Overcoming Three Hurdles to IFQs in U.S. Fisheries:
A Guide for Federal Policy Makers

By Donald R. Leal, Michael De Alessi, and Pete Emerson

To the Reader

For decades, U.S. federal fisheries policy has relied on direct regulations to prevent overfishing. Such an approach has not eliminated overfishing, nor has it prevented the enormous waste and hazards of fishing under a destructive race for fish. The good news is that there is a better way to manage our ocean fisheries. Individual fishing quotas (IFQs), also called individual transferable quotas (ITQs), have proven effective in restoring health and sanity in a host of fisheries around the globe.

In spite of these successes, there are a number of obstacles to IFQ implementation. To begin to address these, PERC, the Reason Foundation, and Environmental Defense held a luncheon briefing on Capitol Hill on November 12, 2003, for federal policy makers and their staffs. The briefing, titled "Overcoming Hurdles to Implementing Individual Transferable Quotas (ITQs) in U.S. Fisheries," was well-attended and opening remarks were made by Congressman Wayne Gilchrist (R-MD), who plans to introduce legislation re-authorizing the Magnuson-Stevens Fishery Management Act. Mr.Gilchrist assured everyone in attendance that fishery management legislation needs to be "as reasonable, as pragmatic as possible," and needless to say, more effective than in the past.

The following discussion, based on the November 12 briefing, describes the problems in U.S. fisheries, the potential role of IFQs, and the three most contentious issues surrounding their implementation. These are the questions of whether a two-tiered system that includes both IFQs and individual processor quotas (IPQs) is needed, what restrictions, if any, to place on IFQs, and whether or not to place a sunset provision on IFQs.

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WHY INDIVIDUAL FISHING QUOTAS?

Anyone familiar with U.S. coastal ocean fishing recognizes that the current approach to managing our fisheries is not working. Despite a multitude of fishing restrictions, seven species of groundfish off Washington, Oregon, and northern California have been declared overfished by the National Marine Fisheries Service. So have several crab stocks off Alaska's Bering Sea, and a $100 million vessel buyout program is needed to reduce the size of the crab fleet. Red snapper in the Gulf of Mexico have suffered enormous waste under a management-induced fishing derby since 1990. And so the story goes.

Fortunately, there is a better way to manage our fisheries. A growing number of fisheries around the world have adopted individual fishing quotas (IFQs), also called individual transferable quotas (ITQs).Under IFQs, each quota holder is entitled to catch a specified percentage of the total allowable catch (TAC) that is set each season by fishery managers. Thus, an individual who holds a 0.1 percent share in the Gulf of Mexico red snapper fishery is entitled to 3,000 pounds of snapper for the season if the TAC is 3,000,000 pounds. By making IFQs transferable, current holders can adjust the size of their fishing operations by buying and selling quotas. Those wishing to enter an IFQ fishery can buy or lease quotas from current quota holders who want to reduce their participation. Those wishing to leave the fishery can sell their quota to other fishermen.

New Zealand and Iceland now use IFQs to manage nearly all their commercial fisheries, Canada and Australia use IFQs in quite a few of their fisheries, and the United States, Greenland, and the Netherlands use IFQs for some fish species. Overall, IFQs have generated higher incomes for fishermen, improved product quality for consumers, reduced fleet excesses, and nearly eliminated instances in which the actual harvest exceeded the total allowable catch (see Arnason 1996; De Alessi 1998; NRC 1999; Repetto 2001; Wilen and Homans 2000).

Practical experience with IFQs indicates that they have led to considerable benefits. Consider the Alaska halibut fishery. Under the old regulatory regime, managers tried to prevent the overall harvest from exceeding the TAC by shortening the length of the fishing season. The seasons got shorter and shorter, but fishermen still tried to catch as much as they could as quickly as they could, and the overall harvest often exceeded the TAC (Dinneford et al. 1999). By the early 1990s, halibut fishermen were limited to fishing during just two or three 24-hour fishing openings a year. Not only did profits fall and consumers receive mostly frozen fish, but halibut fishermen had to fish in bad weather.

