SJR

7

SENATE RESOURCES COMMITTEE
LEGISLATION CHECKLIST

IDENTIFICATION:

BILL NUMBER: SJR 7

BILL NAME: Opposing imposition of halibut moratorium & establishment of shares system

SPONSOR(S): Mulcahy

RELATED BILLS PENDING: HJR 10

DATE INTRODUCED: 1-19-83

REFERRALS: Resources

INITIAL RESEARCH:

BILL SUMMARY COMPLETED:

SUMMARY BY LEGAL DIVISION:

SPONSOR CONTACTED FOR BACKUP MATERIALS:

DEPT. OF LAW SUMMARY:

FISCAL NOTE:

AGENCY RESPONSE:

OTHER INTERESTED SENATORS OR REPS. NOTIFIED:

BACKGROUND RESEARCH:

SIMILAR BILLS INTRODUCED IN PREVIOUS LEGISLATURES:

RESPONSES FROM INTERESTED PERSONS/GROUPS:

OTHER STATE OR FEDERAL PRECEDENTS, REGULATIONS, LAWS:

HEARING PREPARATION:

CHAIRMAN BRIEFED:

DATE AND PLACE SET:

STAFF MEMO TO COMMITTEE:

TELECONFERENCE:

BACKGROUND MATERIAL DISTRIBUTED:

PSA/PRESS RELEASE:

LIST OF WITNESSES:

SUGGESTED AMENDMENTS/COMMITTEE SUBSTITUTES DRAFTED:

Alaska State Legislature

BETTYE FAHRENKAMP
CHAIRMAN
ROBERT H. ZIEGLER, SR.
VICE-CHAIRMAN
DICK ELIASON - PAUL FISCHER
VIC FISCHER - BOB MULCAHY
ARLISS STURGULEWSKI

POUCH V
STATE CAPITOL
JUNEAU, ALASKA 99811
(907) 465-3834
(907) 465-3835

Senate

Committee on Resources

Memo

To: Senate Resources Committee Members

From: Resources Committee Staff

Subject: Committee Consideration of SJR 7 and SJR 10, Feb. 11, 1983

The Fisheries Subcommittee of the Committee held hearings on the above resolutions on Thursday, Feb. 10 and moved a subcommittee substitute for each of the resolutions to the full Committee.

Attached are the subcommittee substitutes. We will hope to have final typed versions when the Committee meets to consider the resolutions at 3:00 PM on Friday, the 11th. At this time it is hoped the Committee will take final action on the resolutions. The meeting will be in Beltz Rm.

SJR 7--Relating to the imposition of a halibut moratorium and the establishment of a shares system for halibut in Alaska.

In response to a recommendation by the North Pacific Fishery Management Council that a moratorium and possible share-quota system be imposed on Alaska's halibut fisheries, the resolution calls on the Secretary of Commerce and the NOAA Administrator to seriously consider the views of Alaskans on the NPFMC's recommendations and to disapprove any share-quota system for halibut in Alaska.

SJR 10--Requesting rejection and renegotiation of the proposed US-Canada salmon interception treaty.

Under the terms of a draft treaty between the US and Canada, Alaskan fishermen would be required to substantially reduce overall catches of chinook salmon. The resolution requests the Governor to reject the proposed treaty, requests the Alaska's Senate Delegation to prevent the treaty's ratification and requests the Secretary of State to reopen treaty negotiations.

Offered: 2/14/83
Referred: Rules

Original sponsor: Mulcahy

IN THE SENATE BY THE RESOURCES COMMITTEE

CS FOR SENATE JOINT RESOLUTION NO. 7 (Resources)

IN THE LEGISLATURE OF THE STATE OF ALASKA

THIRTEENTH LEGISLATURE - FIRST SESSION

Relating to the imposition of a halibut moratorium and the establishment of a shares system for halibut in Alaska.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS the North Pacific Fishery Management Council has recommended imposition of a moratorium on Alaska's halibut fisheries and is considering recommending the establishment of a share-quota system for the allocation of the fishery resource; and

WHEREAS the proposed moratorium would exclude fishermen who did not participate from 1978 to 1982; and

added –

WHEREAS many people in Alaska oppose imposition of a moratorium in any form, while many others in Alaska favor imposition of a moratorium as proposed or in another form; and

added –

changed from would –

WHEREAS a share system could result in the concentration of ownership of the fishery resource in the hands of a few "wealthy" deleted fishermen; and

WHEREAS a share system could encourage speculation and the making of exorbitant profits at the expense of Alaska fishermen; and

WHEREAS concentration of ownership in and speculation by nonresidents could result in a loss to Alaska fishing communities and to the state of a fishery resource valued at $50,000,000 annually; and

changed from would –

WHEREAS a share system could tend to eliminate competition among halibut fishermen; and

"and sex" deleted

WHEREAS existing management tools, such as harvest levels, size limits, gear restrictions, and area closures, are less drastic alternatives to a share-quota system and have not been adequately considered by the

management council; and

WHEREAS numerous Alaska communities, including Akutan, Cordova, Craig, Kenai, the Kenai Peninsula Borough, King Cove, Kodiak, the Kodiak Island Borough, Valdez, and Whittier, and organizations, including the Kodiak Area Native Association, the Kodiak Area Chamber of Commerce, the Alaska Draggers, and the United Fishermen's Marketing Association, have passed resolutions or otherwise expressed views in opposition to the share-quota system; "and/or moratorium" deleted

and

WHEREAS the Legislature would oppose the use of state-operated facilities and other forms of cooperation in implementing a share-quota system;

BE IT RESOLVED by the Alaska State Legislature that the Secretary of Commerce and the administrator of the National Oceanic and Atmospheric Administration are respectfully requested to give serious consideration to the comments submitted by Alaskans regarding the imposition of a moratorium on Alaska halibut fisheries; and be it

FURTHER RESOLVED that the Secretary of Commerce and the administrator of the National Oceanic and Atmospheric Administration are respectfully requested to disapprove any share-quota system for halibut in Alaska that is recommended by the North Pacific Fishery Management Council.

COPIES of this resolution shall be sent to the Honorable Malcolm Baldridge, Secretary of Commerce; Mr. John V. Byrne, Administrator, National Oceanic and Atmospheric Administration; Mr. Clem Tillion, Chairman, North Pacific Fishery Management Council; and to the Honorable Ted Stevens and the Honorable Frank Murkowski, U.S. Senators, and the Honorable Don Young, U.S. Representative, members of the Alaska delegation in Congress.

wording in original bill:
"to disapprove the imposition of a moratorium on Alaska halibut fisheries"

North Pacific Fishery Management Council

[illegible] Tillion, Chairman
[illegible]nson, Executive Director

[illegible] 4th Avenue
Anchorage, Alaska 99510

Mailing Address: P.O. Box 3136DT
Anchorage, Alaska 99510

Telephone: (907) 274-4563
FTS 271-4064

December 28, 1982

PUBLIC HEARINGS ON A MORATORIUM ON NEW ENTRIES INTO THE ALASKA HALIBUT FISHERY FOR 1983

The North Pacific Fishery Management Council announces a schedule for public hearings on a moratorium on new entries into the halibut fishery off Alaska for 1983. They will be holding hearings in cooperation with the U.S. Secretary of Commerce in Alaska and Seattle in January. Comments are requested only on the moratorium. Limited entry in the halibut fishery and the possible methods by which limited entry might be accomplished will be the subject of extensive Council hearings and discussion beginning in March 1983. The schedule of hearings on the moratorium is as follows:

On-site Public Hearings

Times published for on-site hearings are Pacific Standard Time. These times may be extended if necessary.

January 7, 1983	Baranof Hotel Juneau, Alaska	1 - 5 p.m.
January 8, 1983	City Council Chambers Petersburg, Alaska	1 - 5 p.m.
January 9, 1983	State Office Building Conference Room 20[illegible] Ketchikan, Alaska	3:30 - 7 p.m.
January 17, 1983 January 18, 1983 January 20, 1983	Homer, Alaska Kodiak, Alaska Seattle, Washington	(Times and locations to be announced)

Teleconference Hearings

Times published for teleconference hearings are Alaska Standard Time. Times may be extended if necessary. See Attachment 4 for further information.

January 24, 1983	Connecting Seward, Cordova Valdez, Soldotna, Yakutat, and Seattle (Anchorage, moderator only)	8 -10 a.m.
January 26, 1983	Connecting Sand Point Unalaska, St. Paul, and Seattle (Anchorage, moderator only)	8 - 10 a.m.

Teleconference Hearings, continued

January 28, 1983	Connecting Sitka, Hoonah, and Haines (Anchorage, moderator only)	8:30 - 10:30 a.m.

The moratorium, expected to be published in the Federal Register as a Notice of Proposed Rulemaking by the U.S. Department of Commerce on approximately January 20, would restrict participation in the halibut fishery off Alaska from May 1, 1983 through December 31, 1985. Only those persons who lawfully harvested and sold halibut from those waters between January 1, 1978 and December 31, 1982 would be allowed to fish during 1983, 1984, and 1985. It would apply to the waters off Alaska in International Pacific Halibut Commission management areas 2C and 3 and south of 56°N latitude in IPHC management area 4. The Northern Pacific Halibut Act of 1982 (Act) requires the Council to provide an opportunity for the coastal villages north of 56°N to develop a halibut fishery over the next three years. Fishermen in that area would not be included in a moratorium.

The Halibut Fishery

Pacific halibut have been managed as an international resource by Canada and the United States through the International Pacific Halibut Commission (IPHC) since 1923. The Commission, with three U.S. and three Canadian members, has a permanent staff of U.S. and Canadian scientists headquartered in Seattle. The Commission conducts research and sets seasons, quotas, fishing methods, and fishing areas, but has no authority to decide who may participate in the fishery; that is left to the member countries. The Northern Pacific Halibut Act of 1982 authorized the North Pacific Fishery Management Council to develop regulations limiting participation in the fishery. Any regulations developed must be approved by the Secretary before they can be implemented.

When the Magnuson Fishery Conservation and Management Act (MFCMA) was passed in 1976, both Canadian and U.S. fishermen fished off Alaska, with Canadian fishermen taking over half the catch. Their fishery off Alaska was phased out, ending in 1980, and they may now fish only off Canada. Canadians may still land their catches in American ports.

The American catch off Alaska has increased from 13 million pounds in 1978 to 22 million pounds in 1982 through the elimination of the Canadians and an increase in the quota set by IPHC. The number of participants during that same period has increased from 2,100 to over 2,800. But while the catch has increased, the seasons have sharply decreased. It took 73 days in 1977 to catch 3.4 million pounds in Southeast Alaska, but only 5-1/2 days to catch the same amount in 1982. In Area 3, the Gulf of Alaska west of Cape Spencer and including the grounds around Kodiak and Cook Inlet, 12.3 million pounds were taken in 47 days in 1977 while 17.6 million pounds were taken in 11-1/2 days in 1982.

The IPHC is concerned with the ever decreasing seasons because it is very difficult to keep catches within quotas with such a rapid increase in fishing effort. They believe that it is poor biological management to take the entire catch from the particular stock component that might be available during a very short season. They would prefer longer seasons which allow the quota to be taken from as many stock components as possible.

Another problem with short seasons is that since the catch arrives at the processor during a very short period of time, most of it is frozen and stored for later distribution. Fresh halibut are available to the consumer for only a short time during the year. The long storage times plus high interest rates increase the processors' costs and prices to the consumer and lower prices to the fishermen.

Short seasons are also dangerous. Fishermen must work "around the clock" in order to catch enough fish to make a living. This can result in more injuries and boat losses as fishermen become physically exhausted. Many will continue to work in weather conditions they wouldn't normally fish.

The Moratorium

Recognizing that the rapidly expanding fleet would soon create drastic problems in harvest management and the availability of fresh halibut during the year, the North Pacific Council began studying the problems in the halibut fishery in 1978. In November 1978 they set December 31, 1978 as a cut-off date for eligibility in the eventuality that some form of limited entry was developed in the next two or three years. That date did not hold up for legal reasons, but the Council has since stated on several occasions their intent to establish a cut-off date for accruing rights under any future limited entry system.

In early 1979 the Council appointed a Limited Entry Workgroup composed of halibut fishermen, industry representatives, and agency staff to assess methods of limiting the offshore salmon troll fishery in Southeastern Alaska and to develop possible approaches to limiting effort in the halibut fishery. By June of 1979 some segments of the halibut fleet were urging the Council to develop a limited entry system, and later that year the Council advertised for proposals to study limited entry in the halibut fishery. They also asked that the enabling legislation for the newly renegotiated Pacific Halibut Convention contain authorization for a limited entry system for the halibut fishery. In 1980 the Limited Entry Workgroup again recommended a moratorium on entry into the fishery, but the Council was unable to act until the aforementioned enabling legislation became law, which did not occur until the Northern Pacific Halibut Act was signed by the President on May 17, 1982.

