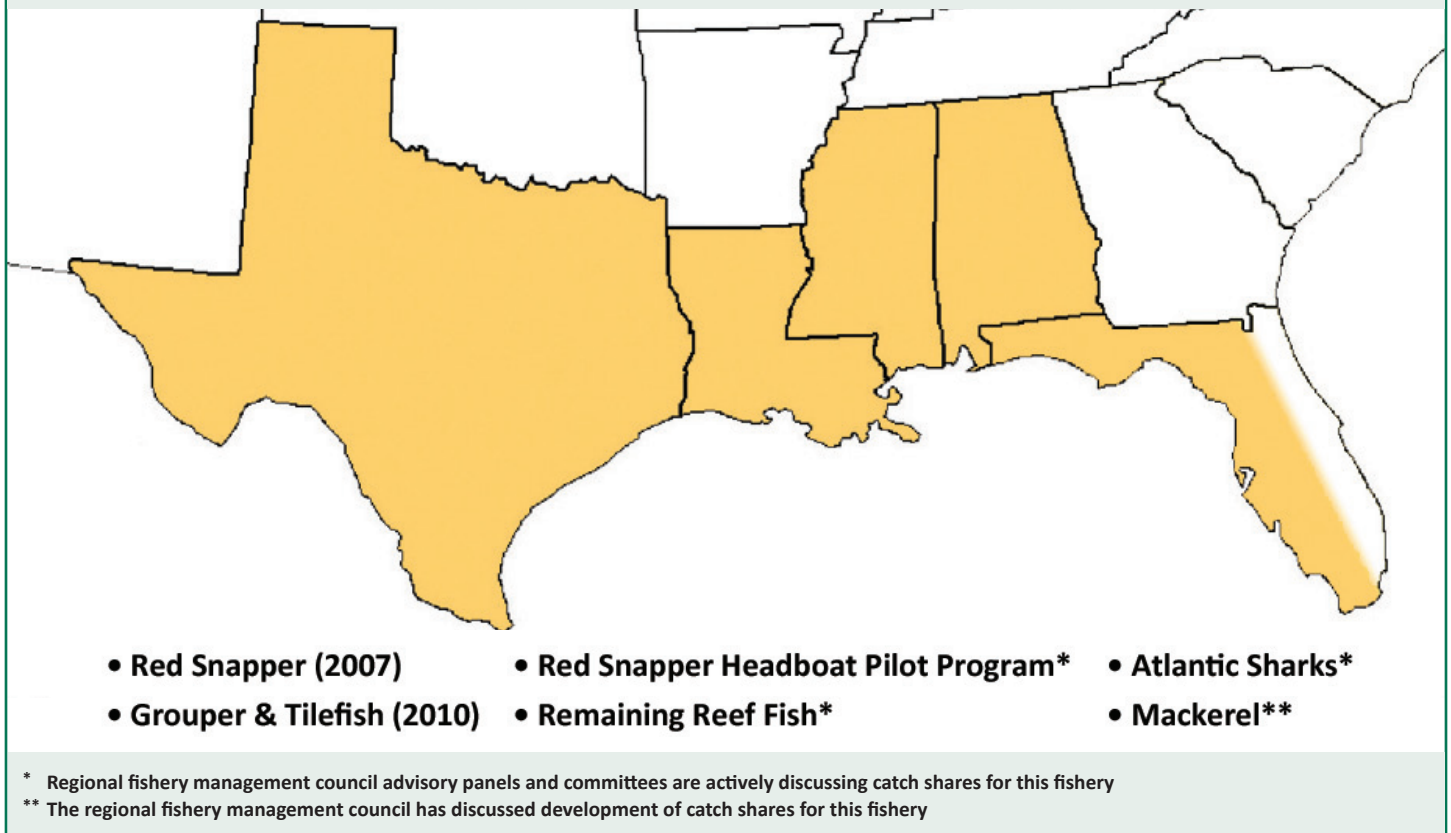
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Introduction	2
The Failures of Market-based Fisheries: The Red Snapper IFQ.	3
<i>Catch Shares at a Glance.</i>	3
<i>Leasing and Buying Quota: A Big Boat's Game</i>	5
More Catch Shares, More Problems: The Grouper and Tilefish IFQ	6
<i>The Birth of "Big Fish".</i>	7
Pushing Forward Despite the Problems: New Programs Under Development	8
<i>Large-scale Fishermen with Oversized Voices.</i>	8
Catch Shares Aren't Fair.	9
Endnotes.	9

