

Report
to the
Committee to Review
Individual Fishing Quotas
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(Including Supplementary Comments)

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SUMMARY

Conservation

Replacement of the open access race for fish by the Halibut/Sablefish Individual Fishing Quota Program (“IFQ Program”) has resulted in improved conservation and management. The incidental catch of halibut in the directed sablefish fishery has declined 38%. The incidental catch of groundfish in the sablefish fishery has dropped by 39%. Halibut mortality due to lost fishing gear has decreased by 59.65% (translating to a \$3.5 million dollar saving, annually). Incidentally caught sablefish is no longer discarded in the directed halibut fishery. Sablefish in the western and central Gulf of Alaska is now fully harvested (\$3.93 million gain, annually).

The principal purpose of the Magnuson-Stevens Fishery Conservation and Management Act (“Magnuson-Stevens Act”) is conservation; minimizing bycatch and related mortality is a major objective. National Standards 1 and 9.

Safety

Replacement of the open access race for fish by the IFQ Program has greatly improved the safety of life at sea. The former halibut fishing derby was the second most dangerous occupation in the United States (preceded only by the Bering Sea crab fisheries). Under the IFQ Program in 1995, search and rescue operations dropped to 15, from 33 in 1994 and 26 in 1993, under the open access system. There has been only one fatality since the IFQ program began in 1995, compared with an average of 2-3 fatalities each year in the open access halibut derbies.

The Magnuson-Stevens Act requires that fisheries management promote the safety of human life at sea. National Standard 10.

Communities

Community development quotas, which are integral to the IFQ Program, have assured isolated, low-income, Alaskan native coastal communities a major source of employment and revenue. At the same time, economic and social disruption of other communities has been avoided; the top five halibut ports and the top four sablefish ports remain the same as under the open access system. Small vessels serving minor ports have been guaranteed their place in the fisheries, and an industry fee-based loan program has been established for the owners of those

vessels and for new entrants to the fisheries. In short, the IFQ Program has increased the overall value of the fisheries, making it possible to dedicate a portion to the poorest communities, without adversely affecting the others.

The Magnuson-Stevens Act requires that fisheries management take into account the interests of fishing communities. National Standard 8.

Overcapitalization

Excess capacity in the fisheries has been identified as one of the fundamental causes of resource declines, unsafe conditions, lost economic efficiency, and lower quality product. The IFQ Program has resulted in a reduction of the halibut fleet from 3,290 (1994) to 2,768 (1996). Conservation risk associated with fishing pressure on the resources has declined radically. Unsafe conditions due to 24-hour halibut derbies and 2-week sablefish seasons have disappeared, as fishermen have gained the opportunity to conduct their operations in periods of good weather during eight months of the year. Longer seasons have led to full-time employment on vessels and in processing plants, and higher fish values have resulted in better lives for vessel owners and crews. Slower paced fisheries have allowed much improved handling of the catches, and thus, better quality product for the consumer.

The Magnuson-Stevens Act provides for consideration of economic efficiency, and for reduction of excess fishing capacity. National Standard 5; section 312(b). A government-funded buyback achieving what was accomplished by the IFQ Program would have cost the taxpayers \$213.12 million.

Greatest Overall Benefit to the Nation--Conservation, Safety, Efficiency, Quality, Value

In addition to achieving improved conservation, safety, and efficiency, the IFQ Program has resulted in improved product quality and higher product value. The slower paced fisheries have translated to greater availability of higher quality product, in particular, fresh halibut for eight months, instead of a few days of the year, and greater bargaining power for U.S. producers in the sablefish export market.

The Magnuson-Stevens Act requires that fisheries management achieve the greatest overall benefit to the Nation. National Standard 1; section 3(28).

REVIEW OF THE HALIBUT/SABLEFISH INDIVIDUAL FISHING QUOTA PROGRAM

Section 108(f) of the Sustainable Fisheries Act, enacted during the 104th Congress, mandated a formal review, by the National Academy of Sciences, of individual fishing quota ("IFQ") programs. 16 USC 1853 Note. It was the intent of Congress that the review should provide a basis for future legislative or administrative decisions concerning such programs. Section 108(d)(1)(A) of the Act also imposed a moratorium on new IFQ programs, until October 1, 2000. 16 USC 1853 Note. In that context, this paper provides information on the record of the halibut/sablefish IFQ program, since its inception in 1995.

When the North Pacific Fishery Management Council recommended approval by the Secretary of Commerce of an IFQ system for the halibut and sablefish fisheries, it was on the basis of an administrative process involving extensive debate and intensive analysis. Over the course of several years, the Council had considered an array of possible management responses to conservation, social, and economic factors at work in the then open access fisheries. These factors were identified, as follows:

- Allocation conflicts;
- Gear conflicts;
- Fishing mortality and other costs due to lost gear;
- Bycatch loss of halibut and sablefish in other fisheries;
- Discard mortality for halibut and other retainable species in the halibut and sablefish fisheries;
- Excess harvesting capacity;
- Product quality, as reflected in halibut and sablefish prices;
- Safety of fishermen;
- Economic stability in the fixed gear halibut and sablefish fisheries and affected communities; and
- Rural coastal community development of a small boat fishery.

The Council ultimately determined that the IFQ system would be the best management response to these factors. This paper addresses the performance of that IFQ system in relation to those factors.

ALLOCATION CONFLICTS

Allocation conflicts between the operators in the halibut/sablefish fisheries generally were found in skirmishes involving halibut. Prior to implementation of the IFQ program, the allocation issues centered around manipulations of when specific area openings would take place in order to give an advantage to one group at the expense of another.

In the Bering Sea/Aleutian Islands area, there evolved a series of complex clearing procedures designed to make it more inefficient for non-resident-operated vessels. This included such regulations, in the Pribilof Islands area, as restraining trip limits and a requirement that non-resident vessels must deliver back to Dutch Harbor, and not to the Pribilof Islands. This, of course, gave the local fishermen additional fishing time. Similar clearing requirements were in the eastern Bering Sea, 4E, and the area known as 4B in the Aleutian Islands.