At the IPHC meeting in February 1982 many members of the Fishermen's Conference Board, a group of halibut fishermen from the U.S. and Canada, asked the Council to develop a limited entry system based on the "fishermen's share" system and urged a halt to further entry into the fishery. The Council asked the Department of Commerce to implement a moratorium as quickly as possible, recognizing that it would probably not be possible for the 1982 season, but urging action well in advance of the 1983 fishing season. They believed it would deter people from entering the fishery in hopes of obtaining rights under any limited entry system that might develop and would tend to stabilize effort at the current level. A moratorium will give fishermen, the Council, and the public time to consider management alternatives to stabilize the fishery so participants can expect reasonable returns on their investment and efforts and consumers can buy fresh halibut for more than a few days a year.

Regulations to implement a moratorium were developed by the Council and the National Marine Fisheries Service to be published as a Notice of Proposed Rulemaking in the Federal Register. Those regulations are included in this

package as Attachment 1. There will be a 45-day comment period after they are published. They can then be rewritten and published as a Notice of Final Rulemaking, becoming effective 30 days after that publication. The proposed regulations would permit anyone who has participated in the halibut fishery between January 1, 1978 and December 31, 1982 to continue participating in the fishery in the same manner from May 1, 1983 through 1985. The moratorium would end on December 31, 1985. It could end earlier if supplanted by limited entry.

Theoretically, using the base period 1978 - 1982, a maximum of 6,481 individuals would be qualified to participate in the fishery in 1983. Without a moratorium, of course, there would be no limit to the number of people who could fish in 1983. As currently written the moratorium will not necessarily reduce effort, although it should limit the increase below what it would be if the fishery were to remain open to everyone. One of the chief values of a moratorium, in any case, is to establish a cut-off date beyond which participants cannot accrue credit toward participation in a limited entry system.

Some who support the moratorium would like to see a further restriction on effort beyond limiting the number of people, and have proposed restricting the size of boat that could be used in 1983-85 to the same size used in the 1978-82 period. (See Attachment 2, Comments Requested on the Moratorium, Proposal B.) Others are willing to consider other methods that would limit the increase of effort.

The proposed rulemaking can be greatly modified through the public hearing and comment process. The Council would like to hear comments on all of the proposals listed in Attachment 2 and any others which may occur to you.

Limited Entry in the Halibut Fishery

Early in 1982 the North Pacific Fishery Management Council developed a research proposal for a study of limited entry systems for the hook and line halibut fishery off Alaska. They set four primary objectives for a limited entry system:

1. That it distribute the hook and line halibut fishery in time and space to ensure resource conservation;

2. That it provide high quality, fresh and frozen fish to the consumer twelve months of the year;

3. That it encourage development of an economically viable and efficient year-round U.S. hook and line fishery that would make it possible for some fishermen to earn a major share of their income from hook and line halibut fishing and is made up of owner/operator rights holders;

4. That it ensure that no single individual or entity acquires excessive control of the resource and minimize disruption of the present fleet by using past performance to distribute initial rights in the fishery, using the market to transfer fishing rights after initial distribution.

A contract between the Council and Northwest Resources Analysis (Bob Stokes) was signed on June 17, 1982 calling for an analysis of known limited entry systems and their ability to achieve the described objectives. The Council asked for a detailed study of the fishermen's share system. The study emphasizes that system because it was requested in the initial Fishermen's Conference Board request to the Council and because less is known about that system than other limited entry systems. Limitations on individuals or boats have been in existence for some time and their advantages and disadvantages are relatively well known. The share system has not been used for a fishery of any magnitude, although British Columbia intends to implement it for halibut in 1983.

The contractor, Northwest Resources Analysis, has been working closely with an industry steering group, soliciting their advice on the direction his study should take and what options to consider. The steering group consists of representatives of the major fishermen's organizations involved in the halibut fishery as well as representatives from the Council.

More details on that study and its current status are included in Attachment 3, an excerpt from the NPFMC Newsletter of August 1982.

The contractor finished an interim report on program design titled "Halibut Limited Entry Study Program Design" in November 1982. Copies of that study are available at the Council office. We expect the contractor's final report to be available for review at the Council meeting in February or March. When that report has been accepted by the Council it will be available for public distribution. The Council will then decide if they want to go ahead with limited entry and, if so, specify what system or systems they want to send to the public for review and comment. Prior to that decision the contractor will hold informational presentations on his study in Sitka, Seattle, and Kodiak.

If the Council decides to develop a limited entry system, there will be an extended public comment period with hearings in numerous communities in Alaska and in Seattle. Following those hearings the Council will decide what system to develop, complete development of the system, and ask the Department of Commerce through the National Marine Fisheries Service to implement it. It is doubtful that any system could be in place before late 1984.

DRAFT Attachment 1

Billing Code 3510-22

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

December 29, 1982

This Draft supersedes all others in circulation before this date.

[Docket No.]

50 CFR Part 301

Pacific Halibut Fisheries

AGENCY: National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Proposed rule.

SUMMARY: NOAA proposes a rule imposing a moratorium on the entry of certain fishermen into the halibut fishery in waters under U.S. jurisdiction in the northern Pacific Ocean (international Pacific Halibut Commission management areas 2C and 3), and that part of the Bering Sea and Aleutians (management area 4) south of 56° N. latitude. The proposed rule would forbid any person to harvest and sell halibut for commercial purposes from those waters from May 1, 1983, through December 31, 1985, who had not lawfully harvested and sold halibut from those waters between January 1, 1978, and December 31, 1982. This action is necessary to prevent a rush of new participants from entering the fishery in hopes of obtaining rights under a limited entry system which is being considered by the North Pacific Fishery Management Council.

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DATES: Comments on the proposed rule must be received on or before [insert date 30 days after publication in FEDERAL REGISTER].

ADDRESS: Comments on the proposed rule should be sent to Jim Branson, Executive Director, North Pacific Fishery Management Council, P.O. Box 3136 DT, Anchorage, Alaska 99510 (Please see request for comments in SUPPLEMENTARY INFORMATION, below). Copies of the initial regulatory flexibility analysis of this action are available at the same address.

FOR FURTHER INFORMATION CONTACT: Jim Branson, 907-274-4563.

SUPPLEMENTARY INFORMATION:

Background

In recent years, the fishery for Pacific halibut (Hippoglossus stenolepis) off the coasts of Alaska and the Pacific Northwest has witnessed a large increase in the number of participating fishermen despite the fact that halibut stocks during this time have been at depressed levels of abundance. This has required that halibut fishing seasons in these areas be restricted to periods of as little as five days per year. The resulting combination of many participants, a depressed resource, and short seasons has had a number of undesirable effects:

(1) The concentration of halibut fishing effort in very short periods of time each year may result in overharvesting of stocks that happen to be on the fishing grounds during those periods, while leaving underutilized other stocks that are on the grounds at other times of the year.

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(2) For the great majority of participants, the halibut fishery no longer generates sufficient income to earn a significant part of their livings. (For some participants, this has had the effect of encouraging their diversification into other fisheries.)

(3) Fresh halibut, which is superior to the frozen product, is available to consumers only during the few weeks of commercial halibut seasons.

In order to address these problems, the North Pacific Fishery Management Council (Council) is investigating the establishment of a limited entry system for the northern Pacific halibut fishery. Major goals of this system would be the extension of the halibut fishery over a longer period of the year, and the encouragement of voluntary arrangements among current participants that would enable some of them to earn a major portion of their income from halibut fishing, perhaps through the trading of authorized harvest shares. The establishment of such a system is authorized by § 5(c) of the Northern Pacific Halibut Act of 1982 (the Act), Pub. L. 97-176, 16 U.S.C.773 et seq.

It is feared that the prospect of a limited entry system will cause substantial numbers of people with no previous participation or stake in the fishery to consider entering the fishery for the first time, solely in the hope of gaining a financially valuable right in the fishery under any limited entry system which might be adopted. A sudden influx of new participants during the period prior to implementation of a permanent limited entry system would have several undesirable effects:

(1) It would allow an unlimited increase in pressure on the halibut

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resource;

(2) It would allow unlimited reductions in the average harvests of individual participants and hence reductions in per-vessel earnings;

(3) It would increase the number of individuals whose participation in and dependence on the fishery would have to be taken into account in the establishment of a limited entry program, and whose participation in the fishery might have to be terminated;

(4) It would result in additional and excessive investment in vessels and gear, much of which might have to be involuntarily retired in the establishment of an effective limited entry program.

In order to mitigate these undesirable results (particularly the third and fourth), the Council, under the authority of § 5(c) of the Act, has developed a proposed rule which would impose a moratorium on entry into the northern Pacific halibut commercial fishery; it is expected that the effective date of the moratorium will be May 1, 1983 (prior to opening of the 1983 halibut season). Under this moratorium (which applies to fishing in the fishery conservation zone, the U.S. territorial sea and internal waters off the coasts of Alaska), no person could harvest and sell halibut for commercial purposes in International Pacific Halibut Commission (IPHC) management areas 2C and 3, and in that part of IPHC management area 4 south of 56° N. latitude, unless that person had lawfully harvested halibut for commercial purposes from those waters and sold that halibut, reporting the sale in his name as required by State or Federal law, between January 1,

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1978, and December 31, 1982. A person would be considered to have harvested halibut lawfully from those waters if that person has served as master or crew aboard a vessel there at a time when that vessel harvested halibut. If the halibut so harvested was sold, any person considered to have harvested that halibut would be considered to have sold it if the sale of the halibut was reported to the extent required by State and Federal law, and such sale lawfully recorded in the name of that person on the document of sale (State fish ticket or equivalent) required by law. The moratorium would not apply to that portion of area 4 north of 56° N. latitude in order to implement a provision of § 5(c) of the Act authorizing the Council:

> to provide for the rural coastal villages of Alaska the opportunity to establish a commercial halibut fishery in areas in the Bering Sea to the north of 56 degrees north latitude during a 3 year development period.

The moratorium would expire at midnight on December 31, 1985. By that time it is expected that the Council will have developed the permanent limited entry system and that system will have been implemented; or that the Council will have determined that a permanent limited entry system should not be developed.

The fact that a person has obtained a State or IPHC license or permit to fish for or to sell halibut would not affect the application of the moratorium to that person. Unless a person met the criteria for participation in the fishery established by the proposed rule, that person would be forbidden to harvest halibut in the area specified and to sell that halibut, even if he had obtained all necessary permits.

It should be noted that the Council has not yet detemined whether a limited entry system should ultimately be adopted, or what form any such system

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might take. In view of the Council's desire to avoid imposing unnecessary interim constraints on the fishery, the proposed moratorium allows every current participant, whether master, crew member, or owner of vessels or gear, to continue to participate in that current capacity. New masters or crew members may be employed in the fishery, and investment in vessels and gear may continue. However, it should be noted that the rule requires that an individual qualified to harvest and sell halibut for commercial purposes must be aboard each vessel engaged in the commercial harvest of halibut; moreover, the sale of such halibut from such vessel must be reported and recorded in the name of that individual. Furthermore, it is emphasized that any new participation and investment is undertaken at risk, since imposition of a limited entry system is under active consideration.

The prohibition imposed by this rule, then, would be against the harvest of halibut within the area specified and the sale of such halibut, by those who have not harvested halibut within that area and sold such halibut during the qualifying period. Any scheme to evade this rule would fall within the prohibition of the rules.

Request for comments

The Council and Secretary seek public comment on the proposed moratorium. Comments should be submitted to the Council at the address noted above; the Council will transmit copies of all comments received to the Secretary for his consideration in this rulemaking proceeding.

Comments on the following issues would be particularly helpful in assuring that the moratorium meets the requirements of the Act:

(1) Is the allocation of fishing privileges under the proposed

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moratorium fair and equitable to all fishermen? Are any hardships created? If so, what is their nature and extent? What, if any, exceptions to the specified criteria should be made to ameliorate those hardships?

(2) Is reliance upon documents of sale (fish tickets or equivalent documents) as sole indicators of participation in and dependence on the fishery reasonable, fair, and equitable? Does the use of this criterion for participation under the moratorium create any hardships? If so, what other indicators should be examined?

(3) The Council has selected a five-year qualification period, 1978 - through 1982, as indicative of present participation in the fishery. Is this approach reasonable, fair and equitable?

(4) Does the proposed moratorium take account of historical fishing practices in, and the economics of, the fishery? Will it raise any question regarding the capacity of vessels used in the fishery to engage in other fisheries? If so, what is that capacity?

(5) Might the proposed moratorium cause any individual, corporation, or other entity to acquire an excessive share of the halibut fishing privileges?

In developing the proposed moratorium, the Council considered and rejected alternative approaches, including a moratorium on entry by vessels. Comments on such alternatives are welcome, however.

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It must be emphasized that the Secretary has not made a final determination that the moratorium as proposed can be approved under the Halibut Act's criteria; comments are being solicited to enable the Secretary to make the necessary determinations. Thus, commenters are urged to make as comprehensive a review of the proposed regulation as possible. Final rules to implement the moratorium will be influenced by comments received on the proposed rule; comments received may lead to adoption of final rules that differ from this proposal or to withdrawal of the rulemaking.