Under IFQs, managers extended the length of the fishing season, increasing it from two or three one-day openings a year to just over eight months a year. The extended

season allowed fishermen to respond more effectively to consumer demand for fresh fish, resulting in slightly higher dockside prices for fishermen (GAO 2002, 21). Safety has improved as fishermen were no longer forced to fish during bad weather (Hartley and Fina 2002, 34). Gear loss and halibut mortality due to gear loss declined substantially, resulting in much lower gear replacement costs and less resource waste (Hartley and Fina 2002, 34). Actual harvests no longer exceed TACs (Dinneford et al. 1999). The number of vessels active in the fishery declined from 3,412 in 1994 to 1,612 in 1999, largely due to buying and selling of quotas (NMFS 2000). All told, higher returns and good prospects have led to a dramatic rise in aggregate value of quotas. In 1995, the first year of the program, the aggregate value of the quotas was just over $295 million. In 1998, the aggregate value of the quotas had grown to nearly $492 million–a 67 percent increase in four years (Leal 2002, 13).

In the more challenging multi-species British Columbia groundfish fishery, IFQs are again proving their worth. Before individual vessel quotas (IVQs)—a variant of IFQs—were introduced, the fishery was suffering from bloated fleet size and declining trip limits that resulted in unusually high bycatch and discard mortality, declining income for fishermen, and economic instability throughout the industry. Under IVQs, the fleet has trimmed down to nearly half its size (Environmental Defense n.d.). The elimination of trip limits has resulted in improved operational efficiency, improved product quality, and better servicing of markets. In addition, the number of processors has increased from 12 to 15 companies, helped along by a partial allocation of the TAC to newly formed processor/fishermen teams.

Conservation has also improved markedly (Environmental Defense n.d.). Before IVQs, bycatch and discard mortality were increasing. Under IVQs, bycatch and discard mortality have been decreasing. Prior to IVQs, fishery managers were unable to manage groundfish species individually and as a result many individual stocks were overfished. With IVQs, fishery managers were able to focus on a stock-specific basis, with IVQs for each of the 55 stock-specific TACs. Now, none of the TACs is being exceeded under the IVQ program.

WHAT IS HOLDING UP IFQ IMPLEMENTATION?

Despite their successes, IFQs have been implemented in only four federally managed fisheries in the United States. A moratorium was imposed on using IFQs in other federal fisheries in the 1996 re-authorization of the Magnuson-Stevens Act. Congress allowed the moratorium to expire at the end of September 2002, but congressional debates continue over how ITQs should be implemented.

Currently, there are three highly contentious issues surrounding IFQ implementation in U.S. fisheries. They are: whether or not to create a two-tiered system that includes IFQs and individual processing quotas (IPQs); what restrictions, if any, to

place on the transferability of IFQs; and whether or not to impose a sunset provision on IFQs.

Processor Quotas

"When all the rhetoric is stripped away, processor quotas come down to one simple idea: to place legal restrictions on where fishermen can sell their catch."

Richard Young
Commercial Fisherman
Multiple West Coast Fisheries

In 2003, individual processor quotas (IPQs) moved front and center in the debate over how IFQs should be implemented in U.S. fisheries. They were made part of a plan to rationalize crab fisheries in the Bering Sea and Aleutian Islands.[1] Among the plan's many provisions, each crab fishery would be managed using IFQs allocated to crab fishermen with catch histories in the fishery and using IPQs allocated to processors with processing histories in the fishery.[2] In addition, ninety percent of the catch would have to be delivered to processors that hold IPQs, while the remaining ten percent can be processed by anybody. Such a system is the first of its kind for a U.S. fishery, and it appears it will not be the last. A pilot program of IFQs and IPQs is also planned for the rockfish fishery in the Gulf of Alaska.

There is little doubt that the current approach to managing Alaska crab fisheries needs to change. Each fishery is subject to an extremely short fishing season—as little as 2 to 3 days in the fishery with the shortest season. The short seasons have forced fishermen to deliver all of their catch to processors in one fell swoop, resulting in a glut of crab on the market and lower dockside prices for fishermen. Moreover, the hectic pace of fishing increases fishing costs, complicates stock management, and exacerbates dangerous fishing conditions.

The proven remedy to such problems is to establish IFQs in the crab fisheries. IFQs would eliminate the need for short seasons and slow the pace of fishing so it could become more manageable and safer. Because they are tradable, IFQs would also help reduce fleet excesses that built up under the old regime.