Fig. 1: Existing and Developing Catch Share Programs in the Gulf of Mexico



The Gulf of Mexico is known for fishing — vacationers flock to the coasts to charter a boat for a day of recreational fishing or just to dine in restaurants serving up the commercial catch of the day.¹ But behind the stories of landing a monster fish and melt-in-your-mouth grilled filets, a battle is being waged to determine if the Gulf’s fishermen and charter captains will remain an independent and integral part of southern coastal culture, or if they will instead lose their way of life in the rush to transform our fisheries into corporate-dominated markets.

The heart of the problem is a fishery management system called catch shares. (See Figure 1.²) These programs are promoted as “market-based solutions” to fishery management and as the most economically beneficial way to run a fishery.³ But these programs have achieved “efficiency” by cutting smaller-scale, traditional fishermen and their communities out of the fishing business entirely, consolidating the profits in the fishery in the hands of fewer, larger fishing operations.⁴ This kind of consolidation echoes the “get big or get out” mentality that has transformed our nation’s agricultural system from family farms to factory farms and triggered a loss of food quality, food safety and consumer choice.⁵

As detailed below, the Gulf of Mexico is a case study in the problems that result from catch shares management of fisheries:

- Gulf of Mexico fisheries managed under catch shares have seen significant consolidation and job losses, and smaller-scale fishermen are being hit the hardest by these changes. The red snapper fishery faced as much as a 44 percent decrease in the number of permit holders due to its catch share program, resulting in an estimated loss of between 1,017 and 1,695 jobs.
- The direction of fisheries policy in the region is set by the larger-scale fishermen — typically “winners”

under catch shares. Both the red snapper and grouper catch share programs were approved by referenda that excluded those smaller-scale fishermen that had the most to lose from catch share programs.

- Gulf catch share fisheries face increased incentives for fishermen to discard fish. In 2009, in a survey of discards under the red snapper program, more than half of the total fish caught were brought in accidentally and then discarded, were discarded dead or met some other unknown fate rather than being sold at dockside.
- The inherent rigidity of catch share programs leaves them unable to adapt readily to changes in fish stock health for the benefit of fishermen and the fish. In the Gulf, private subsidies had to be given to reduce the price of red snapper quota, after an increased abundance in the eastern Gulf resulted in an increase in grouper fishermen's discards.

Despite these problems, the Gulf of Mexico Fishery Management Council (GMFMC, or the Council), the body responsible for developing federal fishery management strategies for the region,⁶ intends to extend catch shares into more commercial fisheries and also into the recreational fishing sector.

The Failures of Market-based Fisheries: The Red Snapper IFQ

Implemented in January 2007, the Gulf of Mexico red snapper IFQ was the first catch share program in the region. Like most catch share programs, it immediately created a class of “winners” and “losers,” forcing smaller-scale fishermen out of the fishery and granting a small number of larger-scale fishermen increasing control.

Under the law, new catch share programs in the Gulf of Mexico region must first be approved by a referendum of participants in the fishery.¹¹ The region's fishery managers — the Council and the National Marine Fishery Service (NMFS) — used their authority to limit the pool of voters to only those fishermen who had historically caught the most fish; in other words,

Catch Shares at a Glance

Catch shares, often called individual fishing quotas (IFQs), are a means of fisheries management that is spreading rapidly throughout the coastal regions of the United States.⁷ Rather than solving our nation's fishery management problems, however, these programs only create a host of new ones.

Catch shares divide the total amount of fish that can be caught in a year — called a total allowable catch, or TAC — into smaller portions, called shares or quota. These have been given away for free, and often practically forever, to individual fishermen and fishing companies, who are able to lease and sell them.⁸ This creates a small elite group that has access to and control over fish — a public resource. Effectively, this amounts to privatization and hurts consumers, fishermen and our oceans.