It is expected that the Council and Secretary will hold public hearings on this proposal following publication of the proposed rule in the FEDERAL REGISTER. The time(s), date(s) and place(s) of such hearings will be subsequently announced.

Classification

The NOAA Administrator has determined that this proposed rule is not a "major rule" requiring a regulatory impact analysis under Executive Order 12291, because it will not result (1) in an annual effect on the economy of $100 million or more; (2) in a major increase in costs or prices to consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or (3) in significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or export markets. Among alternatives considered, this rule involves the least net cost to society. By discouraging potentially unprofitable investment in and entry into the halibut fishery, and by reducing the number of persons whose participation will have to be considered

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in the implementation of any limited entry system, this proposed rule can be expected to yield a net benefit to society.

An initial regulatory flexibility analysis has been prepared on this proposed rule under the Regulatory Flexibility Act, 5 U.S.C. §601 et seq. This document analyzes alternative approaches to the moratorium, including the proposed action, the inclusion under the moratorium of all prior participants and vessel owners, a prohibition against the entry of new vessels into the fishery, and a continuation of the status quo (no moratorium). The analysis presents a range of impacts on individual entities based on various numbers of participants that might be active in the fishery. On the one extreme, if approximately 15 percent of the 3,041 participants who were active in 1981 temporarily withdraw from the fishery for economic considerations and the remaining 2,500 individuals actually fish during the moratorium, average earnings per vessel would be expected to increase by about 21 percent from the average $6,873 earned in 1981 (assuming static quotas and prices). On the other extreme, if all of the 6,481 "qualified" individuals actively participate in the fishery, average earnings per vessel could decline about 53 percent to just over $3,000 per vessel. Regardless of how many "qualified" individuals participate, the analysis shows that a substantial risk exists that average vessel performance would be even more severely affected absent some mechanism (the moratorium) to reduce speculative entry into the fishery. The analysis concludes that among the alternatives considered, the proposed rule will have the least economic impact on small entities. Copies of the initial regulatory flexibility analysis may be obtained from the address noted above.

This proposed rule does not contain an information collection requirement or involve any Federal agency in the collection of information for purposes

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of the Paperwork Reduction Act of 1980.

An environmental assessment on this proposed rule was filed with the Environmental Protection Agency on _____. Based upon this assessment, the Assistant Administrator for Fisheries, NOAA, has determined that this proposed rule does not involve a major Federal action significantly affecting the quality of the human environment and requiring an environmental impact statement under § 102(2)(C) of the National Environmental Policy Act.

The Council has determined that this proposed rule will be carried out in a manner that is consistent to the maximum extent practicable with the Alaska Coastal Management Program, in accordance with § 307 of the Coastal Zone Management Act of 1972 and its implementing regulations.

List of Subjects in 50 CFR Part 301

Fish, Fisheries, Fishing, International organizations.

DATED:

_____

National Marine Fisheries Service

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PART 301 - PACIFIC HALIBUT FISHERIES

For the reasons set out in the preamble, 50 CFR Part 301 is proposed to be amended as follows:

1. The authority citation for Part 301 is revised to read as follows:

AUTHORITY: TIAS No. 9855; 16 U.S.C. 773-773k.

2. A new §301.15 is added to read as follows:

§ 301.15 Moratorium on entry into the Pacific halibut fishery.

(a) Criteria for participation.

(1) From 12:01 A.M., Alaska Standard Time, on May 1, 1983, until 11:59 P.M., Alaska Standard Time, on December 31, 1985, no person may harvest and sell halibut for commercial purposes from the northern Pacific Ocean or that part of the Bering Sea and Aleutian Islands area south of 56° N. latitude unless that person had lawfully harvested and sold halibut for commercial purposes from those waters and reported such sale to the extent required by law, at any time between January 1, 1978, and December 31, 1982.

(2) An individual qualified to harvest and sell halibut for commercial purposes under paragraph (a)(1) of this section must be on board each vessel engaged in the commercial harvest of halibut in the waters described in paragraph (a)(1) of this section, and the sale of halibut so harvested must be recorded in the name of that individual as required by law.

(3) For purposes of this section--

(A) A person shall be considered to have harvested halibut for

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commercial purposes from the waters referred to in paragraph (a)(1) of this section if that person served as master or crew aboard a vessel at a time when that vessel harvested halibut for commercial purposes from those waters; and

(B) Any person who is considered to have harvested halibut under paragraph (a)(3)(A) shall be considered to have sold that halibut for commercial purposes if sale of that halibut was reported to the extent required by law, and such sale was lawfully recorded in the name of that person on the document of sale required by law.

(b) Definitions. The terms used in this section have the following meanings:

(1) Bering Sea and Aleutian Islands area -- means waters under the jurisdiction of the United States within management area 4 (as defined in section 301.1 of this part).

(2) Halibut -- means Hippoglossus stenolepis;

(3) Northern Pacific Ocean -- means waters under the jurisdiction of the United States within management areas 2C, 3A and 3B (as defined in section 301.1 of this part).

(4) Waters under the jurisdiction of the United States -- means the internal waters and territorial sea of the United States and the fishery conservation zone established by the Magnuson Fishery Conservation and Management Act, 16 U.S.C. 1801 et seq.

(c) Relationship to other licenses and permits. The requirements of this section are in addition to all other requirements imposed by law for

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participation in the halibut fishery. The issuance to a person of a State or International Pacific Halibut Commission license or permit purporting to authorize fishing for or sale of halibut during the moratorium period shall neither excuse nor constitute evidence of that person's compliance with paragraph (a)(1) of this section.

OPPOSING THE IMPOSITION OF A HALIBUT MORATORIUM AND THE ESTABLISHMENT OF A SHARES SYSTEM FOR HALIBUT IN ALASKA.

SJR 7

MULCAHY

The North Pacific Fishery Management Council has recommended imposition of a moratorium on Alaska's halibut fisheries and is considering recommending the establishment of a share-quota system for the allocation of the fishery resource. The moratorium would exclude fishermen who have not participated since 1978.

SJR 7 urges the Secretary of Commerce and the administrator of the National Oceanic and Atmospheric Administration (NOAA) to disapprove the imposition of a moratorium and any share-quota system, and instead consider other management tools (harvest levels, size and sex limits, gear restrictions, area closures).

SJR 1

HALIBUT MORATORIUM TELECONFERENCE
BELTZ ROOM, 10:00 AM, 1/26/83

Sandpoint, Unalaska, St. Paul, King Cove, Cordova, Seattle, Juneau were tuned in.

Background from Council moratorium issue/limited entry undecided. Study was concentrated on share system because the least was known about it, not because it's been decided it's the best option.

Concerns of testifiers:
- villagers don't have many choices for employment; villages economically dependent on fishery
- some villages in Aleutians, Pribiloffs won't qualify for permits cause halibut fishery is recent development
- not all areas of state should be under same laws cause fishery isn't being impacted the same in all areas.
- if limited entry, children of fishermen relegated to being crew until parents retire, cause can't get own permits.
- Unalaska still developing fishery - small boat harbor put in last year
- want opportunity to fish the local resources
- necessary to limit number of applicants but oppose limiting catch (Cordova)
- out-of-state fishermen don't contribute to our economy
- areas north of 56° would be excluded from moratorium to allow them to gain experience in the halibut fishery. In St. Paul, concerned all other schooners will go there and deplete the stock.
- unfair to limit U.S. fishermen while allowing in foreign fleets ("incidental catch")

1982 statistics (halibut fishery catch)

2,482	Alaska boats caught	13,450,000 lbs.
218	Washington	8,265,000 lbs.
71	other areas	1,500,000 lbs.

("Obviously, Alaska boats smaller.")

In Anchorage, formed Alaska Halibut Fishermen, Inc. Feel haven't had enough time to completely analyze info./comment. Think Commission should have sent moratorium paper to each halibut fisherman in Alaska. Urge extension on moratorium decision.

Kodiak fisherman from Seattle says has been a large increase in halibut fishery in Bering Sea last few years. Crab supply has been depleted by "over-fishing" - concerned same will happen to halibut over time.
"Limited entry can secure a stable economic base for your community."
Council feels moratorium could conceivably lengthen the halibut season.

For my info.:
Proposed moratorium would be for 3 years. (If hadn't fished between 1978-1982, could not fish under moratorium.) Boat size limited to size used then also.
Share quota is a form of limited entry. This method would limit your catch based on your previous catch.

NOAA (Dept of Commerce) wants regulation printed in Federal Register in March.
Then 45-day comment period
Then becomes law.
Cooling off period of 30 days.

Sandra

Halibut season begins June

JAN 25 1983

KODIAK ISLAND BOROUGH

Telephones 486-5736 - 486-5737 — Box 1246
KODIAK, ALASKA 99615

January 21, 1983

Governor Bill Sheffield
Office of the Governor
Pouch A
Juneau, Alaska 99811

Dear Governor Sheffield:

Enclosed is a copy of my testimony before the North Pacific Fisheries Management Council (NPFMC) in Kodiak on January 18, 1983 in opposition to the proposed moratorium for the Alaska halibut fishery. If the Secretary of Commerce and NPFMC should concur and approve the moratorium it will be a new major policy decision adversely affecting the future of all our fisheries. The public testimony of Kodiak fishermen was unanimous in opposition to the moratorium. It is inconceivable to me that the Reagan administration and the State of Alaska could go along with such a program of bureaucratic, economic regulation of our industry.

The Kodiak Island Borough has gone on record against the shares-quota system with the enclosed Resolution No. 82-38-0 of March 1982. We will be considering an updated resolution at our February 3, 1983 meeting in opposition to the moratorium.

I feel this upcoming decision concerning the moratorium will be such a major policy decision by your administration that I hope you are able to give personal direction. It's not just a matter of how many halibut fishermen are for or against it, but rather what will be the future of all of Alaska's fisheries.

I appreciate any attention you might give to this matter. This decision will affect the future of all our open access fisheries.

Sincerely,

Dave Herrnsteen

R. David Herrnsteen
Mayor
Kodiak Island Borough

RDH:cmk

Enclosures

cc: Senator Bob Mulcahy, Alaska State Senate
Representative Fred Zharoff, Alaska House of Representatives
Senator Jay Kertulla, President of the Senate
Representative Joe Hayes, Speaker of the House
Bettye Fahrchkamp, Senate Resources Chairman
Representatives John Rignstad and Richard Shultz,
Co-chairmen, House Resources
Don Collinsworth, Acting Commissioner, ADF&G

KODIAK ISLAND BOROUGH
RESOLUTION NO. 82-38-R

A RESOLUTION OF THE KODIAK ISLAND BOROUGH ASSEMBLY OPPOSING THE SHARE-QUOTA SYSTEM OF ALLOCATION OF FISHERIES RESOURCES.

WHEREAS, the North Pacific Fishery Management Council on March 25, 1982 enacted a moratorium on new entrants to the Alaska halibut fishery, and directed that a shares-quota system of allocation of the fishery be prepared for the 1983 season, and

WHEREAS, the United States Senate recently passed SB 2244 giving the Council the necessary authority to enact such a system, and

WHEREAS, the bill is expected to pass the U. S. House of Representatives without any public hearings, and

WHEREAS, the proposed share system will allocate permanent fishing shares consisting of a fixed percentage of the halibut to individual fishermen based on their average harvests of the past three years as a percent of the total harvest, and

WHEREAS, it is intended that these shares may thereafter be bought, sold or leased by the initial shareholders, and that individual shareholders may purchase additional shares from willing sellers up to an aggregate of two percent, or possibly higher, of the total quota per shareholder,

WHEREAS, it appears inevitable that these shares will concentrate to fewer and fewer people, theoretically as few as 50 if two percent is the maximum allowed per person, and

WHEREAS, the annual value of the halibut harvest in Alaska approaches $50 ' .0,000 to the fishermen, and

WHEREAS, it has been conservatively estimated that the value of halibut shares could be three to five times the value of their annual allowed catch, or about $250,000,000, creating an undeserved windfall to the initial shareholders, and an even greater burden to future potential shareholders, and

WHEREAS, this halibut share-quota system is being used as a precedent and prototype for other Alaskan fisheries by state and federal fishery managers, and

WHEREAS, under the shares system a fisherman's catch will be dependent solely on the number of shares he owns (his wealth) rather than on his abilities as a fisherman, and

WHEREAS, such a system will concentrate the increasing wealth of our fisheries into fewer and fewer hands, creating great inequities of opportunity in our fishing communities, particularly among the young, and

WHEREAS, the share system greatly hinders fishermen from being able to diversify among various fisheries, thus depriving them of a key element for success, and

WHEREAS, Alaska fishery managers already have an adequate variety of regulatory tools such as harvest levels, sex and size limits, gear restrictions, area closures, et cetera and our fisheries are generally very healthy biologically, and

WHEREAS, the fishing industry is too vital to the people and economy of Kodiak and Alaska to risk all the inherent dangers and inequities of such an irreversible, unnecessary management plan as the shares system, and

WHEREAS, the Kodiak Island Borough considers the rich, abundant fisheries resources in the waters surrounding Kodiak Island and Alaska to be a renewable PUBLIC resource which serves a primary purpose, along with helping feed people around the world, of sustaining the livelihoods and economy of the people and communities of our island and state, and

WHEREAS, the idea of permanently turning over the ownership of our public resource to a few private hands is repugnant to the fishing industry and people of Kodiak.