The annual meetings of the International Pacific Halibut Commission (IPHC), were prolonged for hours on the question of when to have the spring and fall 24-hour openings. Some of the issues that drove this debate were as follows: were the Canadian or the United States fishermen going to open first to get an advantage on price; would the spring opening conflict with the spring herring opening in southeast Alaska; would the openings conflict with western peninsula salmon seasons; would openings occur during big tides; would an opening put product at the docks in Alaska at the right time for the Sea Land ship; would the fall opening conflict with the State of Alaska sablefish openings; and would it conflict with the Russian Orthodox holidays, which the fleet tried to respect?

None of those issues, which were debated with emotion and zeal, have arisen since the implementation of the IFQ program. When the IFQ program was adopted, the onerous clearing requirements and trip limit regimes in the Bering Sea district were removed, though there are still clearing requirements they are not of an allocative nature. Former Governor of Alaska, Walter J. Hickel has correctly observed of the IFQ program, "Ultimately the free market decides..." Letter from Walter J. Hickel to Bob Alverson, August 27, 1997. See Appendix 1. All of the concerns of when to fish or not to fish that the industry and fisheries' managers debated at length prior to implementation of the IFQ program, are now the business decisions of each and every vessel owner. Those decisions are now based on what is best for the vessel and its crew. There were 2,768 vessels that participated in the 1996 season and the operator of each one made his or her own decision when to fish. See Appendix 7.

GEAR CONFLICTS

The supplemental EIS stated:

Although an IFQ program will tend to decrease gear conflicts within the halibut and sablefish fishery, it may increase gear conflicts between halibut or sablefish fishermen and other fishermen by increasing the areas and length of periods in which such conflicts can occur. For example, it is less costly for trawlers to avoid the halibut grounds during brief halibut openings than to avoid these areas most of the year. Similarly, the areas and times with a high risk of gear conflicts are easier to identify and avoid with the current intensive halibut fishing periods than with an IFQ program. No attempt has been made to estimate the magnitude of this effect. [Page 2-7.]

Halibut fishermen no longer have gear conflicts with sablefish fishermen. The best sablefish grounds are usually located on the outer continental shelf, or at about 350 to 600 fathoms. The halibut fishery is conducted generally between 100 and 250 fathoms. The IFQ fishery allows the participants to target where the fish are located. The time available for the fishermen to decide where and when to set gear allows avoidance of other fishing operations, particularly now that the grounds for halibut and sablefish are no longer saturated with gear.

The statement, “it is less costly for trawlers to avoid the halibut grounds during the brief halibut openings, than to avoid these areas most of the year”, is ironic because the reverse has turned out to be the case. It is very costly for trawlers to avoid halibut grounds, because the trawl groundfish seasons have become very short. This is particularly true in the Gulf of Alaska. Should trawlers inadvertently get into a school of halibut or area where halibut gear is set, the trawl fishermen do not have the time to make optimum adjustments. If the trawlers had the time to make those adjustments, the bycatch and potential gear conflicts could be further reduced. As it stands, now, the longline IFQ fishermen have adequate time to harvest their quota shares and can avoid most of the intense trawl activity. In fact, the pacific cod fishery in the Gulf of Alaska has been shortened, so that it ends about the time the March 15th IFQ fisheries start, with the result that few, if any, gear conflicts have been occurring with that directed fishery.

The following openings were provided the trawl fleet in the Gulf of Alaska during 1995 and 1996. The reader can easily see that fishing time is now at a premium to the trawl fleet, as it was to the halibut and sablefish fishermen prior to the IFQ program. The loss of fishing gear, particularly someone else’s, becomes a low priority, when fishing time becomes a high priority.

1995

Pacific Cod
(inshore)

Western Gulf January 20 to March 17
Central Gulf January 20 to March 22

Pollock

Western Gulf January 20 to February 2
June 1 to June 2
July 1 to July 2
October 1 to October 1 (12 hours)

Central Gulf January 20 to January 24
June 1 to June 5
July 1 to July 5
October 1 to October 4

S.E. Alaska Pacific Ocean Perch

July 1 to July 9
Plus two days in October

1996

Pacific Cod

Western Gulf January 20 to March 3
Central Gulf January 20 to March 18

Pollock

Western Gulf January 20 to January 28
June 1 to June 1 (12 hours)
September 1 to September 18

Central Gulf January 20 to January 23
June 1 to June 1 (12 hours)
September 1 to September 3

S.E. Alaska Pacific Ocean Perch July 1 to July 11 and July 31 to August 7

With the short trawl openings, it has become increasingly easy for the IFQ operators to avoid trawl operations. Additionally, due to the IFQ fleet being spread out over time, there is less gear on the grounds at any single time to be encountered by trawlers.

In summary, the supplemental EIS predicted less gear conflicts, and this has occurred. The supplemental EIS' contemplation of IFQ harvesters having conflict between one another has not occurred, largely because sablefish and halibut operations occur at different depth strata and because of the eight months of fishing time halibut harvesters can afford to communicate with their fellow fishermen and avoid each others gear. The same applies for sablefish harvesters. The conclusion of the supplemental EIS about trawlers has turned out to be just the reverse of actual experience. The trawl derbies have increased the trawlers' cost of avoiding gear conflicts.

FISHING MORTALITY AND OTHER COSTS DUE TO LOST GEAR

The supplemental EIS correctly predicted the following with regard to gear loss:

“...fishing mortality caused by the lost gear. There are several reasons why an IFQ program is expected to decrease gear losses and the associated costs. First, it would reduce the amount of gear that is on the grounds at any one time, and therefore, reduce the amount of gear that becomes tangled. Second, it would increase the willingness of fishermen to take more time to avoid tangling gear and to retrieve lost or tangled gear. It would do so by decreasing the opportunity cost of the time required either to set gear so that it is less likely to become tangled or to retrieve it. Third, it would eliminate the current gear losses that occur because fishermen set more gear than they can retrieve before the end of the brief halibut openings. Finally, it would allow fishermen to fish at a pace and in areas, time periods, and weather conditions that decrease gear losses.” [Page 2-6.]