The closed markets created by catch shares have numerous problems. Catch shares typically cause consolidation of shares (and thus economic power), force many fishermen out of the industry, make it harder for new fishermen to join, cause unemployment for crew and hurt related industries such as processors, boat repair and bait shops and communities with strong ties to commercial fishing.⁹ Further, catch shares can incentivize the use of larger-scale boats, more damaging gear and wasteful fishing practices that hurt fish populations and the habitats upon which they depend.¹⁰

those with the highest “landings.”¹² This excluded smaller-scale fishermen who might be less likely to vote for a catch share program.¹³ The final referendum, in which only 167 ballots were distributed,¹⁴ excluded the more than 600 holders of lower-landings permits.¹⁵

An economic disaster: Smaller-scale red snapper fishermen left out in the cold

The Gulf of Mexico red snapper IFQ was expressly intended to reduce “overcapacity” in the fishery.¹⁶ This means that the objective was primarily to remove fishermen and boats competing for catch from the fishery. After four years of catch shares management, NMFS claims a total reduction in red snapper shareholders of 22 percent, from 546 initial participants to 425.¹⁷ But this number doesn’t count the fishermen who qualified to catch red snapper before the IFQ but were cut out of the fishery afterward.¹⁸ As shown in Figure 2,¹⁹ there could be as much as a 44 percent decrease in the number of permit holders for red snapper due to the IFQ.²⁰

But since shareholders are typically the owners of boats,²¹ these reductions actually can translate into as many as three to five crewmember jobs per boat pulled off the water.²² NMFS’s estimate of a 22 per-

cent reduction in shareholders means that as many as 363 to 605 jobs could have been lost during the first four years of the catch share program.²³ But by including all the fishermen excluded from red snapper by the IFQ, this number increases to as many as 1,017 to 1,695 lost jobs.²⁴

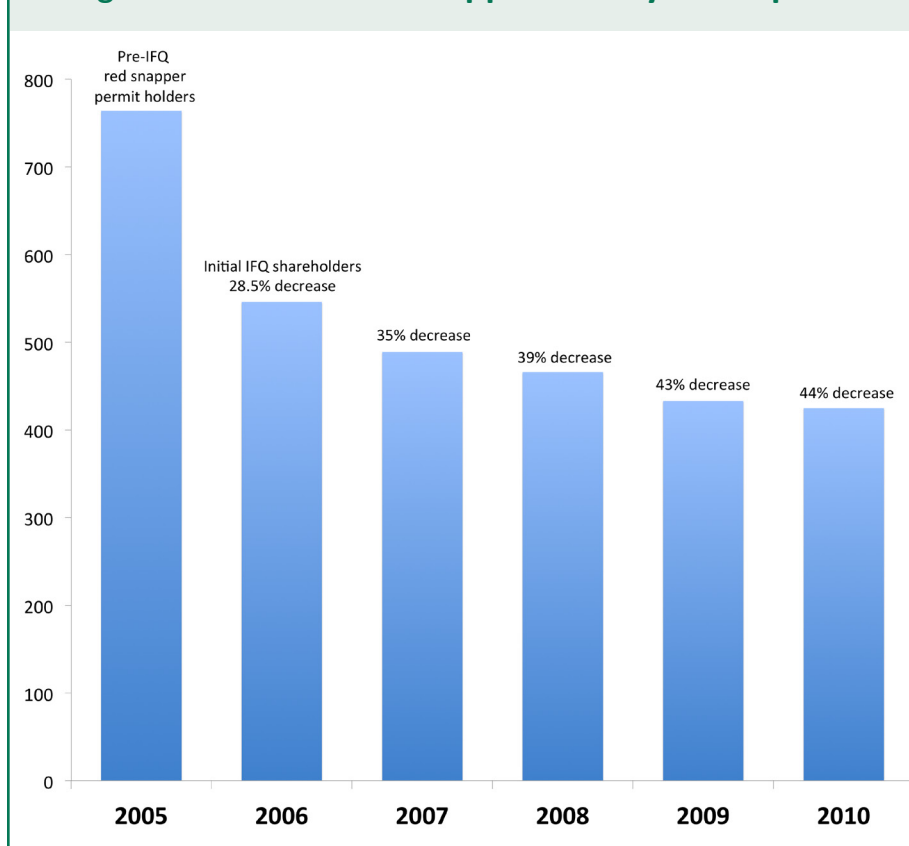
Small fishermen have borne the brunt of these losses. NMFS’s data show that the fishermen who chose to sell their shares and exit the fishery have been disproportionately smaller-scale fishermen; the number of larger-scale fishermen actually increased during this period, as they were able to purchase additional shares.²⁵

The dramatic reduction in smaller-scale fishermen is likely due to a combination of two things. First, under NMFS’s estimate of the minimum number of shares a fishermen would need to stay profitable under catch shares,²⁶ more than 434 of the original 546 share recipients would not profit.²⁷ This means that smaller-

scale fishermen could struggle because they received such an inadequate amount of quota. Second, smaller fishermen were squeezed out when the total red snapper commercial quota was reduced by 23 percent between 2007 and 2008,²⁸ due to concerns about the overfished state of the stocks.²⁹ With less fish available to apportion to shareholders, those with smaller initial shares and those who are operating with narrow profit margins likely had trouble legally catching enough fish to cover their costs.