NOW, THEREFORE, BE IT RESOLVED that the Kodiak Island Borough is opposed to the share-quota system of allocation of any fisheries resources in Alaska, and that this resolution be communicated to the following people:

The President
Ronald Reagan

The Honorable Jay S. Hammond
Governor of Alaska

The Honorable Ted Stevens
United States Senate

The Honorable Frank H. Murkowski
United States Senate

The Honorable Edward M. Kennedy
United States Senate

The Honorable Don Young
The United States House of Representatives

The Honorable John B. Breaux
The United States House of Representatives

The Honorable Gerry E. Studds
The United States House of Representatives

NPFMD, Chairman, Clem Tillion

Alaska Legislature

Messrs. H. A. Boucher, Steve Cowper, Tom Fink, Oral E. Freeman, Bruce J. Lemke, Terry Miller, Rick Reakoff, Bill Sheffield, Edward J. Vincent, Brad Bradley, Mike Colletta, Stephen McAlpine Charles H. Parr, Terry Stimson, David A. Rose

All Alaska Cities

PASSED AND APPROVED this 30th day of April, 1982 by the Borough Assembly.

KODIAK ISLAND BOROUGH

By _____
Borough Mayor R. David Herrnsteen

ATTEST:

By _____
Borough Clerk

Ayes 7 Nays 0

TESTIMONY TO THE NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL
REGARDING
A MORATORIUM ON NEW ENTRIES INTO THE ALASKA HALIBUT FISHERY FOR 1983

R. David Herrnsteen
Mayor
Kodiak Island Borough

The Kodiak Island Borough encompasses the Kodiak Island group extending from the Barren Islands to the Trinity Islands and has a population of over 12,000 people. In 1981, and certain other previous years, the City of Kodiak ranked as the number one fishing port in the United States as measured by dock side value of fish landed. As our economy is dependent almost solely on fishing, we are concerned that our fish are properly managed biologically in our fisheries. In addition, as there is a natural turnover of participants in any fishery - some people get out - while new people get in. I am concerned that all our local residents have equal opportunity for present and future employment in our fisheries.

The Kodiak Island Borough's largest responsibility is education - the Assembly is responsible for building and funding the schools. We have an extensive program of fisheries education in our schools, including on-the-water experience for our high school students. I am concerned that our young people leaving school have a chance to find their niche in the fisheries, if they so desire. Some students try fishing halibut to help fund their college education - this moratorium would not allow new students to have this opportunity.

The Kodiak Island Borough includes six villages, five of which are second-class cities. Employment opportunities other than fishing are particularly few in the villages. There have recently been federal cutbacks in the various social and jobs programs. These villages have gone on record, through the Kodiak Area Native Association, as being opposed to the halibut moratorium. It's hard to have a resource in your front yard, watch others making good money, and not be able to have a crack at it. That's not fair and equitable.

Having lived in Alaska 22 years, and fished in Kodiak 17 years, I've seen where many times if a person gets quite comfortable financially, and particularly can make it in a short period of time, often they will tend to move Outside to a condo in Hawaii, a house in Seattle, or a farm in Missouri or Vermont (for example). That's their privilege, and I have no gripes if they are able to do it because they are good fishermen and can out-compete the others. But when they are able to do this because the government has restricted competition and allowed only a select few to profit from the increasing wealth of our fisheries, at the expense of employment opportunities of our local people, that's not equitable.

The workings of an economy are often very nebulous, it's hard to exactly describe on paper in dollars and cents, but it is still very real. Kodiak's economy over the past 15 years has been a slow, steady growth. After the king crab boom in the mid 60's, and the simultaneous reconstruction of Kodiak after the tidal wave of 1964 subsided, our economy had a pretty healthy growth. As the fisheries went up and down with the natural fluctuations of the fish stocks and fish prices, many fishermen moved back and forth among

fisheries. Those fishermen who stuck with one fishery benefited from the others having the ability to move out and into a more prosperous fishery.

In the late 60's and early 70's many halibut fishermen, particularly from Seattle, left the depressed halibut fishery and moved into the Alaska crab fishery. When the king crab fishery slumped in the early 70's many crabbers became combination boats and switched to the booming shrimp fishery; as shrimp declined in the late 70's many shrimpers switched to crab. And as salmon seasons have gone up and down over the years, many salmon fishermen switch back and forth among crab, shrimp and halibut to make a living.

Some areas of Alaska don't have as much continental shelf and aren't as blessed with the abundance of fisheries we have here, but we are generally an open town - people come here from Oregon, Washington, Southeast Alaska, Cook Inlet, and Westward Alaska to fish - some only seasonally, some move here. Some come only when they have a poor season at home. Usually we don't enjoy seeing the Outsiders who come and go, but it's been our freedom to move around and diversify that's been the secret of our success.

Certainly this system of mostly free entry has its problems. When you have a slump after a boom, it takes time for boats to move out of a fishery and into something else. And there are times when management of the fishery has to be more sophisticated and cautious. And it means the fisherman has to be cautious as a businessman at times. If he expands too heavily during a boom and isn't prepared for increased competition, or for a slump, he can feel a pinch. Or if he gets too high expectations during the "easy money" that occasionally accompanies a boom, he'll feel a shock when the reality of normal times hits. It's important for a fisherman to remember during a boom, or when he's "on a roll", that his earnings aren't normal or likely to continue that high.

If limited entry had been put on all our fisheries 10 or 12 years ago, I feel it would have been a disaster to the town as a whole - socially and economically. If we had locked everybody into their fisheries back when most crabbers fished just crab, and shrimpers just shrimp, etc. we would now probably have just a group of family dynasties harvesting our fish, and with many of them moving Outside. I think the town would have frozen or shrunk in size. You wouldn't have seen, every year, the new homes and steady expansion. It would have been feast or famine for many fishermen.

The price of halibut climbed from $.18 in 1967 to as high as $2 a pound, shrimp went from $.04 to $.28, king crab went from $.10 to $4.30, tanner crab went from $.10 to $1.80. Even though the quotas and harvests have fluctuated greatly, the overall seafood harvest values have climbed to a record $130 million value to fishermen in 1981 in Kodiak. Instead of new people, new jobs, new blood and enthusiasm, you would have had a static or even declining number of men. It's very possible that the capital costs would be just as high because of write-offs, just fewer people dividing the pie. It's very possible that except within the family, crew jobs would have become salaried under some of the limited entry schemes.

Now I'm not eager to see how many people we can bring to Kodiak or Alaska, but we do need jobs for our young people. Many of our businesses and people's dreams are dependent on some growth. What concerns me most is that we have some fairness and equity in the allocation of the wealth of our fisheries.

Drive through our high school parking lot and see how many brand new 4-wheel drive pickups you see. Last summer was a slow season, so the number may be down a little. Some kids are able to afford them because they might fish with their dad who may be an exceptional fisherman. But if limited entry had been put on all fisheries 12 years ago, many kids would have those trucks solely because their dad happened to have received one of those lucky permits 12 years ago. We would have developed a privileged class, an elitest society that was determined by the roll of the dice - who was fishing when limited entry was imposed. I don't think that's healthy for society, or what Alaska and fishing is all about.

My own personal case is typical. In 1967 they closed the Kodiak salmon season for almost the entire summer, so I spent four months on a halibut schooner. For the next four years I continued to make halibut trips along with fishing on crab, shrimp and salmon boats. Halibut prices were down (as low as $.17/lb.) and stocks were slumping (we fished 26 days on a highline schooner for 30,000 pounds in 1971 - my crew share was $90 for the month). I crewed for eight years with many highliners in all four fisheries so that when I got my own boat I could be diversified.

In 1974 my wife and I made the big jump and bought our own 42 foot boat. For two years we fished entirely shrimp, then we branched into crab. In 1978 we sold our first boat and bought a slightly larger boat. When shrimp declined we tendered salmon along with crab fishing. Last year because of the salmon price slump we did not tender, so fished just crab - including dungeness.

Even though I haven't fished shrimp since June of 1978, I am still a shrimp fisherman and dependent on the shrimp resource to make my living. Even though I haven't fished halibut since July 1971 and then only as a crewman, I am still a halibut fisherman, and consider myself dependent on the halibut fishery. I've spent more hours at the roller, gaffed more halibut and baited more hooks than a large number of the fishermen who could qualify to fish under the proposed moratorium the next three years. I have a vessel and a reel that are suited for halibut. All of the skills I've developed as a skipper in finding crab and shrimp and running my business are applicable to finding halibut. The halibut, cod and pollock stocks are in an upward cycle, and are also preying heavily on crab and shrimp stocks. I am dependent upon my ability to move my business along with nature's cycles in order to make a living. The guidelines of the proposed moratorium are arbitrary and capricious. To exclude me because I never fished halibut since January 1, 1978 is not fair and equitable.

The Council needs to look at fisheries as a group and over time, taking into consideration dynamic environmental and market conditions. It is natural and healthy economically that as the halibut stocks and markets started booming in the late 70's, that participation increased. The same boats I crewed on in the early 70's, averaging a crew share of maybe $1500 for a three week trip, by the late 70's were crewsharing $1000 a day and better - $60,000 man-shares in much shorter seasons. Instead of working off-season winter jobs, as many men did in the earlier years, many were able to lay back in the winters. There is nothing wrong with making big money- that's the thrill of fishing - that's the

dream that keeps you going. It's only wrong when you feel you deserve big money all the time, and need to exclude others in order to achieve it.

Obviously the Council's own actions have been a very large impetus in the increased fleet. Ever since 1978, the Council has been setting "cut-off dates for eligibility" for halibut limited entry - setting up work groups, funding studies, etc. All of these actions have helped create the often frantic rush to fish halibut, even if at a loss. If this moratorium should be approved, it will be a major government policy and will create a new rush to participate in all fisheries not under a limited entry system. The State of Alaska's enthusiasm for extending limited entry beyond salmon and herring definitely cooled in the late 70's and many Kodiak fishermen once again started making their decisions on when and what to fish, purely on business and personal reasons. A new government policy like a halibut moratorium would have a very major effect on participation in the other fisheries. It would start another frantic rush, would increase our costs by forcing us to participate unprofitably in certain fisheries so we could qualify for future permits. In addition, it would decrease our individual earnings because of the added participation. All these negative reactions would be very real and are not just imaginary. It would be an extremely unwise action for our industry. You cannot act on the halibut fishery without affecting the rest of the industry. The harvesting sections of our industry are just as interrelated as the fish in the ocean.

It is very likely that if future limited entry would be put to rest and the halibut moratorium be turned down, there would be less participation in the halibut fishery than if the moratorium would be enacted. A three year moratorium would bring people out of the woodwork who had already dropped out of the fishery, just so they could increase their qualifications for future permits, and wisely so. The Council has been saying periodically since 1978 that "next year's" participation won't count. So why should the Council be believed now if the Council should say participation during the next three years won't count. More than twice as many people (6,481 individuals) will be eligible to fish under the proposed moratorium than ever fished in any one year (2,800), and it seems certain that a large number of those who dropped out will re-enter the fishery, largely in the hopes of financial gain from ownership of a future share or permit. In addition, many of those who fished the past year or two, but were not financially successful and were considering quitting, will have a renewed incentive to remain active in the fishery during the moratorium.

A moratorium has such a nice allure to it. You kick out the fewest and postpone the disagreements about the various limited entry systems. However, during the enactment of Alaska's limited entry law (and ever since) government lawyers have told us that a moratorium is the most unconstitutional of all limited entry alternatives because it creates such a closed class without a means of entry. The halibut resource is in the best shape its been in decades and I believe there is no way you can justify "protection of the resource" as reason for a moratorium.

Certainly the moratorium will appeal to the fear all fishermen have of competition. It appeals to the greed in us. For the hobby or vacation halibut fisherman who has regular year-round shore-based jobs its real nice. But watch out - how can they be considered dependent on the fishery. For the successful fisherman who has fished mainly or solely halibut and had a taste of the big season, he thinks he'll be eliminating future competition.

The halibut commission has been telling fishermen for over a year that without limited entry they will lose halibut as a fishery. The commission can't justify its own existence if the season is too short, they say. Hogwash! The biologists just need to be used in the other fisheries, also if they have slack time. It seems to me that the halibut commission has a unique bureaucratic position in being separate from both ADF&G and NMFS, a situation which needs review.