These benefits will not come without processors experiencing change in the supply of crab. The longer seasons from IFQs eliminate crab gluts and allow fishermen more time to choose when to fish, which may include the time when fishermen expect higher prices. Moreover, there will no longer be a need to process and freeze large quantities of crab all at once. As a result, some processor capital may become unnecessary, at least in the short term. Not all processors, however, will necessarily suffer from shift to IFQs. A recent government report concludes that in the Alaska

halibut and sablefish IFQ program "[s]ome processors were adversely affected by the IFQ program, while others benefited"(GAO 2002, 1).

Helping processors adjust to such changes can help broaden acceptance of IFQs, and IPQs have been offered as a way to compensate for any losses processors may experience. But is it the best approach? From the standpoint of economic efficiency the answer is a resounding no. With IFQs, the expected efficiency gains are clear. The longer season allowed by IFQs and the corresponding slower pace of fishing allows fishermen to take better care of their catch and respond to market demand. By allowing IFQs to be transferable, fleet size will also be reduced, which will lead to lower fishing costs. But, in contrast, IPQs will result in less competition among fish buyers while offering no countervailing efficiency gains. IPQs do nothing to end the race for fish and its associated problems and they do nothing to help reduce fleet excesses that have built up under the present regime.

In a letter from the Antitrust Division of the Department of Justice to the National Oceanic and Atmospheric Administration (NOAA) General Council's Office, the Department concluded that as a part of crab rationalization, IPQs "will likely reduce competition among processors, which could discourage efficient investments, limit new product development, and undercut competition in selling processed crab products."[3] Moreover, while the Department "recommends that NOAA support individual fishing quotas ('IFQs') for harvesters, a reform that will end the race to fish," it "further recommends that NOAA oppose individual processor quotas ('IPQs')."[4]

An appropriations bill rider containing crab rationalization with IPQs sailed through Congress in January 2004, but the rider's passage has not ended the IPQ debate in Congress. In a February 25, 2004, a Senate hearing on possible use of IPQs for other U.S. fisheries contemplating IFQs, Chairman John McCain (R-AZ) voiced his displeasure: "For centuries, fishermen have used market forces to negotiate their dockside prices and foster competition that ultimately benefits consumers. Requiring fishermen to sell their catch to only a handful of processors sets this economic principle on its head" (quoted in Freedman 2004).

There are better options for compensating processors, ones that we recommend in lieu of IPQs. One is a one-time buyback of stranded processor capital using funds from a loan from the government that will be paid back by IFQ holders. Experience in other IFQ fisheries indicates that fishermen holding IFQs obtain a new source of wealth from the IFQ as it rises in value in response to an improving fishery. The gains from this new source of wealth will enable them to pay back the loan over a reasonable amount of time with interest. In contrast to IPQs, such an approach does not distort markets and removes the specter of anti-trust concerns associated with IPQs.

Another option is to set aside a portion of the TAC for processors or processor/fishermen teams who experience hardships because they are located in remote communities with few employment options. The latter is being carried out in the British

Columbia groundfish trawl fishery. Specifically, ten percent of each groundfish TAC is set aside as groundfish development quota (GDQ). Allocations of GDQ go to proposals jointly prepared by processors and licensed trawl vessel operators based on the amount of fish they propose to catch, processor production history, and the proposal rating determined by the governing body for the program. Proposal rating is based on how well a proposal achieves market stabilization, maintains existing processing capability, stabilizes employment, benefits coastal communities, increases the value of production, and provides training opportunities and sustainable fishing practices (Environmental Defense n.d.).

Transferability

"The biggest problem today is waste. The snapper fishery has been a derby fishery since 1990."

Donnie Waters
Commercial Fisherman
Gulf of Mexico Snapper Fishery

The waste that fisherman Donnie Waters refers to is the waste of red snapper in the Gulf of Mexico. When the snapper season is closed, snapper caught while fishing legally for other reef fish species must be thrown back. Even during open snapper seasons, undersized snapper must be thrown back. Millions of snapper die as a result. At a recent Gulf of Mexico fishery council meeting, it was learned that the mortality rate of snapper thrown back is at least 70 percent, more than double the rate assumed by biologists in stock assessments**.**

A primary reason there is such a huge waste of snapper is the race for fish that exists in the Gulf of Mexico snapper and other reef fish fisheries (Weninger and Waters 2003). Under the race for fish there is often no time for fishermen to leave an area where too many undersized snapper are being caught and search for an area with less undersized snapper. Similarly, when fishing for other reef fish, there is no time to leave an area where too many snapper are being caught and search for an area with less snapper.