Catch share programs typically allow shares to be sold or leased. In the Gulf programs, “shares” represent the percent of the total catch the fishermen was given based on his or her history, and they can be permanently sold, while the yearly “allocation” of pounds of fish for those shares can also be sold on only a year-at-a-time basis. Sales

Fig. 2: Decline in Red Snapper Fishery Participants

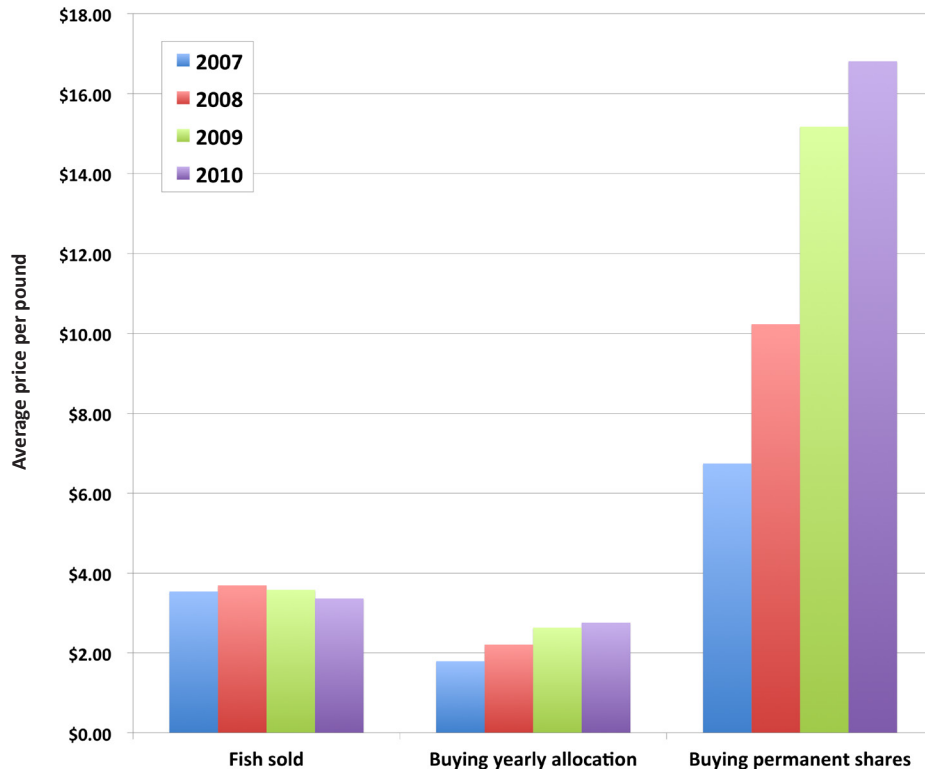


In 2005, there were 764 permits for red snapper; after four years of IFQ management, only 425 participants remained.

of yearly allocation are akin to leasing shares for a year.

Theoretically, fishermen should be able to purchase additional permanent shares or yearly allocation³⁰ to increase their access to fish, but smaller-scale fishermen might not be able to afford to do either. Revenue under the IFQ program was predicted to increase as much as 48 percent,³¹ but prices for selling fish, at their highest, only increased by approximately 3 percent by 2008,³² while the total allowable catch was reduced. Meanwhile, the prices for shares and allocation have increased steadily every year.³³ As shown in Figure 3,³⁴ the new costs of doing business represent an increasing and untenable burden on fishermen. Fishermen are forced out of the fishery, either into bankruptcy³⁵ or into other fisheries that aren't under an IFQ.

Fig. 3: Sale Price for Red Snapper Versus Cost of Yearly Allocation or Permanent Shares



During the first four years of the red snapper IFQ program, the price fishermen earned for their fish remained relatively the same, while the prices for allocation and shares increased steadily.