Certainly the fishing industry has troubled times. I haven't been so concerned for a long time as to where I'll make it next season. But putting boxes around each fishery and each boat isn't the answer, There are no guarantees in fishing, and if someone wants one he's in the wrong business.

Dave Herrnsteen Jan 21, 1983

R. David Herrnsteen Date
Mayor
Kodiak Island Borough

Alaska State Legislature

Senate

Resources Committee

Official Business

Senator Bettye Fahrenkamp
Chairman

Pouch V
State Capitol
Juneau, Alaska 99811

February 11, 1983
3:05 p.m.

Senate Resource Committee Hearing

MEMBERS PRESENT

Senator Ziegler
Senator Eliason
Senator Paul Fischer
Senator Vic Fischer
Senator Kerttula

SJR 10 -- Requesting rejection and renegotiation of the proposed US-Canada salmon interception treaty. Under the terms of a draft treaty between the US and Canada, Alaskan fishermen would be required to substantially reduce overall catches of chinook salmon. The resolution requests the Governor to reject the proposed treaty, requests the Alaskan Senate delegation to prevent the treaty's ratification and requests the Secretary of State to reopen treaty negotiations.

Senator Eliason moved and asked unanimous consent that Committee Substitute for SJR 10 be moved from committee with individual recommendations. There were no objections.

SJR 7 -- Relating to the imposition of a halibut moratorium and the establishment of a shares system for halibut in Alaska. This resolution was introduced in response to a recommendation by the North Pacific Fishery Management Council that a moratorium and possible share-quota system be imposed on Alaska's halibut fisheries. The resolution calls on the Secretary of Commerce and the NOAA Administrator to seriously consider the views of Alaskans on the NPFMC's recommendations and to disapprove any share-quota system for halibut in Alaska.

Senator Eliason moved and asked unanimous consent that Committee Substitute for SJR 7 be moved from committee with individual recommendations. There were no objections.

Meeting adjourned 3:15 p.m.

Alaska State Legislature

Senate

RESOURCES SUBCOMMITTEE ON FISHERIES

Official Business

Pouch V
State Capitol
Juneau, Alaska 99811

February 10, 1983

TO: Senator Bettye Fahrenkamp, Chairman
Senate Resources Committee

FROM: Senate Resoures Subcommittee on Fisheries

SUBJ: SJR 7

The subcommittee has taken testimony and recommends replacing SJR 7 with CS SJR 7(Res) and reports CS SJR 7(Res) back to the committee as a whole with the following recommendations.

Members		Recommendation
Senator Mulcahy	Bob Mulcahy	do pass
Senator Eliason	[illegible]	do pass
Senator Gilman	Don Gilman	do pass

DRAFT DRAFT

TREATY BETWEEN THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA CONCERNING PACIFIC SALMON

(Negotiator's Draft of December 1982)

INDEX

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DRAFT

DEC 22 1982

TREATY BETWEEN THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA CONCERNING PACIFIC SALMON

The Government of the United States of America and the Government of Canada,

Considering the interests of both Parties in the conservation and rational management of Pacific salmon stocks and in the promotion of optimum production of such stocks;

Recognizing that States in whose waters salmon stocks originate have the primary interest in and responsibility for such stocks;

Recognizing that salmon originating in the waters of each Party are intercepted in substantial numbers by the nationals and vessels of the other Party, and that the management of stocks subject to interception is a matter of common concern;

Desiring to cooperate in the management, research and enhancement of Pacific salmon stocks;

Have agreed as follows:

U.S

Article I

DEFINITIONS

As used in this Treaty,

1. "enhancement" means man-made improvements to natural habitats or application of artificial fish culture technology that will lead to the increase of salmon stocks;

2. "fishery" means the activity of harvesting or seeking to harvest salmon;

3. "fishery regimes" means the fishing limitations and arrangements adopted by the Parties pursuant to Article IV, paragraph 6;

4. "interception" means the harvesting of salmon originating in the waters of one Party by a fishery of the other Party;

5. "overfishing" means fishing patterns which result in escapements significantly less than those required to produce maximum sustainable yields;

6. "stocks subject to this Treaty" means Pacific salmon stocks which originate in the waters of one Party and

(a) are subject to interception by the other Party;

(b) affect the management of stocks of the other Party; or

(c) affect biologically the stocks of the other Party; and

7. "transboundary river" means a river that rises in Canada and flows to the sea through the United States.

Article II

COMMISSION AND PANELS

1. The Parties shall establish a Pacific Salmon Commission, hereinafter referred to as "the Commission", to be composed of two national sections, a Canadian Section and a United States Section.

2. The Commission shall have legal personality and shall enjoy in its relations with other organizations and in the territories of the Parties such legal capacity as may be necessary to perform its functions and achieve its ends. The immunities and privileges which the Commission and its officers shall enjoy in the territory of a Party shall be subject to agreement between the Commission and the Party concerned.

3. The Commission shall consist of not more than eight Commissioners, of whom not more than four shall be appointed by each Party. Each Party may also appoint not more than four alternate Commissioners, to serve in the absence of any Commissioner appointed by that Party.

4. The Commissioners and alternate Commissioners shall hold office at the pleasure of the Party by which they were appointed.

5. At the first meeting of the Commission one section shall select from its members a Commission Chairman, and the other section shall select from its members a Vice-Chairman, each of whom shall hold office for the calendar year in which the Treaty enters into force and for such portion of the subsequent year as the Commission may determine. Thereafter the Chairman and Vice-Chairman shall hold office for a term of twelve months and shall be selected by their respective sections. The section which selects the first Chairman shall be determined by lot and thereafter the offices of Chairman and Vice-Chairman shall alternate between the sections. If either office becomes vacant before the end of a term, the appropriate section shall select a replacement for the remainder of the term.

6. Each section shall have one vote in the Commission. A decision or recommendation of the Commission shall be made only with the approval of both sections.

7. Subject to the approval of the Parties, the Commission shall make such by-laws and procedural rules,

M.P.S.

for itself, for the Panels established pursuant to paragraph 18, and for the committees established pursuant to paragraph 17, as may be necessary for the exercise of their functions and the conduct of their meetings.

8. The Commission may make recommendations to or advise the Parties on any matters relating to the Treaty.

9. Unless otherwise agreed by the Parties, the seat of the Commission shall be at New Westminster, British Columbia.

10. The Commission shall hold an annual meeting and may hold other meetings at the request of the Chairman or of either Party. The Chairman shall notify the Commissioners of the time and place of meetings. Meetings may be held at the seat of the Commission or at such other place as may be determined in accordance with the by-laws and procedural rules of the Commission.

11. Each Party shall pay the expenses of its own section.

12. The Commission shall prepare an annual budget of joint expenses and submit it to the Parties for approval.

The Parties shall bear the costs of the budget in equal shares unless otherwise agreed, and shall pay their shares as the by-laws may specify after the budget has been approved by both Parties.

13. The Commission shall authorize the disbursement of funds contributed by the Parties pursuant to paragraph 12, and may enter into contracts and acquire property necessary for the performance of its functions.

14. The Commission shall submit to the Parties an annual report on its activities and an annual financial statement.

15. The Commission shall appoint an Executive Secretary, who, subject to the supervision of the Commission, shall be responsible for the general administration of the Commission.

16. The Commission may engage staff or authorize the Executive Secretary to do so. The Executive Secretary shall have full authority over the staff subject to the direction of the Commission. If the office of the Executive Secretary is vacant, the Commission shall determine who shall exercise that authority.

M.P.S

17. The Commission shall establish a Committee on Research and Statistics and a Committee on Finance and Administration. The Commission may eliminate or establish committees as appropriate.

18. The Commission shall establish Panels as specified in Annex I. The Commission may recommend to the Parties the elimination or establishment of Panels as appropriate.

19. The Panels shall provide information and make recommendations to the Commission with respect to the functions of the Commission and carry out such other functions as the Treaty may specify or as the Commission may direct.

20. In cases where fisheries intercept stocks for which more than one Panel is responsible, the appropriate Panels shall meet jointly to carry out the functions specified in paragraph 19. If the Panels cannot agree, each may make an independent report to the Commission.

21. Each Panel shall consist of not more than 6 members from each Party. Each Party may designate alternate Panel members to serve in the absence of any Panel member appointed by that Party.

22. Except as otherwise provided in the Treaty, paragraphs 4, 5, 6, 10 and 11

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Article III

PRINCIPLES

1. With respect to stocks subject to this Treaty, each Party shall conduct its fisheries and its salmon enhancement programs so as to:

   (a) prevent overfishing and provide for optimum production; and

   (b) provide for each Party to receive benefits equivalent to the production of salmon originating in its waters.

2. In fulfilling their obligations pursuant to paragraph 1, the Parties shall cooperate in management, research and enhancement.

3. In fulfilling their obligations pursuant to paragraph 1, the Parties shall take into account:

   (a) the desirability in most cases of reducing interceptions;

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(b) the desirability in most cases of avoiding undue disruption of existing fisheries; and

(c) annual variations in abundance of the stocks.

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Article IV

CONDUCT OF FISHERIES

In order to facilitate the implementation of Articles III, VI and VII:

1. Each Party shall submit an annual report on its fishing activities in the previous year to the other Party and to the Commission. The Commission shall forward the reports to the appropriate Panels.

2. The Panels shall consider the reports submitted pursuant to paragraph 1 and shall provide their views to the Commission. The Commission shall review the reports of the Panels and shall provide its views to the Parties.

3. Each year the State of origin shall submit preliminary information for the ensuing year to the other Party and to the Commission, including:

(a) the estimated size of the run;

(b) the interrelationship between stocks;

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(c) the spawning escapement required;

(d) the estimated total allowable catch;

(e) its intentions concerning management of fisheries in its own waters; and

(f) its domestic allocation objectives whenever appropriate.

The Commission shall forward this information to the appropriate Panels.

4. The Panels shall examine the information submitted pursuant to paragraph 3 and report their views to the Commission with respect to fishery regimes for the following year.

5. The Commission shall review the reports of the Panels and shall recommend fishery regimes to the Parties.

6. On adoption by both Parties, the fishery regimes referred to in paragraph 5 shall be attached to this Treaty as Annex IV.

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7. Each Party shall establish and enforce regulations to implement the fishery regimes adopted by the Parties. Each Party, in a manner to be determined by the Commission, shall notify the Commission and the other Party of these regulations and shall promptly communicate to the Commission and to the other Party any in-season modifications.

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Article V

SALMON ENHANCEMENT PROGRAMS

1. Salmon enhancement programs that may be established by the Parties shall be conducted subject to the provisions of Article III.

2. Each year each Party shall provide to the other Party and to the Commission information pertaining, inter alia, to:

(a) operations of and plans for existing projects;

(b) plans for new projects; and

(c) its views concerning the other Party's salmon enhancement projects.

The Commission shall forward this information to the appropriate Panels.

3. The Panels shall examine the information and report their views to the Commission in light of the obligations set forth in Article III.

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4. The Commission shall review the reports of the Panels and may make recommendations to the Parties.

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Article VI

FRASER RIVER

1. This Article applies to Fraser River sockeye and pink salmon harvested in the area specified in Annex II.

2. Notwithstanding the provisions of Article IV, paragraph 7, on adoption by the Parties of the fishery regime for the stocks covered by this Article, the Fraser River Panel shall propose regulations to the Commission for the harvest of salmon referred to in paragraph 1.

3. The Fraser River Panel shall review with other appropriate Panels the fishery regimes and the information provided pursuant to Article IV, paragraph 3, with respect to salmon other than Fraser River sockeye and pink salmon before proposing regulations pursuant to paragraph 2. The Fraser River Panel and the Commission shall ensure that regulatory proposals and recommendations, to the extent practicable, meet the requirements of the Parties with respect to the management of stocks other than Fraser River sockeye and pink salmon.

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4. In implementing this Article, the Fraser River Panel and the Commission shall take into account and seek consistency with existing aboriginal rights, rights established in existing Indian treaties and domestic allocation objectives.

5. On the basis of the proposals made by the Panel, the Commission shall recommend regulations to the Parties for approval. The Parties shall review the recommendations for, inter alia, consistency with domestic legal obligations. The regulations shall become effective upon approval by the Party in whose waters such regulations are applicable.

6. During the fishing season, the Fraser River Panel may make orders for the adjustment of fishing times and areas stipulated in the annual regulations in response to variations in anticipated conditions. The Parties shall review the orders for consistency with domestic legal obligations. The Parties shall give effect to such orders in accordance with their respective laws and procedures.

7. The Parties shall not regulate their fisheries in areas outside the area specified in Annex II in a manner that would prevent achievement of the objectives of the fishery regime.

Article VII

TRANSBOUNDARY RIVERS

1. This Article applies to salmon originating in transboundary rivers.

2. Notwithstanding Article IV, paragraph 3(c), whenever salmon originate in the Canadian portion of a transboundary river, the appropriate Panel shall provide its views to the Commission on the spawning escapement to be provided for all the salmon stocks of the river if either section of the Panel so requests.