The 1992 Supplemental EIS on the halibut/sablefish IFQ program stated, "There are principally two types of costs associated with gear losses in the halibut and sablefish fishery. There are (1) cost of replacing lost gear, and (2) harvest forgone due to the fishing mortality caused by the lost gear." [Page 2-6.] The supplemental EIS estimated that, in 1990, 1,860 skates of gear and two million pounds of halibut were lost. [Page 2-6.]

In its' annual reports, under the category of waste, the International Pacific Halibut Commission ("IPHC") includes the mortality of halibut due to lost gear. In the 1994 Annual Report (Appendix 2), waste was recorded at 2.85 million pounds. The 1995 and 1996 Annual Reports recorded waste as 1.0 and 1.3 million pounds, respectively (Appendices 3 and 4). This represents a 59.65% reduction in waste, or an annual savings of approximately 1.7 million pounds of halibut. This compares impressively with the 50 percent saving predicted by the supplemental EIS. Based on the 1997 Seward, Alaska price for halibut (approximate average, \$2.10/lb), the saving this year due to reduced waste is approximately \$3.5 million.

The lost fishing gear in the halibut derbies was primarily the result of 4,000 to 6,000 vessels setting their gear all at the same time, and the gear becoming entangled. Gear lost in this manner is a thing of the past. The supplemental EIS estimated the value of lost gear at \$2.0-\$2.4 million per year in the halibut derbies. [Page 2-6.] Under the IFQ program, the vessels share the grounds over an 8-month season. Gear can be lost due to the normal hang-up on the bottom, but the large

amounts of gear lost during the halibut derbies from gear conflicts has come to an end.

There has also been a savings in the amount of gear a vessel purchases for a season. It was not uncommon for vessels to pre-bait and set 80 to 130 skates of gear during a derby openings. Vessels are now fishing similar to pre-derby operations using 50 to 70 skates of gear. Additionally, the vessel operators, prior to IFQs, used two different types of gear--one for halibut and one for sablefish. Many harvesters are now using their sablefish gear to harvest the halibut quotas, further reducing gear-related costs to the fleet.

The supplemental EIS predicted a 50% reduction in gear needed to harvest the same amount of fish. Page 2-7. The supplemental EIS properly predicted that significantly less gear would be set out.

The open access sablefish fishery had similar problems with lost gear, however, the supplemental EIS in 1992 did not quantify the loss. It is reasonable to conclude, based on the halibut experience, that the lengthened sablefish seasons under the IFQ program have also resulted in lower gear losses and associated resource mortality than prevailed in the open access fishery.

In summary, fishing mortality of halibut due to lost gear has resulted in a 59.65% reduction in recorded waste by the IPHC. This has resulted in a net benefit of \$3.5 million annually to the fleet. The IFQ program has resulted in much less gear being set to harvest the quota.

BYCATCH LOSS OF HALIBUT AND SABLEFISH IN OTHER FISHERIES

Prior to the implementation of the IFQ program for sablefish and halibut, the length of the seasons had shortened to a point of causing chaos. The sablefish fishery had collapsed from a 9-month season to a less than a 10-day fishery in the western Gulf of Alaska, and to a five-day season in southeast Alaska.

By 1994, the halibut fishery had become a series of two 24-hour openings, one in the spring and one in the fall. In the mid 1970's, the halibut season had been 9-months. By the 1990's, when fishermen fished for sablefish, they had to throw away their incidentally caught halibut, and during the halibut derbies the harvesters had to throw away the incidentally caught sablefish. The mortality associated with this regulatory bycatch was deducted from the available commercial harvests.

The IPHC recorded the halibut mortality in the directed sablefish fishery by the use of the observer program. The average halibut mortality in the longline sablefish fishery for each of the five seasons preceding the IFQ program was 1,816,000 pounds. Appendix 5. The bycatch mortality, after the IFQ program was implemented in 1995, was recorded at 297,000 pounds. This represented an 84 percent reduction in halibut mortality, or a reduction of 1,519,000 pounds annually.

This occurred because of several factors. Two of the more important ones were: 1) the fishery slowed down, and juvenile halibut were able to be released with better care, and thus with a lower probability of mortality; and 2) the adult halibut were now allowed to be taken and counted against the quota. (As noted above, juvenile halibut are not allowed to be landed; they are defined as being less than 32 inches long.)

Due to the lack of observers in the directed halibut fishery, similar information is not available to quantify what has taken place with incidentally caught sablefish. The directed halibut fishery is generally conducted in a shallower habitat than that in which the sablefish are generally found, so the sablefish saved in the halibut fishery would probably not be as great as the halibut saved in the directed sablefish fishery. (The deep-water sablefish habitat does, however, have substantial numbers of halibut in the late winter and spring.) The important point is that the fleet is now landing incidentally caught sablefish; less discarded sablefish translates to less waste. That was not the case prior to the IFQ program.

The reduction in halibut mortality in the directed sablefish fishery of 1,519,000 pounds represents approximately a \$3.2 million gain to the longline fishermen, assuming an average 1997 price of \$2.10 per pound. As noted above, prior to the IFQ program, this now-retained bycatch was discarded and deducted

from what might be available for commercial harvest.

There was an additional saving to the longline fleet with the implementation of the IFQ program. Prior to 1995, the longline sablefish fishery operated in the Gulf of Alaska with a halibut cap of 700 metric tons. Once this bycatch mortality cap had been accounted for, with the help of the observer program, the directed sablefish fishery was closed. This was having the result in the western Gulf of Alaska, and at times the central Gulf, of stopping the harvest of sablefish in order to protect halibut. The ability under the IFQ program to keep the sablefish fishery open in the Gulf of Alaska in 1995, 1996, and 1997, has allowed for the western Gulf of Alaska harvest level to be fully achieved, and the central Gulf quota to also be harvested. For 1997, in the western Gulf of Alaska, the harvestable amount of sablefish quota shares amounted to 1,690,222 round pounds, representing an additional \$3.93 million to the fleet. (Price \$3.70/dressed, 63% recovery.)

