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Alaska Halibut Captains' Attitudes Towards IFQs

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Introduction

In 1995, an Individual Fishing Quota (IFQ) management system was introduced for the Alaska halibut fishery. With more than 3,000 participating vessels, 1994 landings of more than 44 million pounds, and a total ex-vessel value in 1994 of \$84 million, the Alaska halibut fishery represents the largest fishery to date for which an individual quota management system has been adopted (ADFG 1995; IPHC 1995).¹

In 1994, prior to the introduction of the IFQ system, the University of Alaska Anchorage's Institute of Social and Economic Research (ISER) conducted a detailed survey of vessel captains who had fished for halibut between 1987 and 1993. The survey included five questions about captains' expectations for and attitudes towards the planned IFQ management system. This paper reports on captains' responses to these questions.

The Alaska Halibut Fishery

Pacific halibut (*Hippoglossus stenolepis*) are flatfish found on sandy bottoms in coastal waters of the Pacific Northwest from northern California to the Bering Sea. Halibut are a long-lived species and may attain sizes up to 500 pounds, but most fish harvested are between 15 and 60 pounds. Most halibut are harvested on long-line gear by vessels ranging from less than 30 feet to more than 100 feet in length, many of which also participate in other fisheries.²

Halibut are harvested in both U.S. and Canadian waters. Recent total harvests in the North Pacific halibut fishery have ranged between 50 and 70 million pounds. About 85% is harvested in Alaska and 15% in British Columbia, with less than 1% along the U.S. west coast. The International Pacific Halibut Commission, created in 1923 by a joint treaty between the U.S. and Canada, establishes gear restrictions and area-specific fishing seasons and annual total allowable catches (TACs). The United States and Canadian governments, through the North Pacific Fishery Management Council and the Canadian Department of Fisheries and Oceans, establish additional

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² Information in this section on the Pacific halibut fishery and Canadian halibut management is summarized from Casey, Dewees, Turriss and Wilen (1995). This article provides a detailed description of experience with Individual Vessel Quota management in the British Columbia halibut fishery.

regulations to meet the TACs and to allocate harvests. Until the late 1970s, both the Alaskan and Canadian halibut fisheries were managed without access restrictions, with harvests limited by the timing of openings.

In response to rapid growth in the Canadian fleet during the 1970s, Canada established a halibut limited entry program in 1979, with 435 licensed vessels. However, Canadian fishing capacity continued to increase with larger crews and more efficient gear, reducing the fishing season from 60 days in 1982 to just six days per vessel in 1990. In the late 1980s fishing organizations met to discuss alternative management methods. A fishing industry Halibut Advisory Board developed a proposal for an individual quota program, which was supported by a majority of 70% of license holders, but opposed by large processing companies and the crew member union. The individual quota system was adopted on a trial basis for the 1991 and 1992 seasons, and subsequently on a permanent basis.

Alaska also experienced rapid growth in the halibut fleet in the 1970s, but did not limit entry to the fishery. The number of long-line vessels participating in the Alaska halibut fishery grew from 1,000 in 1975 to 3,600 in 1983 and about 3,700 by 1993. The season length fell from 150 days in 1970 to 16 days in 1979. From the mid-1980s until introduction of the IFQ program, most of the harvest in the most productive areas (2C, 3A, and 3B) was taken in two or three 24-hour openings.³

In 1988 the North Pacific Fishery Management Council declared the status quo unacceptable in the halibut fishery (as well as the sablefish fishery, which had experienced similar problems). The Council began discussions on management options for the halibut and sablefish fisheries, including license limitation and IFQs. After an intense three-year debate, the Council recommended an IFQ plan in 1991. After further debate and analysis, the Secretary of Commerce approved the plan in January 1993. The final rule was published in the *Federal Register* in November 1993 and a six-month application period for initial quota share allocation began in January 1994. Halibut and sablefish fishing under the IFQ system began in March 1995.

The Alaska Halibut IFQ System

Quota Share Allocation

The Alaska halibut IFQ program is based on holdings of quota share (QS). Individuals were allocated QS for each registration area in which vessels that they owned or leased had landings during the qualifying years 1984–1990. QS was awarded in four vessel categories: freezer vessels of any length (A), catcher vessels 100 feet or longer (B), catcher vessels 35 feet to 65 feet in length (C), and catcher vessels under 35 feet in length (D). If an individual had landings on several different vessels, he was awarded QS in the largest vessel category.⁴

For each regulatory area, an individual's initial QS allocation was based on landings on vessels owned or leased by the individual during the years 1984–1990.