3. On the basis of the views provided by the Panel pursuant to paragraph 2, the Commission shall recommend spawning escapements to the Parties.

4. Whenever salmon originate in the Canadian portions of transboundary rivers, or would originate there as a result of enhancement projects, salmon enhancement projects on the transboundary rivers shall be undertaken co-operatively, provided, however, that either Party, with the consent of the Commission, may separately undertake salmon enhancement projects on the transboundary rivers.

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Article VIII

YUKON RIVER

1. Notwithstanding Articles III, paragraph 1(b), and VII, arrangements for consultation, recommendation of escapement targets and approval of enhancement activities on the Yukon River require further development to take into account the unique characteristics of that River.

2. The Parties consider it important to ensure effective conservation of stocks originating in the Yukon River and to explore the development of co-operative research and identification of potential enhancement opportunities.

3. The Parties shall initiate in 1983, and conclude, as soon as possible, negotiations to, inter alia:

   (a) account for United States harvests of salmon originating in the Canadian section of the River;

   (b) develop joint management procedures taking into account United States management programs for stocks originating in the United States section of the River;

(c) consider co-operative research programs, enhancement opportunities, and exchanges of biological data; and

(d) develop an organizational structure to deal with Yukon River issues.

4. Prior to the entry into force of this Treaty, the Parties shall agree upon:

(a) the range within which the accounting of United States interceptions referred to in paragraph 3(a) shall be established;

(b) arrangements for exchange of available data on the stocks; and

(c) proposals for research.

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Article IX

STEELHEAD

In fulfilling their functions, the Panels and Commission shall take into account the conservation of steelhead.

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Article X

RESEARCH

1. The Parties shall conduct research to investigate the migratory and exploitation patterns, the productivity and the status of stocks of common concern and the extent of interceptions.

2. The Commission may make recommendations to the Parties regarding the conduct and coordination of research.

3. Subject to normal requirements, each Party shall allow nationals, equipment and vessels of the other Party conducting research approved by the Commission to have access to its waters for the purpose of carrying out such research.

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Article XI

DOMESTIC ALLOCATION

1. This Treaty shall not be interpreted or applied so as to affect or modify existing aboriginal rights or rights established in existing Indian treaties and other existing federal laws.

2. This Article shall not be interpreted or applied so as to affect or modify any rights or obligations of the Parties pursuant to other Articles and Annexes to this Treaty.

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Article XII

TECHNICAL DISPUTE SETTLEMENT

1. Either Party may submit to the Chairman of the Commission, for referral to a Technical Dispute Settlement Board, any dispute concerning estimates of the extent of salmon interceptions and data related to questions of overfishing. The Commission may submit other technical matters to the Chairman for referral to a Board. The Board shall be established and shall function in accordance with the provisions of Annex III. The Board shall make findings of fact on the disputes and the other technical matters referred to it.

2. The findings of the Board shall be final and without appeal, except as provided in paragraph 3, and shall be accepted by the Commission as the best scientific information available.

3. Either Party may, by application in writing to the Chairman of the Commission, request reconsideration of a finding of a Board, provided that such request is based on information not previously considered by the Board and not previously known to or reasonably

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discoverable by the Party requesting such reconsideration. The Chairman shall, if possible, refer the request to the Board which made the finding. Otherwise, the Chairman shall refer the request to a new Board constituted in accordance with the provisions of Annex III.

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Article XIII

ANNEXES

1. All references to this Treaty shall be understood to include the Annexes.

2. The Commission, whenever appropriate, shall review the Annexes and may make recommendations to the Parties for their amendment.

3. The Annexes may be amended by the Parties through an Exchange of Notes between the Government of Canada and the President of the United States of America.

4. The Commission shall publish the texts of the Annexes whenever amended.

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Article XIV

IMPLEMENTATION

Each Party shall:

(a) enact and enforce such legislation as may be necessary to implement this Treaty;

(b) require reports from its nationals and vessels of catch, effort and related data for all stocks subject to this Treaty and make such data available to the Commission; and

(c) exchange fisheries statistics and any other relevant information on a current and regular basis in order to facilitate the implementation of this Treaty.

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Article XV

ENTRY INTO FORCE AND TERMINATION OF TREATY

1. This Treaty is subject to ratification. It shall enter into force upon the exchange of instruments of ratification at _____.

2. At the end of the third year after entry into force and at any time thereafter, either Party may give notice of its intention to terminate this Treaty. The Treaty shall terminate one year after notification.

3. Upon the entry into force of this Treaty, the Convention between Canada and the United States of America for the Protection, Preservation and Extension of the Sockeye Salmon Fishery in the Fraser River System, as amended, signed May 26, 1930, shall be terminated. Following the termination of the Convention, the transfer of responsibilities from the International Pacific Salmon Fisheries Commission to the Commission, the Fraser River Panel and the Government of Canada shall be as agreed by the Parties.

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Annex I

PANELS

The following panels shall be established pursuant to Article II, paragraph 18:

(a) a Southern Panel for salmon originating in rivers with mouths situate south of Cape Caution, except as specified in sub-paragraph (b);

(b) a Fraser River Panel for Fraser River sockeye and pink salmon harvested in the area specified in Annex II; and

(c) a Northern Panel for salmon originating in rivers with mouths situate between Cape Caution and Cape Suckling.

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Annex II

FRASER PANEL AREA

The area comprises the waters described in Article I of the Convention between Canada the the United States of America for the Protection, Preservation and Extension of the Sockeye Salmon Fishery in the Fraser River System, as amended, signed May 26, 1930.

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Annex III

TECHNICAL DISPUTE SETTLEMENT BOARD

1. Each Technical Dispute Settlement Board shall be composed of three members. Within 10 days of receiving a request under Article XII to refer a matter to a Board, the Chairman of the Commission shall notify the Parties. Within 20 days of this notification, each Party shall designate one member and the Parties shall jointly designate a third member, who shall be Chairman of the Board.

2. The Board shall determine its rules of procedure, but the Commission or the Parties may specify the date by which the Board shall report its findings. The Board shall provide an opportunity for each Party to present evidence and arguments, both in writing and, if requested by either Party, in oral hearing. The Board shall report its findings to the Commission, along with a statement of its reasons.

3. Decisions of a Board, including procedural rulings and findings of fact, shall be made by majority vote and shall be final and without appeal except as provided in Article XII, paragraph 3.

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4. Remuneration of the members and their expense allowances shall be determined on such basis as the Parties may agree at the time the Board is constituted. The Commission shall provide facilities for the proceedings.

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Annex IV

Chapter 1 TRANSBOUNDARY RIVERS

1. Notwithstanding Article III, paragraph 1(b), 37.5 percent of the harvest by the United States of each species of salmon originating in Canadian sections of transboundary rivers, except those with mouths situate in the Bering Sea and Arctic Ocean, shall be deemed to be of United States origin.

2. As it is not yet possible to determine with accuracy the extent of exploitation by fisheries of the two Parties and the spawning escapement requirements of salmon bound for Canadian sections of the transboundary rivers in the southeastern Alaska area, the Parties during 1983 shall form a Technical Working Group to:

(a) assemble available information on the migratory patterns (including consideration of recent stock separation studies based on examination of scales), extent of exploitation and spawning escapement requirements of the stocks; and

(b) identify potential increases in stocks that can be achieved through enhancement.

3. The following arrangements shall apply to the United States and Canadian fisheries which harvest salmon stocks bound for the Stikine River.

(a) Sockeye Salmon

(i) In 1983 the run of sockeye is anticipated to be 70,000 pieces. Given this expected run size, subject to agreed adjustments in the event that analysis of available data (which shall be made available for joint review) indicates that the run size differs significantly from that projected, and based on the data base available to each side:

(A) the United States shall manage its fisheries to allow approximately 55,000 sockeye to reach the Canadian section of the River; and

(B) Canada shall manage its food and commercial fisheries to allow a spawning escapement of approximately 40,000 to 47,000 sockeye.

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(ii) In 1984 the run of sockeye is anticipated to be 40,000 pieces. Given this expected run size, subject to agreed adjustments in the event that analysis of available data (which shall be made available for joint review) indicates that the run size differs significantly from that projected, and based on the data base available to each side:

(A) the United States shall manage its fisheries to allow approximately 33,500 sockeye to reach the Canadian section of the River; and

(B) Canada shall manage its food and commercial fisheries to allow a spawning escapement of approximately 28,000 sockeye.

(iii) In 1983 and 1984, taking into account the low anticipated run sizes and difficulties in achieving precise spawning escapements, the foregoing provisions may result in the Canadian share of the Stikine River sockeye harvest exceeding 35 percent of the Total Allowable Catch. It is the United States view that the allowable catch should be divided between the countries so that the United States would receive 65 percent and Canada 35 percent.

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(b) Coho Salmon

Given the prevailing rates of harvest of Stikine River coho salmon in United States troll fisheries and in net fisheries targetting on other species, it may not be possible in 1983 and 1984 for the United States to provide an upriver escapement sufficient to meet spawning requirements and a Canadian in-river harvest of 35 percent of the total expected catch. It is also expected that the 1983 and 1984 runs will be poor. In light of these circumstances the Parties shall monitor the runs in and on the approaches to the Stikine River throughout the season, with a view to providing Canada with an in-river harvest as close as possible to a 35 percent share of the total catch while, at the same time, meeting spawning requirements.

(c) Other Species

Canadian catches and United States terminal catches of chinook, pink and chum salmon bound for the Canadian section of the River will be taken as an incidental harvest in the directed fishery for sockeye.

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4.(a) In 1983, Canada shall limit its in-river fishery so that catches of sockeye and pink salmon originating in the Taku River do not exceed 3,000 and 5,000 pieces, respectively.

(b) The Parties shall meet during 1983 to re-evaluate the fishery regime for the fisheries on Taku bound salmon for 1984, taking into account the report of the working group described in paragraph 2 of this Chapter. At the same time the Parties will also give consideration to improving procedures for co-operative management of the fisheries on transboundary river stocks in the southeast Alaska area, and to the question of future sharing of allowable harvests, taking into account potential enhancement opportunities.

5. Chinook and early sockeye salmon runs originating in the Alsek River are depressed and require special protection in 1983 and 1984. Fisheries for other species originating in the Alsek River shall be conducted in the same manner as in recent years.

6. Considering that stocks of salmon originating in Canadian sections of the Columbia River form only a

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small proportion of the total populations of Columbia River salmon, the arrangements for consultation and recommendation of escapement targets and approval of enhancement activities set out in Article VII are not appropriate to the Columbia system as a whole. Nevertheless, the Parties consider it important to ensure effective conservation of upriver stocks which extend into Canada and to explore the development of mutually beneficial enhancement activities. Therefore, notwithstanding Article VII, paragraphs 2, 3 and 4, during 1983 the Parties shall consult with a view to developing, for the transboundary sections of the Columbia, more practicable arrangements for consultation and setting escapement targets than those specified in Article VII, paragraphs 2 and 3. Such arrangements should seek to:

(a) ensure effective conservation of the stocks;

(b) facilitate future enhancement of the stocks on an agreed basis; and

(c) avoid interference with United States management programs on the extensive salmon stocks existing in the non-transboundary tributaries and the

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Annex IV

Chapter 2 Northern British Columbia-Southeastern Alaska Boundary Area

1. Considering that the chum salmon stocks originating in streams in Portland Canal and harvested in the mixed stock and target fisheries in the Dixon Entrance, Portland Inlet and Portland Canal are depressed and require protection:

(a) in 1983 and 1984 neither Party shall allow target fisheries on these stocks in Portland Canal unless it is determined that a harvestable surplus exists; and

(b) in 1983, assessments shall be made to identify possible measures (including enhancement and regulatory programs) to restore the stocks. On the basis of such assessments, proposals shall be prepared for a long term plan to bring about such restoration.

2. (a) With respect to sockeye salmon, the United States shall:

(i) limit its purse seine fishery in the Noyes Island area (District 4) in a manner that will result in an annual average harvest of 160,000 sockeye salmon during the period 1983-86; and

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(ii) limit its drift gill net fishery at Tree Point (Districts 1A and 1B) in a manner that will result in an annual average harvest of 130,000 sockeye salmon during the period 1983-86.

(b) These harvest levels shall be reviewed during the negotiation of fishery regimes for 1985 and 1986.

3. Canada shall limit its fisheries for pink salmon in the sub-areas of Areas 3 and 5 that were described in the interim arrangements for 1981 and 1982 and in the area 1 troll fishery in a manner which will result in a total catch in the 1983 and 1984 pink salmon cycles of 2 million fish. Of this total, in 1983, no more than a total 650,000 pink salmon shall be taken, and of that, the area 1 troll fishery shall take no more than 125,000 pink salmon. In 1984, no more than a total 1,350,000 pink salmon shall be taken, and of that, the area 1 troll fishery shall take no more than 275,000 pink salmon. These harvest levels shall be reviewed during the negotiation of fishery regimes for 1985 and 1986.