Leasing and Buying Quota: A Big Boat's Game

Catch share programs, like the Gulf of Mexico programs detailed here, typically allow shares to be sold or leased. But this system can turn out to be inherently unfair to small-scale fishermen. First of all, the initial free distribution of shares gifts a select few with a windfall of wealth, as such an allocation transfers the future value of the public fishery into private ownership.³⁶ Immediately upon receipt, these privileged few can sell their quota and gain an instant profit,³⁷ or they can use the expected value as collateral to get bank loans.³⁸

Quota owners can use these loans to buy additional quota³⁹ or to invest in other industries, furthering their own personal profit.⁴⁰ Some choose to hold on to their quota, lease it to other fishermen and accrue long-term wealth without actually fishing.⁴¹ These “armchair fishermen” or “fishery landlords” make a profit, while quota leasing can become the single largest operating cost for the fishermen out on the water.⁴² Essentially, catch shares turn a fishery into a stock market, where quota shares become intangible assets with higher market values than the vessels and equipment needed to fish, or even the fish themselves.⁴³

Ecosystem-unfriendly management: The red snapper IFQ fails to adapt

In addition to its failure to improve the economic status of all Gulf fishermen, the red snapper IFQ has struggled to meet its ecological goals. As mentioned above, in the second year of IFQ management, the TAC for red snapper had to be reduced sharply to respond to declining stock estimates. While there is some indication that the red snapper stock is now recovering as the Council has increased the total allowable catch,⁴⁴ this may be due to a combination of other measures that were taken to protect the stock, not simply IFQ management.⁴⁵ The measures, implemented shortly after the establishment of the IFQ, included those aimed at reducing red snapper “bycatch” — when incidentally caught red snapper are discarded, often dead or dying, by fishermen targeting other species.⁴⁶ The Council changed the size limits of the fish that had to be retained, took steps to decrease bycatch from shrimp fishing and mandated the use of fishing hook types less likely to kill accidentally caught and released snapper.⁴⁷

Even with these measures, the fishery struggles with bycatch. NMFS, which is responsible for monitoring bycatch levels in the fishery, conducted a very small analysis of 66 out of 2,491 red snapper fishing trips in 2009⁴⁸ and found that more than half of the total fish caught were discarded.⁴⁹ This means that they were brought in accidentally and then discarded, were discarded dead or met some other unknown fate rather than being sold at dockside.⁵⁰ Bycatch numbers improved in 2010, when only around 40 percent of the catch was discarded, but these numbers are still worse than bycatch for 2007 or 2008.⁵¹

One possible explanation for this change is changes in the stock itself — red snapper abundance has been increasing in the eastern Gulf, and they are being caught more by grouper fishermen who do not have much red snapper quota (because they didn’t initially qualify for quota and can’t afford it now). So, these fishermen must discard their catch.⁵² This exposes one of the major flaws of IFQ systems: their rigidity. Fishermen cannot respond to changes in fish stocks because they are locked into the quota they have or locked out of quota systems they weren’t initially in.

Since the red snapper IFQ system had no real way to address this problem, an anonymous donor began subsidizing red snapper quota for fishermen in the eastern Gulf.⁵³ Without this dramatic intervention from an outside party, fishermen would have little choice but to continue to discard valuable fish the IFQ prohibited them from keeping. In fact, one member of the Council panel that oversees the IFQ opined that it wasn’t even possible to address the snapper bycatch issue in an IFQ program.⁵⁴

The bycatch problem in the Gulf is consistent with new research suggesting that at least one U.S. catch share program has diverted traditional fishing communities’ focus on diverse and adaptive fishing strategies — strategies that consider habitat, migratory patterns and fishing gear.⁵⁵ Rather than increasing fishermen’s personal investment in the fishery and encouraging cooperation to spur long-term sustainable management, this program has motivated fishermen to attain short-term goals, such as maximizing their quota usage and raising the value of their quota share.⁵⁶

The red snapper IFQ program in the Gulf is currently under review, having been in place for almost five years.⁵⁷ Despite the fact that there have been no comprehensive studies released that assess the comprehensive socioeconomic or ecological impacts of the program, the Gulf Council’s review panel has already agreed that the catch share program was “functioning well and meeting its goals and objectives.”⁵⁸