In summary, the IFQ program has allowed the fleet to recapture the lost harvest of halibut that was occurring due to sablefish operations. This gain amounts to \$3.2 million annually. The program additionally allows for the full harvest of sablefish in the western and central Gulf of Alaska, providing an annual gain of \$3.93 million. The program has resulted in an 84% reduction in lost halibut income opportunities that was occurring in the longline sablefish fishery.

DISCARD MORTALITY FOR HALIBUT AND OTHER RETAINABLE SPECIES IN THE HALIBUT AND SABLEFISH FISHERIES

Section 106(b)(9) of the Sustainable Fisheries Act provides a new national standard for the Magnuson-Stevens Act:

Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.¹

16 USC 1851(a)(9).

Congressional interest and intent with respect to bycatch reduction was clearly reflected in the Senate and House Floor debates in the 104th Congress.² Senator Stevens declared that, “Under S.39, the councils will...be required to reduce the amount of bycatch in every fishery around our country.” Congressional Record, September 18, 1996 at S10810. He also stated, “We thought Americanization would go a long way toward conserving the fishery resources of this Nation. Foreign vessels have now given way to U.S. vessels that are capitalized now far beyond what we ever envisioned in the seventies, and the fisheries waste continues to get worse in many areas.” Id. Senator Murkowski stated, “This will put us on the road to stopping the shameful waste that is currently occurring in many fisheries.” Id. at S10820. Senator Gorton remarked, “...I join my colleagues in lauding those provisions that aim to reduce waste and bycatch in the fisheries....” Id. at S10814.

On the House Floor, Congressman Young, principal author of H.R. 39, and chairman of the committee of jurisdiction, stated, “The reduction of bycatch in our fisheries is one of the most crucial challenges facing fisheries managers today.” Congressional Record, September 18, 1995 at H9116. On passage of S. 39, he stated, “...the bill recognizes that bycatch is one of the most pressing problems facing the continuation of sustainable fisheries....” Congressional Record,

¹ “Any fishery management plan...shall—include conservation and management measures that, to the extent practicable and in the following priority—(A) minimize bycatch; and (B) minimize the mortality of bycatch which cannot be avoided....” 16 USC 1853(a)(11). This provision first appeared in the Sustainable Fisheries Act, P.L., 104-297, section 108(a)(11), as did the definitions quoted above (section 102(2),(9),(33)). A policy of the Magnuson-Stevens Act is “to assure that the national fishery conservation and management program...encourages development of practical measures that minimize bycatch and avoid unnecessary waste of fish....” 16 USC 1801(c)(3). See 16 USC 1853(b)(10).

² See S. Rpt. 104-276, May 23, 1996 and H. Rpt. 104-171, June 30, 1995.

September 27, 1996 at H11438.

Janet Smoker of Fisheries Information Services ("FIS") completed a review of the IFQ directed sablefish fishery in the Gulf of Alaska relative to the retention of various species caught incidentally. The FIS report, (Appendix 6 enclosed), examines the 1994 season against the IFQ seasons of 1995, 1996, and part of 1997. The following conclusions were based on the North Pacific Fishery Management Council's observer program.

While conducting a directed fishery on sablefish, some of the target catch is discarded. The retained sablefish has always been high, according to the report. The retained sablefish in the directed longline fishery for sablefish during 1994 was 96.8% (a number that is hard to improve upon), and during the 1995, 1996, and 1997 seasons averaged 97.03%.

One observation concerning the small difference in retained bycatch between the open access period and the IFQ fishery is that there has been very little "high grading" in the IFQ fisheries, indeed, less than in the pre-IFQ fisheries. High grading had been a concern with respect to the IFQ program, when it was under development. The supplemental EIS developed by the Department of Commerce cited Dr. Jim Norris's 1990 report on the issue.

Vessel profit would increase 6 percent if sablefish under 4 pounds (Eastern dressed weight) were discarded, but in so doing the number of fishing days would increase 70 percent. The fishermen would have made more money, but would have worked many more days to accomplish it. [Page 2-14.]

The observer statistics compiled by FIS, which indicate a 97.03% retention of sablefish, suggests that Dr. Norris's 1990 assumptions were accurate. High grading, which means catching the fish at least twice, is not economical.

The FIS report indicates that the directed sablefish fishery during the 1994 season was retaining 75.5% of all groundfish, inclusive of sablefish that was being caught. Appendix 6. The next three seasons under the IFQ program increased the total groundfish retention to 84.9% of all groundfish species. Discards of groundfish that declined from 24.5% of the catch to an average of 15.03% of the catch, representing a 39% reduction in discarded groundfish.

The retention of groundfish, not including sablefish, increased from the 1994 season level of 25.7% to an average of 34.6 percent during the 1995, 1996, and 1997, seasons. This represents a 35% increase in groundfish retention, not

including sablefish. Appendix 6.

The halibut discards that occur during the directed sablefish fishery have gone from 21.1% in 1994 to an average of 13.03% during the 1995, 1996, and 1997, seasons. This represented a 38% decline in halibut discards. Appendix 6. Discards of halibut under the IFQ program in the directed sablefish fishery are largely halibut that are less than the legal size for retention.

The discards of rockfish and pacific cod in the IFQ fisheries are significantly the result of the rockfish and cod quotas being achieved during the race for fish in those fisheries, which then result in regulatory discards for the remainder of the year for IFQ fisheries. The majority of groundfish discards in the IFQ fisheries are flounders and skates, for which markets have not yet been adequately developed.

In summary, the retention of sablefish has remained in the 97% range suggesting very little, if any, high grading. The discards of groundfish in the directed sablefish fishery reduced 39%, for a 84.9% retention of everything caught. The fish currently discarded are primarily skates and flounders for which markets are not available. The halibut discards in the sablefish fishery declined 38%. The IFQ program has, therefore, helped reduce bycatch significantly.