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4. The Parties shall exchange preliminary management plans for the fisheries described above at the earliest possible date. Such exchange shall include determination of the intended pattern of the Canadian troll fishery in area 1 which will reflect the understanding of the interim arrangement for 1982 pending the development of new regulatory lines in area 1.

Annex IV

Chapter 3 CONSERVATION MEASURES FOR CHINOOK SALMON

For the past several years, escapements for many naturally spawning chinook salmon stocks originating from the Columbia River northward to southeastern Alaska have declined and are now at levels substantially below production goals. These stocks cannot sustain recent rates of exploitation in the following fisheries: Georgia and Johnstone Straits, central and northern British Columbia, and southeastern Alaska.

The Parties agree to undertake the following actions to stabilize and rebuild depressed stocks of naturally spawning chinook salmon.

1. In 1983, the Parties will jointly develop and initiate a coordinated salmon management program designed to meet the following objectives:

   (a) at least prevent further declines in spawning escapements from recent levels for depressed chinook salmon stocks; and

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(b) restore the production of naturally spawning chinook salmon stocks by achieving escapement goals within a ten year period (approximately 2 cycles, beginning in 1983) which will provide the maximum sustainable harvest.

2. The chinook salmon management program will include at least:

(a) identification of indicator stocks representative of naturally spawning populations of chinook salmon;

(b) procedures to obtain reliable estimates of spawning escapements;

(c) establishment of criteria to evaluate the effectiveness of conservation actions;

(d) exchange of information necessary to analyze the effectiveness of alternative fishery regulatory measures to satisfy conservation objectives;

(e) recommendations for research required to implement this program effectively; and

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(f) development of necessary measures for monitoring and enforcing compliance with the terms of this Treaty.

3. In 1983, the Parties shall enact regulations designed to ensure that:

(a) the combined catch by all southeastern Alaskan salmon fisheries does not exceed 263,000 chinook, and of that, the catch taken by the commercial salmon fisheries does not exceed 243,000 chinook; and

(b) the combined catch by all Canadian salmon fisheries in Georgia and Johnstone Straits and central and northern British Columbia does not exceed 868,000 chinook.

4. In 1983 and 1984, the Parties shall implement management measures for fisheries in other areas as required to ensure that chinook salmon from depressed stocks that are conserved by the imposition of harvest ceilings accrue principally to spawning escapement.

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5. Following the 1983 season and prior to the development of fishery regimes for the 1984 season, the Parties shall establish a Technical Committee, representative of the Northern and Southern Panels, to evaluate the effectiveness of management actions taken in 1983 with respect to:

(a) consistency of actual catches with corresponding harvest ceilings;

(b) the effect of the management measures described in paragraph 3; and

(c) the degree to which the decline in spawning escapement levels has been affected.

6. The Technical Committee shall also re-examine, and if appropriate, propose changes to the extent of reductions in exploitation required to meet the objective specified in sub-paragraph 1(a), and contained in the Report entitled Joint United States/Canada Technical Response to the Canadian Proposal for Chinook Conservation, dated November 30, 1982 (appended to this Annex). On the basis of the findings of the Technical Committee, the Parties shall adopt measures in 1984 which will result

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in reductions in catches to achieve the objective specified in paragraph 1(a). According to present agreed scientific analysis of the status of the stocks of concern contained in the Report, this would require a reduction in catches by the affected fisheries of approximately 25 percent from the 1981-82 harvest of chinook levels (paragraph 2 of the Report).

7. The Parties agree that enhancement efforts designed to increase artificial production of chinook salmon would be beneficial to the rebuilding program. Maintenance of harvest ceilings, combined with increased availability of enhancement fish, provides the opportunity to accelerate the stock rebuilding process by significantly reducing exploitation rates of naturally spawning stocks. The United States is initiating a program under section 4h of the Northwest Power Act as a national commitment to rehabilitation of Columbia River salmon stocks and is developing additional cooperative enhancement plans for southeastern Alaska. Efforts to increase chinook stocks are also under development by the States of Idaho, Oregon, Washington and Alaska, and federal agencies of the United States. Production from Canada's Salmonid Enhancement Program

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will continue to increase its contribution to the available harvest of chinook salmon in the affected fisheries.

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Annex IV

apter 4 FRASER RIVER SOCKEYE AND PINK SALMON

1. In order to increase the effectiveness of the management of fisheries in the Fraser Panel Area and in fisheries outside the Area which harvest Fraser River sockeye and pink salmon and to permit effective implementation of Article III, the negotiations for the 1985 and 1986 fishery regimes shall include development of:

(a) agreed adjustments in the limits of the Area to simplify domestic management in the two countries; and

(b) formulae for providing the United States with agreed harvests of Fraser River sockeye and pink salmon in the Area which take into account:

(i) within the context of Article III, the implications of potential increases in the production of Fraser River sockeye and pink salmon, and of benefits provided to the United States through Canadian management actions in fisheries

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for stocks other than Fraser River sockeye and pink salmon;

(ii) the need to provide flexibility in management of fisheries outside the Area which harvest Fraser River sockeye and pink salmon; and

(iii) the total harvest of Fraser River sockeye and pink salmon wherever they occur.

2. In the interim, in 1983, on the basis of IPSFC projections regarding the abundance of the returning runs (of approximately 6.5 million sockeye and approximately 21.0 million pinks), escapement requirements (including the spawning escapement and estimates of the Native Indian food catch) and normal patterns of fishing outside the Area, it is anticipated that the Total Allowable Catches of sockeye and pink salmon within the Area will be 3.5 million and 10 million, respectively.

3. In 1983, the United States shall be provided 50 percent of the Total Allowable Catches of each species within the Area less 150,000 sockeye and 300,000 pinks.

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4. In 1984, based on an expected run of 3.75 million sockeye and an Area Total Allowable Catch of approximately 1.75 million sockeye, the United States shall be provided with 50 percent of the Total Allowable Catch within the Area of sockeye less 50,000 fish.

5. The IPSFC or the Commission shall develop regulatory programs in the Area to give effect to the provisions of this Annex.

Annex IV

Chapter 5

SOUTHERN BRITISH COLUMBIA - WASHINGTON COHO AND CHUM FISHERIES

1. Anticipated returns of some natural coho and chum salmon stocks originating in Johnstone Strait, the Strait of Georgia and the Fraser River in 1983 and 1984 are expected to be weak and therefore not likely to have a harvestable surplus. Some enhanced stocks of coho and chum originating in the above areas are anticipated to have harvestable surpluses and locally directed fisheries on these enhanced stocks are expected.

2. The Parties shall meet and develop agreed fishery regimes by April 30, 1983 for the 1983 and 1984 fishing season in response to the conservation status of the resources.

3. If at a later date it is determined that harvestable surpluses of Canadian or United States coho and chum salmon exist the Parties will consult to identify and agree on fishing opportunities.

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Annex IV

Chapter 6 GENERAL OBLIGATION

With respect to intercepting fisheries not dealt with elsewhere in this Annex, the Parties shall not permit interceptions to increase above the levels of recent years, nor initiate new intercepting fisheries, except as may be agreed.

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Exchange of Notes

I have the honor to refer to the discussions between representatives of our two Governments and to the Treaty between the Government of the United States of America and the Government of Canada concerning Pacific salmon (the Treaty) and to confirm on behalf of the United States Government the understanding set out below that has been reached between our two Governments concerning the implementation of ARticle XVII, paragraph 3 of the Treaty.

A. Prior to the first anniversary of the date of entry into force of the Treaty:

1. The Fraser River Panel established pursuant to the Treaty shall assume the following responsibilities consistent with the Treaty:

(a) review and evaluate information provided by the Parties, pursuant to Article IV, paragraph 3, in order to provide recommendations to the Commission on the fishery regime to be included in Annex IV;

(b) on adoption by the Parties of the fishery regime, make proposals to the Commission regarding regulations for the harvest of Fraser River sockeye and pink salmon within the Fraser Panel Area (the Area);

(c) collect in-season information on catches within the Area; review information on escapements within the Area; collate information provided by the Parties pursuant to paragraphs 1, 2 and 3 for fisheries outside the Area; conduct test fishing on Fraser River sockeye and pink salmon; and collect data on up-river escapements by observation at Hell's Gate and through the conduct of a hydroacoustic program at Mission Bridge;

(d) make orders for the adjustment of the fisheries pursuant to Article VI paragraph 6, on the basis of information garnered under subparagraph (c); and

(e) provide the Commission, at the end of each fishing season, with an accounting of the catches, wherever made, of Fraser

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River sockeye and pink salmon and with an appraisal of the extent to which the Panel achieved the objectives set by the Parties.

2. Canada shall assume all responsibilities of the International Pacific Salmon Fisheries Commission (IPSFC) except for those responsibilities specified in subparagraph 1.

B. The IPSFC will continue to discharge its responsibilities in the interval between the entry into force of the Treaty and, pursuant to paragraph A, the assumption of responsibilities by Canada and the Fraser River Panel.

C. Prior to the fourth anniversary of the entry into force of the Treaty, the Commission shall review the division of responsibilities set out above.

D. Canada and the United States shall provide to the Commission:

1. the information required by Article IV, paragraph 3;

2. information on in-season catches and estimated catches of Fraser River sockeye and pink salmon by time, area, species, and gear type;

3. post-season statistical information regarding Fraser River sockeye and pink salmon catches by area, gear type, species and time;

4. data on spawning escapements for all sockeye and pink stocks which migrate through the Area; and

5. information on any problems identified in achieving national goals resulting from in-season regulation of the Area fisheries.

E. The following administrative arrangements shall apply to the transfers of staff from IPSFC:

1. Appropriate members of the existing Fishery Management Division and of other Divisions of the IPSFC shall be transferred to the Commission so that it shall have the capability to perform the following duties:

(a) the discharge of the responsibilities of the Commission and of the Fraser River Panel as specified inter alia in paragraph A 1; MAS

(b) interpretation of statistical and biological data and other information referred to in paragraph D;

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(c) collection and assembly of such data as may be required by the Commission and its Panels; and

(d) preparation of such publications as may be decided upon by the Commission.

2. The staff shall be under the direction of the Executive Director pursuant to Article II, paragraph 16.

3. The Operations Division shall be transferred to the Department of Fisheries and Oceans (DFO), Canada, to the extent practicable, and shall continue to carry out upriver work on pink and sockeye salmon in coordination with the staff of the Fraser River Panel. While there will be some duplication of work in the spawning areas during this initial period, it is anticipated that the Operations Division will eventually be integrated into DFO's Fraser River Management and Enhancement Operations to streamline upriver operations and to avoid duplication. The close working

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relationship that now exists at the staff level between the IPSFC Fishery Management Divison and Operations Division should be maintained between the Fraser River Panel staff and the appropriate DFO responsibility centers.

4. The Environment Conservation Division, Biology Division, and Engineering Division shall be transferred to DFO and integrated as practicable

5. The transfers of the Fishery Management Division and the Operations Division of the IPSFC referred to in paragraphs 1 and 2 shall occur during the period November to March. The transfer of the Environment Conservation Division, the Biology Division and the Engineering Division referred to in paragraph 3 may occur at any time within the year after the date of entry into force of the Treaty. Officials of the Parties shall consult with each other and with the IPSFC staff to seek agreement on the specific timing of these transfers, taking into account the need for continued sound management of the fishery resource and the administrative and budget cycles of the two Governments.

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F. In order to ensure continuity in the methodology of collection of upriver data required for the management of Fraser River sockeye and pink salmon:

1. Pending the entry into force of the Treaty, DFO staff shall participate with IPSFC staff in IPSFC upriver activities.

2. In the first two years following entry into force of the Treaty former IPSFC staff members whose responsibilities included upriver work and who become employees of DFO, shall participate in the carrying out of Canada's upriver responsibilities, as practicable. With respect to upstream spawning escapement work, the advice of the new Commission's staff shall be sought as appropriate.

3. On request of either Party, opportunities shall be provided for technical experts to observe the data collection operations of the Parties related to the activities of the Fraser River Panel.

G. The Parties shall consult with each other and with the IPSFC staff with a view, inter alia, to offering employment to IPSFC employees in the new Commission, the Fraser River Panel, or within government agencies of the two Parties on terms and conditions comparable, to the extent practicable, with those they enjoy in IPSFC.

H. The IPSFC Library in New Westminster, B.C., which contains irreplaceable historical records, shall be transferred to the new Commission and shall be readily accessible to the new Fraser River Panel, the Commission, and others whose professional needs require use of these library facilities.

Other IPSFC assets necessary for the work of the Commission and the Fraser River Panel shall be transferred to the Commission.

The remaining assets shall be transferred to Canada.