³ Detailed information about the Alaska halibut fishery prior to the establishment of the IFQ management system is provided in Berman and Leask, "On the Eve of IFQs: Fishing for Alaska's Halibut and Sablefish," published by the University of Alaska Anchorage Institute of Social and Economic Research (ISER) in 1994. Copies of this 20-page report may be obtained by writing ISER, UAA, 3211 Providence Drive, Anchorage, Alaska 99508. Information in the report is based on the survey discussed in this article as well as other sources.

⁴ The description of the IFQ system in this section is drawn from the National Marine Fisheries Service publication *The IFQ Program: Under Way* (National Marine Fisheries Service 1995). Copies of this publication are available from the NMFS Restricted Access Management Division, P.O. Box 21668, Juneau, Alaska 99802.

The QS allocation was equal to the sum of the best five years' landings during this seven-year period. Crew members, hired captains, and individuals who did not fish during the qualifying period did not receive initial allocations of quota share.

For each regulatory area, the Quota Share Pool (QSP) is the total of all QS issued. The QSP will not change, except for small adjustments resulting from appeals or enforcement actions.

Each year, the International Pacific Halibut Commission sets a Total Allowable Catch (TAC) for halibut in each regulatory area. Each quota share holder in a regulatory area is then allocated Individual Fishing Quota (IFQ) pounds for that year in proportion to his holdings of QS in the total QSP. Mathematically, the amount that a quota share holder may harvest in an area in any given year is given by:

$$\text{IFQ} = (\text{QS}/\text{QSP}) \times \text{TAC}$$

IFQ must be harvested in the registration area and from the vessel size category for which it is issued. With a few exceptions, the quota share holder must be on board.

Quota share may be transferred and IFQ may be leased, but there are a wide variety of restrictions on transfers and leases. Restrictions limit the consolidation of small "blocked" holdings (those with less than approximately 20,000 lbs. of annual IFQ). Only original quota share recipients or crew members with more than 150 days experience in a U.S. fishery may purchase quota share. The purpose of these and other restrictions was ". . . to maintain, as much as possible, the current character of the fleet, to allow for new entrants and crew members, and to protect Alaskan coastal economies dependent on fishing. The provisions . . . were designed to slow consolidation and to limit the degree to which it can take place." (National Marine Fisheries Service 1995). In most areas, total landings of any vessel may not exceed 1/2% of the TAC.

Distribution of Quota Share Holdings

Table 1 shows the distribution of halibut quota share by area and vessel class, expressed in 1995 IFQ pounds. Most of the IFQ is in halibut registration areas 2C (southeast Alaska) and 3A (central Gulf of Alaska), and in vessel classes B (over 60 feet) and C (35 feet to 60 feet). During 1995, when ex-vessel prices ranged between \$1.75/lb. and \$2.25/lb., most halibut quota share sold for prices between \$5.00 and \$8.50 per 1995 halibut IFQ lb. A conservative estimate of the total market value of quota share holdings is more than \$200 million.

Table 2 shows the distribution of quota share holdings by size (expressed in 1995 IFQ pounds). A total of 7,514 halibut quota share holdings had been distributed as of November 22, 1995. Seventy-one percent of quota share holdings gave their holders the right to harvest less than 1,000 lbs of halibut in 1995. These holdings accounted for only 3% of the total 1995 IFQ pounds. In contrast, 2% of holdings gave their holders the right to harvest more than 50,000 lbs of halibut in 1995, and accounted for 12% of the total 1995 IFQ pounds. Assuming a market price of \$7.00/lb., these sixty-nine holdings each had a market value of at least \$350,000.

Because some individuals received initial allocations of quota share in more than one area (and thus more than one holding), the number of individuals who received quota share was less than the number of holdings. Approximately 5,500 individuals received initial allocations of quota share (National Marine Fisheries Service 1995).