More Catch Shares, More Problems: The Grouper and Tilefish IFQ

The Gulf’s grouper and tilefish IFQ began on January 1, 2010,⁵⁹ putting 18 additional species,⁶⁰ representing 52 percent of all reef fish landings, under catch shares management.⁶¹ (Red snapper, also a reef fish, represents about 10 percent of the reef fish catch, putting over 60 percent of the reef fishery under catch shares.)⁶²

Like the red snapper, establishing the grouper and tilefish program required a referendum of fishermen in the fishery.⁶³ While the Council planned to allow

all 1,028 holders of commercial reef fish permits to be eligible to hold shares under the program,⁶⁴ they again severely restricted the number of voters in the referendum to far fewer people. Only 333 permit holders, those who had fished over 8,000 pounds on average during the qualifying years, were allowed to vote; this represented only 30.8 percent of the shareholders in the fishery.⁶⁵ By restricting voting to only the very largest of fishermen, getting the referendum passed was not a problem: only 273 votes were cast, and 81 percent were in favor.⁶⁶ Food & Water Watch conducted a “re-referendum” that included the marginalized fishermen and found that 88 percent of respondents would have voted against the IFQ system.⁶⁷

While the grouper and tilefish IFQ program is so new that no hard data exist on its effects, a survey of stakeholders’ perceptions at the program’s outset revealed significant pessimism among fishermen that catch shares was the right thing for their fishery, particularly among small-boat operators.⁶⁸ Fishermen disagreed that discards would decline and that job opportunities would increase.⁶⁹ They also felt the IFQ would reduce the number of vessels in the fishery and prevent new fishermen from entering the fishery.⁷⁰ Perhaps most notably, both larger- and smaller-scale fishermen felt that more fisheries should not be managed with IFQs.⁷¹

The early years of the grouper and tilefish IFQ have been tumultuous. Like the red snapper, the grouper and tilefish IFQ experienced a significant total reduction in quota shortly after being implemented,⁷² but the fishery also had additional severe gear restrictions put in place to protect endangered sea turtles.⁷³ Thus,

both IFQ programs in the Gulf show how catch share programs are inflexible, locking fishermen into fishing specific species and failing to adapt to the greater ecosystem’s dynamics.

For example, the quota for one species of grouper, the gag grouper, was drastically reduced from 1.49 million pounds to 430,000 pounds after new stock assessments indicated that the fish population was too low and too many fish were still being caught.⁷⁴ This reduction will likely increase the financial difficulties of smaller-scale fishermen who relied on gag grouper for their livelihood,⁷⁵ and will increase consolidation in the fishery.⁷⁶ While these fishermen may try to shift their efforts to catching more abundant fish,⁷⁷ they will likely face increased costs from having to buy or lease quota for these different species.

The second shock to the IFQ program came when one particular gear type that typically targets red grouper, called longline gear, was severely restricted due to unacceptably high levels of bycatch of endangered turtles.⁷⁸ Fishermen using longlines tend to be larger-scale operations and likely were initially granted significant shares of red grouper IFQ.⁷⁹ The restriction on longliners was expected to reduce the number of active vessels in the fishery by 79 percent.⁸⁰ Such boat owners may attempt to switch to vertical line gear and target other species, although there is no way to know how many of them will successfully make the switch.⁸¹ To further complicate matters, they are switching to vertical gear, typically used to target gag grouper, which may result in a large number of these very large boats increasing pressure on this overfished species.⁸²

The Birth of “Big Fish”

Our agricultural system has long operated under extreme economic pressure to “get big or get out.”⁸³ Numerous smaller farms rapidly consolidated into fewer large factory farms over the course of the last several decades, resulting in the near-death of the family farm and the loss of food quality, food safety and consumer choice.⁸⁴ Catch shares create similar pressures. As one fishermen in the grouper and tilefish program said: “Many small commercial fishermen who did not cause the problem [stock depletion] are being forced out of business or will be forced to be ‘share-croppers’ buying or leasing IFQ from those who caused the problem. Small fishing communities are getting smaller and poorer.”⁸⁵

Pushing Forward Despite the Problems: New Programs Under Development

Despite the fact that the current programs have put nearly 60 percent of the reef fishery under IFQ management, and catch shares have struggled in the face of fish stock declines and bycatch issues, the Gulf Council is moving forward on developing more IFQ

programs. One advisory panel is developing recommendations to add six or more additional reef fish into an IFQ system,⁸⁶ and the Council is moving forward on a catch share program for migratory sharks.⁸⁷ They are also considering catch shares for headboats, which are recreational charter boats in the reef fish fishery.⁸⁸ IFQ programs are being promoted by powerful and well-funded groups that want to see the Gulf-wide adoption of catch shares for commercial and recreational fisheries.⁸⁹