EXCESS HARVESTING CAPACITY

The supplemental EIS made the following comments with regard to excess harvesting capacity:

“The fact that there are too many vessels has been identified as a problem.”
[Page 2-52]

“The Council has considered the introduction of a quota system as a means to enable vessels to leave the industry to receive some recompense through the sale of quota shares for so doing.” [Page 2-52]

“It is hoped that following introduction, transfer of quotas will lead to less efficient vessels leaving the industry.” [Page 2-52]

In 1994, the number of vessels participating in the sablefish fishery opening numbered 1,382, and in the halibut fishery, 3,920. (See the September 1997 RAM report, Appendices 7-8). The number of vessels participating in the sablefish fishery in 1995, 1996 and 1997, are recorded in the report of September 4, 1997, by the Restricted Access Management Division of NMFS, page 56, enclosed, as being 1,126, 1,041, and 805 respectively. The same report, page 57, enclosed, records the number of halibut vessels as being 2,841, 2,768, and 2,201. (Note: 1997 data is not yet complete).

The reduction of vessels as envisioned by the supplemental EIS is working and is being accomplished without any federal buy-back assistance in order to reduce the fleet. The fleet is using the equity value of quota shares to buy itself out and rationalize itself. The FVOA estimates that, in order for the Federal Government to have achieved a fleet reduction in the halibut fishery from 3,920 vessels in 1994, to 2,768 in 1996, a reduction of 1,152 vessels, it would have cost at least \$185,000 for each vessel and its potential harvest of fish. This means that the halibut fleet has self-rationalized itself in the amount of \$213,120,000 (\$185,000 x 1152 vessels) in two years, without any federal assistance. ³

There are no mechanisms comparable to IFQ's in terms of cost effectiveness in reduction of a fleet. The taxpayer cost of the New England buy-out was \$23 million, and has barely made any material impact. There are currently federal

³This value is arrived at by dividing the 1994 fleet size of 3,920 vessels into the 1994 halibut landings of 44,819,000 pounds. This provides an average fleet landing of 11,433 pounds per vessel. The current median QS value for halibut is about \$10/pound. Therefore, the value of leaving the industry is \$110,000 (\$10 x \$11,433) and we assume a \$75,000 average value per vessel. We therefore assume a \$185,000 per vessel to create a fair and equitable buy-out.

dollars being requested for buy-outs of the Puget Sound salmon fleet and West Coast groundfish fishery. Again, it should be noted that an IFQ allows the citizens to use the value of their fish to buy themselves out, without any federal hand-outs.

One of the options the Council seriously looked at was a license limited entry program that would have reduced the existing halibut fleet from 5000 vessels to less than 1000 vessels. This option would have provided no compensation to the 4000 vessel operations under this option. This was a significant reason for abandoning the license limited entry options.

PRODUCT QUALITY, AS REFLECTED IN HALIBUT AND SABLEFISH PRICES

The supplemental EIS made numerous predictions regarding the expected effects on product quality, the availability of fresh halibut, and ex-vessel prices. Those predictions, when compared to the performance of the industry, are remarkable. One of the primary goals of the IFQ program was to provide high quality fresh halibut on a continual basis. The twenty-four hour openings in the derby fisheries limited the ability to provide fresh halibut to brief periods of the year, and to very few customers. For example, Governor Walter J. Hickel, who owns and operates the Hotel Captain Cook, in Anchorage, Alaska, had to import fresh halibut from Canada to supply his customers, even though Alaska produced more halibut than did any other place in the world. Appendix 1.

“...I mention the Crow’s Nest Restaurant in the Hotel Captain Cook, which has a reputation of serving nothing but fresh halibut. Prior to IFQs, most of the year we flew fresh halibut in from Vancouver.” Letter from the Honorable Walter J. Hickel to Mr. Bob Alverson, August 27, 1997. Appendix 1.

The supplemental EIS had the following specific expectations with regard to the IFQ program,

First, it would provide the flexibility in scheduling landings that is necessary for fishermen and processors: (1) to take advantage both of the latent year round market for fresh halibut and the seasonal consumption patterns for sablefish and (2) to decrease storage time and costs for the halibut and sablefish that are frozen. Second, it would increase the quality of landed halibut and sablefish by decreasing the opportunity cost of the time required to assure that the catch is quickly dressed and cared for. Third, it would eliminate the short intensive openings that result in such large concentrations of landings that unloading and processing delays can decrease product quality and prices. The benefits of increased product quality may become more important if federal inspection of seafood products expands. [Page 2-4.]

Flexibility in scheduling landings to take advantage of a year-round market for fresh halibut and seasonal consumption patterns is evident from the IPHC monthly landing reports for the 1995 and 1996 seasons, which are attached. Appendices 9 and 10. The fleet has spread its landings over the entire time provided, all eight months. This has allowed the fresh fish market to absorb approximately 75 percent of the harvest. The initial forecast by the supplemental

EIS was 50 percent. A significant purchaser of halibut in the Seward and Seattle area has stated, "With the exception of this year, a majority of the halibut landed since the start of the I.F.Q. system has gone fresh." Letter from Dory Seafoods to Robert D. Alverson, August 28, 1997. Appendix 11.

With regard to storage costs and savings, the supplemental EIS stated, "If 75 percent of landings currently are frozen and if an IFQ program would result in only 50% being frozen, the cost savings in 1990 would have been \$4.2 million (\$0.32 per lb. X 25% of 52.6 million lbs.)." [Page 2-5.] With 75 percent of the harvest now going to the fresh markets, cold storage saving in terms of 1990 dollars is \$8.1 million. (\$0.32 per lb. X 50% of 51,116,000 lbs (1997 quota)). This saving thus is twice as great as forecasted by the supplemental EIS. Additionally, in terms of product quality, the supplemental EIS assumed, on average, that halibut was frozen 6 months a year. This is no longer the case, and the quality is, therefore, higher than anticipated.

The supplemental EIS stated, "The price increase for sablefish is expected to be less than for halibut, because the potential benefits from the fresh fish market are probably less for sablefish". [Page 2-5.]