By December of 1995, one year after NMFS began issuing quota share, ownership of 14% of halibut quota share (as measured by 1995 IFQ lbs) had been transferred. As shown in table 3, by November of 1995, the number of persons owning

halibut IFQ had declined to about 4,520. Of these, 1,724 persons, or 38% of IFQ holders, owned less than 1,000 lbs of 1995 IFQ, and accounted for 2% of total 1995 IFQ lbs. In contrast, 145 persons, or less than 3% of all IFQ holders, owned more than 50,000 lbs of 1995 IFQ, accounting for 36% of total 1995 IFQ lbs.

Table 1
1995 Halibut IFQ lbs, Quota Share Price Ranges,
and Approximate Market Value of Quota Share

	Halibut Registration Area	Vessel Class				All Classes
		A Freezer Vessels	B Over 60'	C 35' to 60'	D Under 35'	
1995 IFQ lbs (thousands of lbs)	2C	180	436	6,790	1,444	8,851
	3A	445	7,252	10,496	1,439	19,632
	3B	103	2,017	1,366	133	3,619
	4A-4E	185	3,145	947	309	4,586
	All areas	913	12,850	19,599	3,325	36,687
Quota share price range (per 1995 IFQ lb)	2C		\$7.00-\$8.50	\$7.00-\$8.50	\$7.00-\$8.50	
	3A		\$5.00-\$8.50	\$6.00-\$8.50	\$5.00-\$8.00	
	3B		\$6.00-\$7.75	\$6.00-\$8.50	\$5.00-\$7.50	
	4A-4E		\$4.00-\$7.00	\$4.00-\$7.00	\$3.00-\$7.00	
Approximate market value of quota share (\$000)	2C	\$1,259	\$3,053	\$47,533	\$10,108	\$61,954
	3A	\$2,225	\$36,260	\$62,978	\$7,193	\$108,656
	3B	\$620	\$12,103	\$8,195	\$665	\$21,583
	4A-4E	\$738	\$12,580	\$3,787	\$928	\$18,033
	All Areas	\$4,842	\$63,996	\$122,494	\$18,894	\$210,226

Sources: IFQ pounds calculated from NMFS Restricted Access Management Division quota share holder file as of November 22, 1995 (estimates vary slightly from other data published by NMFS). Quota share prices provided by IFQ Brokers, Inc., Fall 1995. Prices vary depending on size of holding. Quota share market value estimated based on low end of price range. Same prices assumed for Vessel Class A as for Vessel Class B.

Table 2
Distribution of Quota Share, by Size of Holding

Size of holding	Number of holdings	Total 1995 IFQ lbs	Percentage of holdings	Percentage of IFQ lbs
Less than 1,000 lbs	3,218	985,415	71%	3%
1,000-4,999 lbs	2,341	5,894,460	52%	16%
5,000-29,999 lbs	1,554	15,327,760	34%	42%
20,000-49,999 lbs	332	9,964,760	7%	27%
50,000 lbs or more	69	4,514,945	2%	12%
All IFQ holders	7,514	36,687,340	100%	100%

Source: Calculated from NMFS Restricted Access Management Division quota share holder file as of November 22, 1995.

ISER Survey of Halibut Captains

In 1994, the University of Alaska Anchorage's Institute of Social and Economic Research (ISER) conducted a telephone survey of captains of Alaska fishing vessels with longline gear which fished for halibut or sablefish sometime between 1987 and 1993. The survey was funded by the Saltonstall-Kennedy program to collect data for an analysis of long-term economic impacts of the halibut and sablefish IFQ programs.

A sample of 607 permit holders was randomly selected from halibut and sablefish permit holders for the years 1987–1993 for three vessel size categories (less than 60 feet, 60 to 100 feet, and greater than 100 feet), and from a fourth group of permit holders for whom vessel size was not known. The fourth group consisted of captains who were not vessel owners and thus did not appear in the state's vessel license file. Vessel length information for this group was obtained from the survey. A total of 391 interviews were completed, which represented a 69% completion rate. Responses reported in this paper were weighted to the total population in each of the four sample groups. Details of the population and sample sizes for each group, as well as response rates and weights, are included in Appendix A. Unweighted responses to selected questions are included in Appendix B.