Large-scale Fishermen with Oversized Voices

The advent of catch shares in the Gulf of Mexico region has led to the rise of the Gulf of Mexico Reef Fish Shareholder's Alliance, a group composed primarily of the "winners" of the catch share system in the Gulf. These large fishing interests may catch up to half of the Gulf reef fish,⁹⁰ but opposing groups suggest the Alliance represents only fewer than 10 percent of Gulf fishermen.⁹¹

The Alliance, created in 2008, receives a significant portion of its funding from \$112,500 in grants from the Environmental Defense Fund (EDF),⁹² an environmental group that advocates internationally for catch shares as a market-based solution to fisheries management.⁹³ In addition, the Alliance received a \$200,000 grant from the National Fish and Wildlife Foundation,⁹⁴ a non-profit created by Congress⁹⁵ funded by corporate partners, including ExxonMobil, Chevron, BP and Shell,⁹⁶ and foundations including the Walton Family Foundation, the charitable foundation of Walmart.⁹⁷

The Alliance, despite being a new organization, is politically powerful and has influenced the Gulf Council. As highlighted in a report from EDF to one of its funders, the Alec C. Walker Foundation, the Alliance played "a leading role" in both the establishment and design of the grouper and tilefish IFQ.⁹⁸ The report also touts that the Alliance is a driving force behind plans to extend IFQs to more commercial reef fish species.⁹⁹ Demonstrating this, the Ad Hoc Commercial Reef Fish IFQ panel has only seven members, two of which are Alliance members and one of which is from EDF¹⁰⁰ (the EDF report claims the Alliance won six seats but does not specify for which panel).¹⁰¹ The Alliance is also "working with EDF and the Gulf Council to explore ways to expand catch shares management to include recreational fishermen," by actively recruiting for-hire charter captains to work with them.¹⁰²

The Alliance and EDF have further teamed up for a push to label Gulf seafood caught under IFQ programs as sustainable, despite the problems with stock levels and bycatch. "Gulf Wild," a registered trademark of the Alliance, is a seafood branding effort whose partners include EDF, a marketing firm, a major seafood testing company and the Walton Family Foundation.¹⁰³

EDF has estimated that the total project expenses of its work in the Gulf are \$1,664,147.¹⁰⁴ Smaller-scale fishermen are trying to organize against these efforts,¹⁰⁵ but as catch shares are extended to more species in the Gulf, there will be fewer and fewer of them left to fight.

Catch Shares Aren't Fair

There is no question that our nation's fisheries require responsible management systems to ensure their long-term health and profitability. Catch share systems, as implemented throughout the Gulf of Mexico and the world, have typically resulted in an unfair giveaway of public resources to private entities. The gains in economic efficiency hailed by supporters of catch shares have come at the expense of the livelihoods of thousands of smaller-scale, traditional fishermen and their communities, and the claims of increased fishery sustainability and safety are often overblown.

As seen in the Gulf of Mexico, market-based fisheries management fails to adapt to the complexities of fishery ecosystems, and the economic realities of these programs ensure that smaller-scale traditional fishing is in real jeopardy.

The commercial and recreational fishermen of the Gulf of Mexico cannot afford any more of these programs. By making sure that all fishermen are part of the management process and are treated fairly, we can ensure that they belong to healthy communities and catch the fish in our markets using the best available practices. This promotes a better life for our nation's fishermen and coastal and fishing communities and a better product for consumers.