The supplemental EIS greatly underestimated the Japanese frozen market for sablefish, and the marketing advantages that IFQs gave U.S. fishermen, in terms of negotiating leverage in this foreign market. Japan consumes over 97 percent of the U.S.- and Canadian-harvested sablefish. Harvest guidelines have decreased as well, which has put an upward pressure on prices. Since the establishment of the IFQ program, the sablefish price has steadily increased. The 1997 average price to fishermen would conservatively be estimated at \$3.70 per dressed pound. The National Marine Fisheries Service assumes a 63 percent recovery rate between dressed and round sablefish, therefore in terms of round weight, the price would be \$2.33 per round pound.

The supplemental EIS estimated that the round pound price for sablefish would increase \$0.05 per round pound. That document stated, "In 1991, this would have been a \$0.05 per pound round weight increase in the ex-vessel price or about a \$2.8 million dollar increase in ex-vessel value." [Page 2-5.]

The price for dressed sablefish in 1991 based on the supplemental EIS was \$1.59 per dressed pound or \$1.00 per round pound. The 1997 round price of \$2.33 converts to a 1991 price of \$1.98, using a consumer price index regression of .849. In terms of 1991 dollars, the IFQ program added \$0.98 per round pound to the price of sablefish. In terms of the allocated 1997 quota shares, the added value to

the resource is \$29,629,207, in 1991 dollars. ($\$0.98 \times 30,233,885$ 1997 round pounds) The prediction of a \$2.8 million gain, therefore, was very greatly underestimated. In terms of taxes to the State of Alaska, under the 3.3% raw fish tax, the gain has been \$957,000 per year.

With respect to halibut the supplemental EIS predicted the following:

In summary, it is estimated that an IFQ program would increase halibut ex-vessel prices by \$0.04 to \$0.68 per pound. Given the 1990 landings of 52.6 million pounds, the resulting increase in the ex-vessel value of the fishery would have been from \$2.1 million to \$35.8 million. [Page 2-5.]

The supplemental EIS used a 1990 value for halibut at \$1.78 per pound. The prices for halibut since the IFQ program was initiated in 1995 has been in the \$1.90 to \$2.40 range in the Seward Alaska area. Prices in the Seattle area are generally 50 to 60 cents above Seward prices, largely reflecting transportation costs. Assuming an average price for 1997 of \$2.25 per pound, and using a consumer price regression of .814, the 1990 value would have been \$1.83 per pound. Hence the added ex-vessel value to the industry in terms of 1990 dollars is approximately 5 cents. This would mean an added ex-vessel value to the fishermen of \$2.5 million. Consequently, although there has been, in fact, an increase in price paid to the fisherman, the amount has been at the lower end of the prediction.

It should be noted, however, that this value may be somewhat misleading, in that the halibut industry has completely changed since the implementation of the IFQ program. There are no more long lines of fishing vessels waiting to deliver halibut. Processors no longer have product stacked on their processing floors for days at a time because freezers are too full. Halibut is now being flown to markets all over the United States and Europe. Prior to the IFQ program, containers of frozen halibut were transshipped to the Seattle area for redistribution. Now, significant amounts of halibut are air freighted out of Anchorage, Alaska. There has been an added cost in air transportation to get good quality fresh fish to distant markets, which does not readily appear as an additional value when only looking at the price the fishermen receives. There are new businesses in air-freighting as well as long-haul trucking out of Anchorage that were not envisioned prior to the IFQ program.

The industry has been revolutionized, and the most important quality aspect for halibut of the new system is shelf life. The better the quality at the boat, the longer the fresh fish can be available to consumers. The need for good quality to ensure shelf life for halibut now is the driving force on prices paid to the

harvesters. This pressure to provide high quality fish has produced higher quality landed fish. A letter from Dory Seafoods states:

The majority of the high quality buyers want to know when was the fish caught and how old will the oldest fish be when it is received in the market place. Many buyers will not buy old fish, or if given a choice, they will pay more for fresher fish with a longer shelf life. Appendix 11.

I believe the overall quality has improved on air shipments out of Alaska. The fishermen have more time to dress, ice and take care of the product on board the fishing vessels. In addition, the processing plants are receiving smaller quantities per day and, in most cases, are able to ship the product out the same day as received. As a result, the halibut is handled much quicker and received in the market place in better shape than in pre-IFQ years. [Letter from Dory Seafoods to Robert D. Alverson, August 28, 1997. Appendix 11.]

There have been complaints from several shore-side processors that they are not doing well under the IFQ program. It is clear that the raw product cost has not changed very much for halibut from the 1990 prices. It is also evident that the frozen market nature of sablefish makes all ports competitive for sablefish. More importantly, it is true that the landings per port have not changed materially. What the fishermen do notice is that those processors that have available to them good and reliable transportation, either air or long-haul trucking routes, out of such locations as Anchorage, seem to be very competitive with halibut. Those who have chosen as a business decision not to be active in fresh fish marketing probably have lost market share. Processors in western Alaska and the Dutch Harbor area have some access to the fresh markets, but with more difficulty. In these areas the landed halibut generally reflects a frozen product price. In the case of sablefish, the product must be frozen for export to Japan, and therefore, all Alaskan ports with freezer capacity should be able to participate in that fishery.

Sablefish is unique, in that, the final destination is Japan or other Asian markets. Sablefish has very little fresh fish sales. The nature of the flesh quality and high oil content make it necessary to freeze. The distribution of sablefish before and after IFQs were implemented can be seen in the Restricted Access Management reports. Appendix 19. There has not been any significant change in landings to particular ports of call. See enclosures.

In summary, it is evident that quality has improved and halibut is now available fresh throughout an 8-month period. Some of the additional values to the

fishermen, considering some of the predictions of the supplemental EIS, are \$8.2 million in savings in cold storage costs for halibut; \$2.5 million of additional ex-vessel value of halibut; and \$29 million in added export value of sablefish. The supplemental EIS discussed savings in gear, food, bait, and fuel costs to the fleet. The supplemental EIS estimated annual savings of \$1.8 to \$2.5 million for food; \$3.1 to \$4.0 million for fuel; \$20.0 to \$28.0 million for opportunity cost of labor, and \$9.2 to \$11.7 million for fixed costs. This report will not attempt to quantify these actual savings, although savings have materialized in all of these categories. These savings and additional values to the fleet have resulted in at least a \$75 million net annual benefit to the industry.