The surveys were conducted by trained interviewers with extensive experience in telephone interviewing. Most of the survey questions related to halibut and sablefish fishing activities in 1993, vessel expenditures and payment of captains and crew in the halibut and sablefish fisheries, participation and expenditures in other fisheries, and plans to purchase or sell quota share under different assumptions about prices for fish and quota share. The five questions about management preferences for halibut and expected effects of the halibut IFQ program were asked at the end of the interview. Most respondents appeared interested in the survey and provided detailed answers; many of the interviews lasted more than an hour.

Table 4 shows the estimated number of vessel captains who fished for halibut between the years 1987 and 1993, by vessel size class. Of an estimated 5,098 captains, 93% were vessel owners. As the vessel size increased, the percentage of captains who were owners declined. Only 82% of captains of vessels 100 feet or longer were owners.

Seventy-five percent of all captains expected to receive halibut quota share. This percentage increased with vessel size, from 72% for vessels less than 30 feet in length to 81% for vessels 60 to 99 feet in length. However, only 56% of captains of vessels 100 feet or longer expected to receive quota share—likely reflecting the smaller share of captains who were vessel owners in this size class.

Table 3
Distribution of Ownership of 1995 Halibut IFQ

1995 IFQ lbs Owned	Number of Persons	Total IFQ lbs Owned	Percentage of Persons	Percentage of IFQ lbs
Less than 1,000 lbs	1,724	566,443	38%	2%
1,000–4,999 lbs	1,324	3,295,614	29%	9%
5,000–29,999 lbs	1,016	10,223,122	22%	28%
20,000–49,999 lbs	311	9,405,869	7%	26%
50,000 lbs or more	145	13,196,294	3%	36%
All IFQ holders	4,520	36,687,342	100%	100%

Source: Calculated from NMFS Restricted Access Management Division quota share holder file as of November 22, 1995.

Note: Distribution is based on ownership of halibut quota share as of November 22, 1995. Thus the data do not exactly reflect the distribution of the initial allocation of halibut IFQ.

Table 4
 Estimated Number of Vessel Captains Who Fished
 for Halibut between 1987 and 1993

	Vessel Length				Total
	< 30'	30'–59'	60'–99'	100'+	
Vessel Ownership					
Number of captains					
Owned vessel	1,985	2,507	233	31	4,756
Did not own vessel	69	235	31	7	342
Total	2,054	2,742	264	38	5,098
Percent, by owner category					
Owned vessel	97%	91%	88%	82%	93%
Did not own vessel	3%	9%	12%	18%	7%
Total	100%	100%	100%	100%	100%
Percent, by vessel length					
Owned vessel	42%	53%	5%	0%	100%
Did not own vessel	20%	69%	9%	2%	100%
Total	40%	54%	5%	0%	100%
Halibut Quota Share Expectations					
Number of captains ^a					
Expected to receive halibut quota share	1,487	2,078	214	22	3,801
Did not expect to receive halibut quota share	395	460	42	15	912
Didn't know/no answer	172	204	8	2	386
Total	2,054	2,742	264	39	5,099
Percent, by owner category					
Expected to receive halibut quota share	72%	76%	81%	56%	75%
Did not expect to receive halibut quota share	19%	17%	16%	38%	18%
Didn't know/no answer	8%	7%	3%	5%	8%
Total	100%	100%	100%	100%	100%
Percent, by vessel length					
Expected to receive halibut quota share	39%	55%	6%	0%	100%
Did not expect to receive halibut quota share	43%	50%	5%	2%	100%
Didn't know/no answer	45%	53%	2%	0%	100%
Total	40%	54%	5%	0%	100%

^a Differences in totals are due to rounding after weighting.

IFQ Expectations and Attitudes

Financial Situation with IFQs

Table 5 shows responses to the question “Do you think that with IFQs you will be better off financially, worse off, or about the same?” Only 23% of halibut captains thought they would be better off with IFQs, while 42% thought they would be worse off. Only 13% of those who did not expect to receive IFQ thought they would be better off, and only 10% of those who were not vessel owners thought they would be better off.

Only 20% of captains with vessels under 30 feet in length thought they would be better off. This share increased with vessel size to 39% of those with vessels between 60 and 99 feet in length, but declined to 28% of those with vessels 100 feet or longer.