Endnotes

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- 2 Red Snapper: NOAA Fisheries Service. "Catch Share Spotlight No. 6: Gulf of Mexico Red Snapper IFQ." Last updated November 2009; Grouper & Tilefish: NOAA Fisheries Service. "Catch Share Spotlight No. 14: Gulf of Mexico Grouper and Tilefish IFQ." Last updated December 2009; Remaining Reef Fish: Gulf of Mexico Fishery Management Council, Reef Fish Limited Access Privilege Program Advisory Panel. "Meeting summary report." From the February 7-11, 2011 Gulf of Mexico Fishery Management Council briefing packet. Tab B, No. 9. January 25, 2011; Headboat Red snapper IFQ Pilot program: Gulf of Mexico Fishery Management Council, Reef Fish Limited Access Privilege Program Advisory Panel. "Meeting summary report." From the February 7-11, 2011 Gulf of Mexico Fishery Management Council briefing packet. Tab B, No. 9. January 25, 2011. Also from Gulf of Mexico Fishery Management Council Reef Fish Limited Access Privilege Program Advisory panel. "Meeting summary report." March 28-29, 2011; Mackerel: Gulf of Mexico Fishery Management Council, Mackerel Management Committee Meeting, October 27, 2010. From the February 7-11, 2011 Gulf of Mexico Fishery Management Council briefing packet. Tab C, No. 2. At 4; Atlantic sharks: National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce. "Notice of intent: Control date for Atlantic shark landings; request for comments." 76 FR 57709. September 16, 2011.
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- 8 National Research Council. Committee to Review Individual Fishing Quotas. "Sharing the fish: Toward a national policy on individual fishing quotas." National Academy Press. Washington, DC. 1999 at 1-3 and 20; National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce. "Fisheries of the Caribbean, Gulf of Mexico, and South Atlantic; Reef fish fishery of the Gulf of Mexico; Amendment 26; final rule." 71 FR 67447. November 22, 2006 at 66459 – 67462; National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce. "Fisheries of the Caribbean, Gulf of Mexico, and South Atlantic; Reef fishery of the Gulf of Mexico; Amendment 29. Final Rule." 74 FR 44732. August 31, 2009 at 44745–44747.
- 9 Food & Water Watch. 2011 at 3-7.
- 10 Food & Water Watch. 2011 at 8-11.

- 11 Magnuson-Stevens Fishery Conservation and Management Act, as amended through Jan 12, 2007. § 303A (c) (6) (D). May 2007, second printing.
- 12 With a few exceptions, only Class 1 permit holders were eligible to vote in the referendum. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Regional Office. "Final supplemental environmental impact statement for amendment 26 to the Gulf of Mexico reef fish fishery management plan to establish a red snapper individual fishing quota program (including a revised initial regulatory flexibility analysis and regulatory impact review)." July 27, 2006 at 17, 32.
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- 14 National Oceanic and Atmospheric Administration. July 27, 2006 at 32.
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- 18 There are several reasons why a fishermen would not qualify for an IFQ distribution. For instance, shares were only given to those with landings during certain qualifying years, and there was a minimum share value set. 50 C.F.R. § 622.16 (2010).
- 19 National Oceanic and Atmospheric Administration. July 27, 2006 at 19; National Marine Fisheries Service, Southeast Regional Office. October 28, 2011 at 6.
- 20 There were 764 red snapper licenses (136 Class 1 and 628 Class 2) in 2005. The percentage decrease in participants using this number instead of the number of initial red snapper quota holders is 44 percent $((764-425)/764 * 100\% = 44 \text{ percent})$. National Oceanic and Atmospheric Administration. July 27, 2006 at 19; Because multiple permits can be owned by the same person, each permit does not necessarily represent a unique individual. Gulf of Mexico Fishery Management Council and National Oceanic and Atmospheric Administration. December 5, 2008 at 48.
- 21 Gulf of Mexico Fishery Management Council and National Oceanic and Atmospheric Administration. December 5, 2008 at 48.
- 22 Gulf of Mexico Fishery Management Council. "Scoping document for a plan amendment addressing crew size and income requirements for the Gulf of Mexico Fishery Management Council's fishery management plans. March 2011 at 7; Weninger, Q., and Waters, J.R. "Economic benefits of management reform in the northern Gulf of Mexico reef fish fishery." *Journal of Environmental Economics and Management*. Vol. 46, No. 2. 2003 at 213. From Table 1, where Labor (X2) is "measured as the number of crew on board the vessel times days at sea." By dividing mean Labor (14.06) by mean days at sea (3.79) we find a mean number of crew jobs to be 3.7. By dividing max labor (66.5) by max days at sea (14) we find a mean number of crew jobs to be 4.7.
- 23 121 shareholders were lost with 3–5 crew jobs lost per shareholder. Calculations by Food & Water Watch.
- 24 339 permit holders lost, 3–5 crew jobs each. Calculations by Food & Water Watch.
- 25 *Ibid.* at 7.
- 26 National Oceanic and Atmospheric Administration. July 27, 2006 at 146.
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