SAFETY OF FISHERMEN

The 1992 Supplemental Environmental Impact Statement ("EIS") for the halibut/sablefish IFQ program stated:

An IFQ program is expected to increase vessel safety by reducing substantially the incentive fishermen have to disregard factors that increase the risk of accidents. However, due to a lack of reliable data and methodological problems, it is hard to provide quantitative estimates on the linkages between vessel safety and other factors, such as management practices. [Page 2-3.]

In the recently released book, Fishing Vessel Safety, Blueprint for a National Program, the National Research Council noted that commercial fishing has one of the highest mortality rates of any occupation and that safety has largely gone unregulated. Page 142. While attributing a large portion of the safety issues to the vessel (e.g. its structure, equipment, and crew), the authors did consider fishery management practices to be one of three major external influences on vessel safety. Page 131. Allocation conflicts have "resulted in a highly competitive operating environment in which fishermen may take unnecessary risks to maintain their livelihood". Page 132.

During the open access halibut "derbies" which predated the IFQ program, many people lost their lives. In 1992, during the two one-day openings in the Gulf of Alaska, six people were killed. See attached newspaper reports. Appendix 12.

In a report from the U.S. Coast Guard, by Captain B. I. Merchant (Appendix 13), the Coast Guard commented on the safety record for the first year of the IFQ program. The report focused on the derby years, 1992-1994, and the first IFQ year, 1995. The conclusions were that search and rescue attempts over the 8-month 1995 IFQ season were approximately half the number recorded during the two or three twenty-four hour seasons for each of the years, 1992, 1993, and 1994. Specifically, there were 15 search and rescue attempts in 1995, compared to 33 in 1994, and 26 in 1993.

The report states:

Of note, is the fact that no lives were lost in the four vessel sinkings that occurred during the 1995 IFQ season...fishermen have been choosing periods of fair weather to fish. This seems to confirm the premise that the I.F.Q. system provides a framework where each master has the greatest

possible control over safety issues. [Appendix 13.]

In reports completed by Pacific Associates (Appendices 14 and 15), a highly qualified fisheries consulting organization, search and rescue cases for the derbies from 1991-1993 were logged at 216, or an average of 30 per derby opening. To date, after two and one-half seasons, there has been one death during IFQ operations. Of the 22 vessel losses in 1996, due to fire and sinking in Alaskan waters, only one vessel is identified by the U.S. Coast Guard as an IFQ participant.

Due to the high loss of life in commercial fishing activities, the 104th Congress enacted, in section 106(b)(10) of the Sustainable Fisheries Act, a national standard that addresses safety. That provision states, "Fishery conservation and management measures shall promote the safety of human life at sea." 16 USC 1851(a)(10). Senator Patty Murray stated during the Senate Floor debate on S. 39, the Sustainable Fisheries Act:

...[T]his race for fish creates serious safety considerations in many fisheries. Under this race, fishers feel compelled to keep fishing even when the weather or conditions of the vessel or health of the captain or crew would suggest otherwise. Unless fishery management plans provide opportunities and incentives for fishers to sit out storms and return to port for repairs or medical attention, lives will continue to be lost...

For this very reason we included promotion of safety of life at sea in the National Standards of the Magnuson Act.

Congressional Record, September 18, 1996 at S10818.

It is the conclusion of this report that termination of the halibut/sablefish IFQ program, which would result in a race for fish, would be in direct conflict with this new national standard.

ECONOMIC STABILITY IN THE FIXED GEAR HALIBUT AND SABLEFISH FISHERIES AND AFFECTED COMMUNITIES

The Secretary of Commerce recognized that the open entry fishery for halibut and sablefish had created an extreme excess of capital investment. The Secretary recognized that the excess capital was causing instability and uncertainty in the fishery. The supplemental EIS states:

However, once the adjustments are made, IFQs would decrease uncertainty and increase the ability of fishermen and processors to plan their participation in the halibut fishery. [Page 2-13]

Of the 7,992 different vessel owners who participated in the halibut fishery between 1984 and 1994, 38% did so for only one year while only 9% participated all seven years. It is estimated that 1,443 vessel owners participated in the fixed gear sablefish fishery between 1985 and 1990. Of these, 45% participated in only one year and only 6% participated all six years. [Page 2-13]

This is the case in terms of both short and long-term planning. In areas with only a few very short openings, if a vessel breaks down, a fisherman might miss all or a substantial portion of the season. Likewise, increased fishing effort does not allow processors to plan for consistent or orderly processing. The short-term discontinuities make planning difficult. [Page 2-12]

A further benefit of quota systems is deemed to be the degree of certainty given to participants upon which to base their investment and fishing decisions. It is argued that if people are aware of the quantity of fish available to them that they will be able to make soundly based decisions about the future. [Page 2-54]

The vessel owners are now able to fish and time their operations, not just around bad weather, but with a view to market opportunity, so they can efficiently operate in other fisheries that may otherwise have been unavailable to them because of fixed season openings.

Prior to the IFQ program, thousands of vessels had two, one-day earning opportunities. Today, earning opportunities, through consolidation, are creating stability within the harvesting sector. Stability has been further enhanced by the constraints on QS/IFQ consolidation, through the use of ownership caps, vessel caps, and vessel classes. These were designed to prevent too great a concentration

of quota share ownership by individuals in the fleet and to ensure processors an adequate number of harvesting vessels. Ownership caps and vessel cap limits are mentioned in the September 1997 RAM report. Pages 15 and 16, Appendices 16 and 17.