Management Preferences

Table 6 shows responses to the question, “Of the management options which have been discussed for halibut, which do you think should be used? Twenty-nine percent of captains preferred IFQs, 17% preferred limited entry, 19% preferred the current system, and 25% preferred something else (the most frequently mentioned other options included gear restrictions and a differently structured IFQ system).

Among those who thought they would be better off with IFQs, 65% preferred IFQs. This share dropped to 40% for those who thought their financial condition would be about the same, and only 10% for those who thought they would be worse off.

Table 7 shows responses to the question “If you had to choose between the current system and an IFQ, which would you choose?” Only 44% of all captains preferred an IFQ system to the current system. Of those who thought they would be better off under IFQs, 85% preferred an IFQ system, while of those who thought they would be worse off, only 15% preferred an IFQ system.

Table 5

Halibut Captain’s Survey Responses: “Do you think that with IFQ you will be better off financially, worse off, or about the same?”

	Better	Worse	Same	Don’t Know/ No Answer	Total
All responses	23%	42%	21%	15%	100%
Expect to receive					
Yes	27%	35%	22%	16%	100%
No	13%	66%	11%	10%	100%
Don’t know/no answer	13%	48%	30%	8%	100%
Vessel owner					
Yes	25%	41%	22%	12%	100%
No	10%	57%	11%	21%	100%
Vessel length					
Under 30’	20%	38%	24%	18%	100%
30’–59’	24%	45%	18%	13%	100%
60’–99’	39%	38%	17%	6%	100%
100’ or longer	28%	23%	23%	26%	100%

Table 6

Halibut Captains' Survey Responses: "Of the management options which have been discussed for halibut, which do you think should be used?"

	IFQ	Limited Entry	Current System	Something Else	Don't Know/No Answer	Total
All captains	29%	17%	19%	25%	11%	100%
Financial condition with IFQs						
Better off	65%	10%	6%	16%	4%	100%
The same	40%	9%	12%	23%	17%	100%
Worse off	10%	21%	31%	32%	6%	100%
Don't know/no answer	15%	23%	15%	18%	28%	100%
Vessel length						
Under 30'	23%	12%	25%	25%	16%	100%
30'-60'	33%	21%	14%	24%	7%	100%
60'-99'	42%	7%	17%	27%	6%	100%
More than 100'	43%	15%	5%	18%	20%	100%

Table 7

Halibut Captains' Survey Responses: "If you had to choose between the current system and an IFQ, which would you choose?"

	IFQ	Current System	Don't Know	Total
All captains	44%	48%	8%	100%
Preferred management option				
IFQ	100%	0%	0%	100%
Limited entry	21%	76%	4%	100%
Current system	8%	92%	0%	100%
Something else	30%	63%	7%	100%
Don't know	20%	27%	53%	100%
Financial condition with IFQs				
Better off	85%	13%	1%	100%
The same	56%	32%	12%	100%
Worse off	15%	81%	4%	100%
Don't know/no answer	42%	34%	24%	100%
Vessel length				
Under 30'	39%	50%	11%	100%
30'-60'	46%	48%	6%	100%
60'-99'	55%	39%	6%	100%
More than 100'	47%	34%	18%	100%

Note: This question was only asked of captains for whom IFQs were not the preferred management option. For this table, these persons are assumed to have answered "IFQ" to this question. A small number of respondents who said that the "current system" was their preferred management option answered "IFQ" to this question.

Fairness of IFQ System

Table 8 shows responses to the question “Do you think that the IFQ system will fairly allocate halibut among the people who work in the halibut fishery?” Only 20% of all captains thought the IFQ system would allocate halibut fairly. Even among those who preferred IFQs as a management system, only 53% thought the system would allocate halibut fairly. Of those who thought they would be better off, 48% thought the system would allocate halibut fairly, while of those who thought they would be worse off, only 5% thought the system would allocate halibut fairly.

Vessel captains who answered that the system would not allocate fairly were asked who they thought the halibut IFQ system would be unfair to. Of these, as shown in table 9, 60% thought that the system would be unfair to small operators and small boats. Other groups mentioned most frequently included crew members, people who didn't fish or had poor catches during the qualifying period, or new entrants to the fishery since the qualifying period—all of whom stood to receive little or no quota share in the initial allocation.