The good news is that IFQs eliminate the race for fish, not only by removing restrictions that reduce fishing time but by eliminating excessive fleet size through their transferability. A study by Weninger and Waters (2003) estimates that about 87 vessels of the current fleet size of 387 vessels in the Gulf of Mexico red snapper fishery is all that is needed to harvest snapper efficiently. With transferable IFQs, the fleet excess could be eliminated in an orderly fashion as the more efficient fishermen buy out the less efficient fishermen. A fleet reduced in size by slightly more than 77 percent also means there would be far less pressure among remaining fishermen to race for fish, as there would be far fewer competitors for the fish.

Freely transferable IFQs have raised a few concerns, however. One worry is that unrestricted transfers could result in a large amount of IFQs in the hands of a few fishermen or fishing companies. A concentration of IFQs could conceivably result in monopolistic control and higher prices for consumers. But this concern appears overblown. In most regions of the country, fish buyers have ready access to a myriad of domestic and foreign markets for fish, so competition from close substitutes would put downward pressure on the price of fish from that fishery. And in the event that a higher fish price could be achieved by monopolistic control, at least locally, those controlling the market would likely find any attempt to fix prices to be in violation of anti-trust law. In any case, the concern over quota concentration has been addressed in most IFQ fisheries through the imposition of caps on the amount of IFQ that can be held by individuals (e.g., see Hartley and Fina [2001, 10]).

Another transferability concern is over who can own IFQs. When IFQs are transferable, new holders of quotas might not reside in the local community or land their fish there, and the community might consequently suffer a reduction in employment. This concern may be addressed without placing severe restrictions on IFQ transferability. For example, as was done in the Alaska halibut fishery, a portion of the TAC can be allocated to remotely located communities through issuance of community development quota (CDQ) (see GAO 2004). Such an allocation still begs the question of whether a community should be allowed to transfer its quota permanently, or just lease it. After all, the community may not be the most efficient user of quota. Thus without transferability there is no assurance that efficiency goals would be met in trying to meet social goals with a community allocation.

The degree to which restrictions are placed on IFQ transfers to achieve community stability has to be weighed against the reduction in quota value[5] from a limited market, and the possibility that such a limited market may not be robust enough to reduce an oversized fleet to a measurable degree.[6] If the latter were to be the case, then there may be only one way to reduce an oversized fleet—a taxpayer-funded buyout of vessels.

Sunset Provisions

"If you expect to rationalize the fishery, fishermen need an IFQ program that is long-term."

Marion Larkin
Commercial Fisherman
West Coast Trawl
Groundfish Fishery

Uncertainties in the political arena over how an IFQ program will work have led some in Congress to propose IFQs with a "sunset provision"; that is, IFQs must expire

after a certain period of time. In 2003, Congressmen Tom Allen (D-ME) and Bill Delahunt (D-MA) offered legislation that, among other stipulations, requires that IFQs be of a set duration—not to exceed seven years, after which time they may be revocable.[7] On the Senate side, legislation was offered in February 2004 by Senator Olympia Snowe (R-ME) that requires IFQs "to expire at the end of a ten-year period beginning on the date the system is established, or at the end of successive 10 year periods thereafter, unless extended by a fishery management plan amendment in accordance with this Act, for successive periods not to exceed 10 years."[8]

While no one can deny that IFQs represent a quantum shift in fishery management, care must be taken not to take away the potential for IFQs to instill in fishermen the willingness to take a longer view of the fishery. This potential exists when each quota holder's right to a *percentage share* of the TAC is both secure and long-lasting.[9] Having such attributes means that fishermen will be more willing to support a lower TAC for stock rebuilding or invest their own resources in enhancing fish stocks, because they know they will be able to reap the rewards of more abundant fish down the road.

In 1986, the Canadian government adopted a system of secure and durable enterprise allocations (percentage shares allocated to fishing companies) in its Atlantic sea scallop fishery located off Nova Scotia. Today**,** when surveys indicate low abundance of immature scallops, fishery managers, with the full support of the companies, reduce the TAC so that more of the existing stock will be available for later years (Repetto 2001, 8). The companies have opted for this approach because they will proportionately capture the benefits in subsequent years. They have succeeded in rebuilding the scallop stock from depressed levels in the early 1980s (prior to enterprise allocations).