The supplemental EIS stated that, under the IFQ system, people will be able to make sound business decisions about their future. The system was designed to encourage transfers of quota within certain limits. It was designed to encourage an owner-operated fleet. This was provided by requiring new purchasers of IFQs to be on the vessels when the QS were being fished. Transfers of eligibility certificates for fishermen through August 20, 1997 are 1,522. Those who received an actual transfer through August 20 are 694. RAM, page 53, enclosed, Appendix 18. It is apparent that the program is functioning as designed. The owner-operator provision is providing stability for crews and vessel owners who work on deck.

Some members of FVOA have chosen to sell, and others have chosen to purchase, QS. The results are that for those who have chosen to purchase, the owners and the crews are earning more. Those who have sold out have received some compensation for their past investment and efforts. The crews that have been displaced to date are those who were participating in two, one-day jobs. The supplemental EIS states on this issue, the following:

In considering the employment effects of an IFQ program, it should be remembered, that many fishermen take a break from other fishing or non-fishing activities to participate in the halibut fishery. Therefore, their alternative to participation in the halibut fishery is not unemployment. [Page 2-10.]

In terms of stability for the local communities, there have been some claims that the IFQ program has destroyed the ports of Kodiak and Dutch Harbor. The 1997 IPHC Annual Report list by port the halibut landings as follows:

1.	Kodiak	20%	9,103,000
2.	Homer	12%	5,242,000
3.	Seward	9%	3,876,000
4.	Dutch Harbor	6%	2,855,000
5.	Sitka	6%	2,800,000

The RAM September 1997 report, page 50, Appendix 19, shows that, in 1995 and 1997, the top five halibut ports remained the same as in 1994, and the percentage of landings was similar.

With regard to sablefish, the supplemental EIS did not provide similar data; however, in looking at the 1990 data provided in table 3.12 in the supplemental EIS, four of the top five districts are still in the top five for landings, when compared to the 1997 September RAM report, page 50, Appendix 19.

From Supplemental EIS

1.	Wrangel, Petersburg	7,121,000 Lbs.	26%
2.	Sitka borough	6,131,000 Lbs.	22%
3.	Seward Borough	4,302,000 Lbs.	15%
4.	Juneau Borough	2,481,000 Lbs.	9%
5.	Kodiak Island Borough	2,134,000 Lbs.	8%
6.	Aleutian West Borough	not available	

The IFQ program was designed to have a minimal impact on communities by preventing a massive redistribution of landings. This was accomplished significantly with the three-year qualification period of 1988, 1989, 1990, where there had to be a landing to qualify for any poundage in one of these years. This helped ensure that quota holders were still active and operating in the same location they always had been. Clearly, this has been accomplished as shown by the hard evidence of landing reports. An argument of economic disadvantage to Kodiak or Dutch Harbor based on IFQ poundage being delivered elsewhere, cannot be substantiated.

The instability of these communities is most likely the result of the remaining pulse-type groundfish fisheries. The fishermen in the Kodiak area have three, three-day pollock openings; Pacific cod has barely a two-month operation. The landings in Kodiak are down between 1995 and 1996 by 160 million pounds; none of this reduction can be attributed to the IFQ program. NMFS Annual Report, attached. Appendix 20.

Similar landings in Dutch Harbor have been reduced by 105 million pounds between 1995-1996. Appendix 20. The argument that this is due to the IFQ program is similarly unsupported.

RURAL COASTAL COMMUNITY DEVELOPMENT OF A SMALL BOAT FISHERY

The supplemental EIS made the following statements and conclusions regarding rural coastal community development of a small boat fleet.

The Council wished to enhance the opportunities for rural coastal communities to participate in the sablefish and halibut fisheries. It was in pursuit of this objective that the western Alaska community development program was inserted into the preferred alternative. [Page 55.]

Opportunities for small communities will be enhanced by having portions of total allowable catches set aside. [Page 55.]

Many of the constraints imposed on transferability have been introduced to preserve a small boat fishery for sablefish and halibut. [Page 55.]

The community development quota (CDQ) program was specifically set up for western Alaska rural communities. The CDQ halibut quotas for 1997 amounted to 1,884,000 dressed pounds and 639,334 rounds pounds of sablefish. In the halibut regulatory area of 4C, all of the CDQ quota was harvested and landed by the local community and similarly for the participants in area 4E.

The ex-vessel value of CDQ-landed halibut and sablefish for 1997 will be approximately \$4,980,000 (Dutch Harbor price for halibut \$1.90; sablefish \$3.60/dressed). The CDQ halibut and sablefish quotas thus are a significant benefit to the coastal community of western Alaska and the small vessels, which operate out of those communities.

The Gulf of Alaska's small boat fleet vessels, less than 35 feet in length, have a secure position in the fisheries. The Secretary agreed to certain transferability considerations, which placed the poundage earned by initial recipients permanently in the vessel length category operated by the initial recipients. This effectively prevents vessel owners who operate vessels larger than this from purchasing and absorbing quota traditionally landed by the small boat fleet.

The small boat fleet has been additionally enhanced with recent amendments that allow QS holders operating small vessels to buy quota from larger vessel classes and fish that quota on the smaller vessels. IFQ holders operating larger vessels cannot use smaller vessel class quota on their larger vessels. This new provision gives smaller vessels, which tend to operate close to shore, more purchasing opportunity.

The recent amendments to the Magnuson-Stevens Act (Section 303(d)(4)), provided for a government loan program funded, in part, from landing fees of the IFQ participants. Those who can apply for the loan are fishermen with little or no

holdings of IFQs. The amount per loan is limited to about 8,000 lbs. of resource, and anyone holding or controlling 50,000 lbs. or more of quota is not eligible for the loans. Congress chose to help out the crews and those fishermen looking for upward mobility in the industry. This program should help rural citizens who have few cash-generating industries.

In summary, owners of small vessels have a guaranteed pool of quota and have the opportunity to gain more than their traditionally allocated share. Rural communities, dependent on smaller vessels, have been given advantages over the communities dependent on larger vessel classes. In addition, the loan program should improve their ability to become an increasingly significant part of the industry. The western rural communities have been given a perpetual allocation to ensure their participation in the adjacent coastal waters.