Effects on Fishing Safety

Table 10 shows responses to the question “Do you think that IFQs will make fishing for halibut safer?” Almost four-fifths of the captains surveyed thought IFQs would make fishing safer. However, 97% of those who thought their financial condition would be better with IFQs thought fishing would be safer, while only 68% of those who thought they would be worse off thought fishing would be safer. Since safer fishing was an often cited benefit of the IFQ program, possibly respondents who opposed the program for other reasons were less inclined to agree that it would make fishing safer.

Table 8

Halibut Captains' Survey Responses: “Do you think that the IFQ system will fairly allocate halibut among the people who work in the halibut fishery?”

	Yes	No	Don't Know/ No Answer	Total
All captains	20%	68%	12%	100%
Preferred management option				
IFQ	53%	31%	16%	100%
Limited entry	9%	87%	4%	100%
Current system	8%	88%	5%	100%
Something else	4%	87%	9%	100%
Don't know/no answer	9%	59%	33%	100%
Financial condition with IFQs				
Better off	48%	39%	13%	100%
The same	29%	57%	14%	100%
Worse off	5%	93%	2%	100%
Don't know/no answer	6%	57%	37%	100%
Vessel length				
Under 30'	17%	70%	13%	100%
30'–60'	22%	67%	11%	100%
60'–99'	28%	64%	9%	100%
More than 100'	28%	46%	26%	100%

Conclusions and Future Research

Less than half of Alaska halibut captains preferred the IFQ system to the current system, and less than one-third named the IFQ system as their first choice for management of the fishery. Support for IFQs was clearly related to whether or not captains expected their financial situation to improve with IFQs—and the majority did not. But even among those who thought they would be better off, only about two-thirds preferred an IFQ system.

Less than one-third of halibut captains thought that the IFQ system would allocate halibut fairly, and only slightly more than half of those who preferred an IFQ system thought that it would allocate halibut fairly. Most captains thought that IFQs would make fishing for halibut safer—including those who preferred other management systems.

The survey did not ask halibut captains why they supported or opposed IFQs. But the survey responses suggest a simple explanation for why many captains may have opposed IFQs: they thought they would be worse off. The initial allocation of IFQs favored vessel owners with consistent high catches during a seven-year qualifying period which ended five years before the beginning of the program (and four years before the survey was conducted). Many captains might reasonably have expected to receive less halibut IFQ than the harvest they would expect under an alternative management system. There are, of course, many other potential reasons for which halibut captains may not have supported IFQs. A wide variety of other arguments against the program have been (and continue to be) expressed, such as concerns about enforceability, high-grading, and localized resource depletion.

Opposition by Alaska halibut captains to the IFQ system is in contrast to the support expressed by Canadian vessel owners, 70% of whom voted in favor of the Canadian IVQ system (Casey, Dewees, Turriss, and Wilen 1995). An important difference in the establishment of the two systems is that entry to the Canadian halibut

Table 9
Halibut Captains' Survey Responses: "Who do you think the halibut IFQ system will be unfair to?"

Group	Percentage of Those Who Think the IFQ System will Allocate Unfairly
Small operators/small boats	60%
Crew members	27%
People who didn't fish or had poor catches during the qualifying years	13%
New entrants to the fishery since the qualifying period	10%
Young people and other people with limited resources	9%
Alaskan fishermen	9%
Small/coastal communities	9%
Captains who leased vessels during the qualifying years	5%
Local processors	5%
Honest people	5%
Other responses	2%

Note: This question was asked only of those respondents who said that the IFQ system will not allocate halibut fairly. Some respondents cited more than one group to whom the halibut IFQ system will allocate unfairly. Up to three groups per respondent were coded.

Table 10
Halibut Captains' Survey Responses: "Do you think that
IFQs will make fishing for halibut safer?"

	Yes	No	Don't Know/ No Answer	Total
All responses	78%	14%	7%	100%
Preferred management option				
IFQ	97%	1%	1%	100%
Limited entry	78%	16%	6%	100%
Current system	67%	24%	9%	100%
Something else	75%	23%	1%	100%
Don't know/no answer	66%	12%	22%	100%
Vessel length				
Under 30'	73%	16%	11%	100%
30'-60'	82%	14%	4%	100%
60'-99'	75%	16%	9%	100%
More than 100'	79%	5%	15%	100%
Financial condition with IFQs				
Better off	98%	1%	0%	100%
The same	87%	9%	4%	100%
Worse off	68%	26%	6%	100%
Don't know/no answer	63%	11%	26%	100%
IFQs allocated fairly?				
Yes	98%	2%	0%	100%
No	73%	20%	6%	100%
Don't know/no answer	73%	3%	25%	100%

fishery had already been limited more than a decade earlier, and quota share was allocated to limited entry permit holders. Thus, more than for the Alaska IFQ system, generally the same vessel owners stood to benefit under the new system as the one it replaced.