In contrast, the U.S. scallop fishery, only a stone's throw from the Canadian scallop fishery, is regulated without IFQs. Every year individual shares of the TAC are up for grabs. U.S. scallop fishermen, uncertain about how much each will benefit, typically oppose reductions in the TAC to rebuild the scallop stock. Hence it is not surprising that the fishery falls far below the Canadian scallop fishery in performance. In side-by-side comparisons the Canadian scallop fishery has greater stock abundance, greater balance in age classes, smaller fluctuations in annual harvests, and greater profitability than its U.S. counterpart (Repetto 2001).

The closer IFQs are to being secure and durable, the stronger the incentive for fishermen to conserve the resource. In New Zealand, where IFQs are considered property rights and not privileges, fishermen play an active role in enhancing their fish stocks. Through self-imposed levies, quota holders channel their own money into companies whose primary mission is to increase stock abundance over time. For example, the Challenger Scallop Enhancement Company invested in its own research vessel, the FV Tasman Challenger, as well as in efforts to re-seed the scallop stock (Arbuckle and Metzger 2000). Through self-imposed regulations and self-enforcement, quota holders

also play a pivotal role alongside government managers in helping the stock reach optimal size for higher returns.

The push to have sunset provisions placed on IFQs in U.S. fisheries will reduce, if not eliminate, the incentive for fishermen to support conservation measures. Would fishermen be in favor of a TAC decrease if they have no assurance that they can reap the benefits? The answer seems obvious: They will not. Knowing that IFQs are about to expire would probably result in the same response as U.S. scallop fishermen whose shares are up for grabs each year. Similarly, would fishermen be willing to invest in their own research vessel or carry out their own fish enhancement program if they had no assurance of being able to reap the rewards in future years? Again, the answer should be obvious.

Conclusion

IFQs have proven effective in addressing the problems of the fishery where command-and-control regulations have largely failed. In fisheries where IFQs have been tried, they have ended the race for fish, reduced the excesses in fishing fleets, and helped managers achieve better results in conservation. These accomplishments have taken place without individual processor quotas, without severe restrictions on IFQ transfers, and without sunset provisions.

Of the three, it appears there is least justification for sunset provisions. Such provisions seem to be based primarily on a misguided fear that IFQs will result in "privatization" of a public resource. This fear reflects a fundamental misunderstanding of IFQs. IFQs are at best, as in New Zealand, usufruct rights; that is, they do not convey a property right in the resource itself but in use of the resource. Making IFQs temporary through a sunset provision removes key incentives for resource stewardship among fishermen.

As for the other two obstacles to implementation, it is true that concerns over possible impacts to fishing communities, processors, and vessel captains and crew are not to be taken lightly. Yet options to IPQs and transfer restrictions are available, and experience around the globe indicates that they are much more effective and far less costly. Given the particular circumstances of each fishery, application of such options should be considered on a case-by-case basis.

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Endnotes

[1] The plan was developed by the North Pacific Fishery Management Council as a replacement for the current management approach. See North Pacific Fishery Management Council (2002). In January 2004, it was later included as a rider to the Omnibus Appropriations Bill submitted by Senator Ted Stevens (R-AK).
[2] In addition to IFQs and IPQs, the plan includes such provisions as community development quota allocation, voluntary cooperatives, binding price arbitration, and a loan program for vessel captains and crew members.
[3] Letter from R. Hewitt Pate, Assistant Attorney General, Department of Justice, August 27, 2003.
[4] Ibid.
[5] A rise in quota value as a result of stock improvements gives fishermen an incentive to take the long view and accept conservation measures.
[6] An extreme case is the British Columbia halibut fishery where trading of individual vessel quota was not allowed in the first two years of the program. During that time the number of active vessels dropped from 435 to 433. In the following year, with trading allowed, the number of active vessels went from 433 to 351. See Grafton et al. (2000, 685).
[7] The legislation, called the "Fishing Quota Standards Act of 2003," is endorsed by The Marine Fish Conservation Network, a coalition of national and local environmental organizations and various fishing and marine science groups.
[8] The legislation is cited as the "Fishery Conservation and Management Act of 2004."
[9] Note that it is the holder's right to a *percentage share* that must be secure and long lasting, not the holder's actual catch limit for the season, which depends on the season's TAC. Thus, if the fishery is closed for stock recovery, i.e., the TAC is set at zero, quota holders do not have a right to be compensated.