A number of research projects are currently underway or planned to assess the impacts of the Alaska halibut and sablefish IFQ programs. The National Marine Fisheries Service, the Alaska Commercial Fisheries Entry Commission, and the University of Alaska Anchorage are presently preparing a series of reports on the first year of the IFQ program, which are scheduled for completion in June of 1996. After the 1996 halibut season, ISER is planning a follow-up survey to the 1994 pre-IFQ survey, with funding from the Alaska Sea Grant Program.⁵ Respondents to the 1994 survey, including those who did not receive halibut quota share or who left the fishery for other reasons, will be contacted and asked about changes in their fishing since 1993 and their experiences under IFQ management. This follow-up survey will also provide an opportunity to learn whether fishermen's attitudes towards IFQ management have changed since establishment of the system.

⁵ The survey described by this study was developed by ISER researchers Matthew Berman and Jack Kruse. Lexi Hill and Dan Hull contributed to analysis of the survey results and the distribution of quota share holdings.

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Appendix A Halibut Captains Survey Sample Selection and Weights

	Population Sampled				Total
	Vessels Under 60'	Vessels 60'-99'	Vessels 100' or Longer	Vessels for which Length was Unknown ^a	
Estimated number of boats which fished for halibut in 1993	4,645	249	57	645	5,596
Sample size	400	100	57	50	607
Percent sampled	9%	40%	100%	8%	11%
Number of completed interviews	280	63	29	19	391
Vessels contacted which didn't fish or sank	17	2	2	10	31
Vessels not contacted or which refused interviews	103	35	26	21	185
Response rate ^b	74%	65%	54%	58%	70%
Weight for survey responses ^c	15.64	3.83	1.84	22.24	

^a Vessels for which the vessel file could not be matched to the permit file.

^b Completed interviews plus vessels contacted which didn't fish or sank, divided by sample size.

^c Estimated number of boats which fished for halibut in 1993 divided by completed interviews plus vessels contacted which didn't fish or sank.

Appendix B
Unweighted Responses to Selected Survey Questions

	Vessels Under 60'	Vessels 60'-99'	Vessels 100' or Longer	Vessels for which Length was Unknown ^a	Unweighted Total
Vessel length					
Under 30'	110			15	125
30'-60'	171			3	174
60'-99'		63		1	64
100' or longer			21		21
Total	281	63	21	19	384
Vessel owner?					
Yes	263	55	17	18	353
No	18	8	4	1	31
Total	281	63	21	19	384
Expect to receive IFQ?					
Yes	208	50	12	15	285
No	49	11	8	4	72
Don't know/no answer	23	1	1		25
Total	280	62	21	19	382
Financial condition with IFQs					
Better off	64	21	6	4	95
The same	63	12	5		80
Worse off	112	26	5	11	154
Don't know/no answer	40	4	5	4	53
Total	279	63	21	19	382
Preferred management option					
IFQ	84	29	9	2	124
Limited entry	48	5	3	3	59
Current system	47	12	1	8	68
Something else	69	13	4	5	91
Don't know/no answer	32	4	4	1	41
Total	280	63	21	19	383
IFQs or current system?					
IFQ	126	32	10	5	173
Current system	131	27	7	13	178
Don't know/no answer	24	4	4	1	33
Total	281	63	21	19	384
IFQs allocated fairly?					
Yes	58	19	6	2	85
No	187	38	10	16	251
Don't know/no answer	35	6	5	1	47
Total	280	63	21	19	383
Will IFQs make fishing safer?					
Yes	221	46	17	14	298
No	40	11	1	3	55
Don't know/no answer	19	6	3	2	30
Total	280	63	21	19	383

^a Vessels for which the vessel file could not be matched to the permit file.