I have the honor to propose that if the understanding set out in this Note is acceptable to the Government of Canada, this Note and your reply to that effect, shall constitute an Agreement between the Government of the United States of America and the Government of Canada regarding the implementation of the Treaty and shall enter into for-

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At the end of the third year after entry into force and at any time thereafter, either Party may give notice of its intention to terminate this Agreement. The Agreement shall terminate one year after notification.

I avail myself of this opportunity to renew to you, Sir, the assurance of my highest consideration.

Subject to change by mutual agreement on receipt of views provided by IPSFC.

M.P.S

LETTER OF UNDERSTANDING BETWEEN THE NEGOTIATORS
REGARDING IMPLEMENTATION OF ARTICLE III 1(b)

In submitting our recommendations to governments, the negotiators hold the view that the principal goals of the treaty are to enable both countries, through better conversation and enhancement, to increase production of salmon and to ensure that the benefits resulting from each country's efforts accrue to that country. In this regard, we believe that research on the migratory movements of stocks subject to interception must be continued for several years. Such research is required not only to determine with more precision the extent of interceptions by both sides, but also to provide an improved basis for conservation and enhancement. The negotiators believe that resultant long term increases in production of salmon will fully justify the short term expenditures on research.

With respect of the obligation to provide each Party with benefits equivalent to the production of salmon originating in its rivers (contained in Article III, paragraph 1(b) of the Draft Treaty), it must be recognized that data on the extent of interceptions in some areas are imprecise and that it is therefore not possible to determine with certainty the total production of salmon from each country's rivers. It must also be recognized that methods of evaluating benefits accruing within each country may differ. For these reasons, it is anticipated that it will be some time before the Commission can develop programs to implement the provisions of Article III, paragraph 1(b) in a complete and comprehensive manner. Nevertheless, in the short term, it is essential that the Commission ensure that the annual fishery regimes and understandings regarding enhancement be developed in an equitable manner

taking into account the principle outlined in Article III 1(b). In particular, the Commission's decisions should take into account changes in the benefits flowing to each of the Parties through alteration in fishing patterns, conservation actions, or as the result of changes in the abundance of the runs.

In the longer term, if it is determined that one country or the other is deriving substantially greater benefits than those provided from its rivers, it would be expected that within the Commission, the Parties would develop a phased program to eliminate the inequity within a specified time period, taking into account the provisions of Article III paragraph 3. Since correction of imbalances is a national responsibility and may involve differential fishery adjustments or enhancement projects on a regional basis within either country, it would be incumbent on the Party with the advantage to submit appropriate proposals to the Commission for consideration. The plan would be discussed within the Commission and be reflected in the agreed fishery regimes and coordinated enhancement planning in ensuing years.

M.P.S

EXCHANGE OF NOTES

Pending entry into force of the Treaty and the Agreement regarding the implementation of Article XVII, paragraph 3 of the Treaty, the Parties shall seek to implement the Treaty and the Agreement on a provisional basis.

MLS

LETTER OF UNDERSTANDING BETWEEN THE NEGOTIATORS
REGARDING IMPLEMENTATION OF ARTICLE III 1(b)

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North Pacific Fishery Management Council

Clement V. Tillion, Chairman
Jim H. Branson, Executive Director

605 West 4th Avenue
Anchorage, Alaska 99510

Mailing Address: P.O. Box 103136
Anchorage, Alaska 99510

Telephone: (907) 274-4563
FTS 271-4064

JUL 5 1983

The enclosed Council Document #20a, a synopsis by the Council staff of the report by Northwest Resources Analysis titled, "Limited Entry in the Halibut Fishery: The Individual Quota Option," is being mailed to all persons and organizations on the Council's mailing list who have expressed an interest in either the halibut moratorium or limited entry in the halibut fishery.

The full report has been completed and is available for public review, but since the report and its attachments are nearly 200 pages in length, the Council decided a synopsis should be prepared for public distribution. The synopsis you are receiving includes the complete "Summary and Conclusions" portion of the study; the rest of the material in the study has been summarized by the Council staff. We will send you the full report on your request.

The release of this report for public distribution should not be interpreted as Council endorsement of any statements contained herein or adoption of a particular form of limited entry for the halibut fishery.

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LIMITED ENTRY IN THE PACIFIC HALIBUT FISHERY: THE INDIVIDUAL QUOTA OPTION

Northwest Resources Analysis

Seattle, Washington

Report to the North Pacific
Fisheries Management Council
Anchorage, Alaska

Summary and Conclusions
Chapter 1 Verbatim of the Report - pp. 1-19

NPFMC Staff Synopsis
of Chapters 2 - 6 of the Report - pp. 20-62

The North Pacific Fishery Management Council contracted with Northwest Resources Analysis of Seattle, Washington, to perform a study of limited entry in the Pacific halibut fishery. Because there was substantial information already available about other forms of fishery access limitation, the Council directed that the study should determine whether the individual quota or share system would be feasible under current conditions in the fishery. This report has been completed and is available for public review. Since the report and its attachments are nearly 200 pages in length, the Council decided a synopsis should be prepared for public distribution. Included with this synopsis is the complete, "Summary and Conclusions" portion of the study. The full report will be mailed by the Council upon request. The release of this report for public distribution should not be interpreted as Council endorsement of any statements contained herein or adoption of a particular form of limited entry for the halibut fishery.

SUMMARY AND CONCLUSIONS

SUMMARY AND CONCLUSIONS

This study has the broad purpose of developing limited entry alternatives for that portion of the Pacific fishery under the jurisdiction of the North Pacific Fisheries Management Council. Until recently most discussions of limited entry have focused on license limitation programs of the type currently applied to salmon and other Pacific Coast fisheries. As a result, fisheries managers now have an extensive literature and wide experience to turn to when considering new applications of license limitation. Unfortunately, license limitation has not performed well in the view of many of its practitioners. Because of the knowledge already available about license limitation and its limited success, the halibut limited entry working group of the North Pacific Fishery Management Council emphasized other alternatives when it established the objectives for this study. In particular, the group identified the individual quota, or share system, as a previously neglected approach holding considerable promise of being feasible under present circumstances and of achieving the Council's management objectives for the halibut fishery. That view is, in large measure, confirmed by the study results reported below.

Those results are summarized in Figure 1-1 and in the following discussion. We initially restate the relevant management objectives and evaluate the share system against each. Then, for each category of objectives, we compare the share system with the license limitation alternatives. The evaluation concludes with recommendations concerning future staff analysis and council decision making that, in the contractor's view, will lead to selection of the best feasible limited entry program for the Pacific halibut fishery.

	INDIVIDUAL QUOTA SYSTEM
RESOURCE CONSERVATION Maintain compatability with IPHC objectives. Distribute the hook-and-line halibut fishery by time and area to ensure resource conservation. Minimize adverse biological impact of the program on related fisheries.	Rules for allocating and transferring individual quotas conform with current IPHC area quotas, and adjust easily to changes. Dividing area quotas among individuals controls catch more precisely than setting seasons. Incentives to evade catch reporting present new, but manageable, problems. Conservation is enhanced by spreading effort more uniformly over substocks, and by providing more representative catch data.
ECONOMIC EFFICIENCY Reduce capitalization, thus encouraging development of an economically viable and efficient year-round domestic halibut hook-and-line fishery. Provide high quality fresh and frozen fish to the consumer twelve months of the year. Ensure that the costs of administration and enforcement do not exceed the benefits of the program.	Attainable economic benefits are similar to those realized in agriculture, mining, forestry and elsewhere, where exclusive ownership or leasing has replaced open access to primary resources. Specifically, these benefits include: reduced harvest and storage costs, increased consumer value, and better utilization of halibut by-catches in other hook-and-line fisheries. Estimated gross annual benefits are $9.3 million. Government administration and enforcement costs may rise, and unreported catches may impose costs. Net benefits, after subtracting these costs, range from $8.9 to $9.2 million per year, or $.44 to $.46 per pound of 1982 catch.
SOCIAL CONSIDERATIONS Minimize disruption of the present fleet by using past performance as the basis for distributing initial rights. Insure that the fishery is made up of owner/operator rights holders. Enable some fishermen to earn a major share of their income from hook-and-line halibut fishing. Distribute initial rights among historic participants in an equitable manner. Provide for development of halibut fisheries by Bering Sea residents.	The basic share concept preserves present fishing options while creating others, including fishing at preferred times and places, expanding output, and leaving the fishery without loosing the economic value of past participation. An optional common property fishery permits those preferring present arrangements to continue as before without economic loss, and, when combined with transfer rules, permits new entry at approximate current entry costs. Other provisions prevent extensive absentee ownership of shares, preclude monoply control, and allow for halibut fishery development by Bering Sea residents. The proposed allocation framework preserves the status quo for near term participation, and for receipt of income from quota sales. Effectiveness of Alaska programs to promote resident participation in fisheries is enhanced. Equitable allocation depends on choice of a fair and effective decision process for determining allocation, possibly based on principles learned in labor relations and commercial arbitration.
ADMINISTRATIVE/POLITICAL FEASIBILITY Provide for administration and enforcement by existing agencies with minimal increases in staff and budget. Insure that no major user group experiences a significant and uncompensated loss.	New administrative tasks include, entitlement allocation and transfer, quota accounting, and enforcement of accurate catch reporting. These tasks can be accomplished by existing agencies without significant budget increases. Implementation requires further study, including observation of a comparable program proposed for Canada's Pacific halibut fishery. Political opposition based on lifestyle issues is addressed, insofar as possible, by the common property fishery option. Opposition based on demonstrated economic loss is less evident today, but will become more significant when allocation issues are addressed, and its extent will depend, in part, on the perceived fairness of allocation decision making.
OTHER OBJECTIVES Provide that royalties from the fishery at large are sufficient to cover the program costs may be recoverable at some point in the future. Let the market govern transfer of fishing rights after initial distribution.	Equally achievable under all limited entry options considered.

Figure 1-1. Evaluation of the Individual Quota Alternative

NOTE: This figure has been duplicated from the full Northwest Resources Analysis report.

LICENSE LIMITATION OF THE CURRENT FLEET, OR CONTINUED OPEN ACCESS		LICENSE LIMITATION AND SIGNIFICANT FLEET REDUCTION	
Current fisheries management and economics literature and experience generally support the conclusion that license limitation, without significant fleet reduction, will slow, but not stop, growth in the halibut fleet. Thus, the consequences of fleet growth can be expected to continue at different rates, depending on whether license limitation or open access is chosen. From a conservation standpoint these consequences include: sharper focusing of effort on vulnerable substocks, declining reliability of catch and effort data, and greater difficulty in determining when seasons must be closed to achieve area quotas. The incentive to underreport catch will not be present, but other enforcement problems present in today's halibut and salmon fisheries will continue. A question not resolved by this study is the possibility of mitigating these consequences by "fine tuning" the license limitation approach, as was done here with the individual quota concept. Further work is required to determine if such an effort could produce results which are superior, from a conservation standpoint, to those prevailing today, or under the individual quota system.		Depending on the level of fleet reduction, such a program would be capable of achieving conservation and economic efficiency results comparable to those credited to the individual quota system.	
The economic performance of a nonfleet reducing license limitation program would be similar to its effects on resource conservation. Current experience indicates that net economic value will decline, although at a lower rate than without any limited entry programs. "Fine tuning" would be required to preserve the halibut fisheries' current net economic value, or achieve gains of the type and scale credited here to the individual quota system.			
The social consequences of license limitation without fleet reduction will be different from those expected under the share system, or those prevailing today. Geographic, size class and other sectors of the fleet will gain or lose position under open access competition just as they will within the transfer mechanism set up by the share system. But one cannot say in advance what pattern will emerge in either one.		GOVERNMENT BUY BACK Similar in some respects to the individual quota system. Actual consequences would depend on specific buy back rules and criteria.	UNCOMPENSATED REMOVAL Significantly negative social consequences would undoubtedly result from evicting large numbers of fishermen from their established occupation.
CONTINUED OPEN ACCESS Administratively feasible. Political feasability depends on Council willingness to reverse its recent moratorium decision, and public hearings evidence of substantial halibut industry support for some form of limited entry.	NON-FLEET REDUCING LICENSE LIMITATION Administratively and politically feasable, all evidenced by numerous other Pacific Coast fisheries.	Public costs would undoubtedly exceed feasable general revenue appropriations. Self financed programs would conflict with Office of Management and Budget Policy.	Uncompensated eviction would create substantial and most likely unsurmountable, political opposition.

Figure 1-1. Evaluation of the Individual Quota Alternative (continued from previous page)

1.1 MANAGEMENT OBJECTIVES

The objectives governing design of a halibut limited entry program (Column 1 of Figure 1-1) are described in general in the Magnuson Fisheries Conservation and Management Act (MFCMA) and in the North Pacific Halibut Act of 1982. Other more specific statements of objectives either were included in the Council's request for proposals initiating this study or became evident as the study proceeded.

Resource conservation

Resource conservation (achievement of maximum sustained yield on a long run average basis) is implemented by the International Pacific Halibut Commission (IPHC) for the halibut fishery and by Alaska and federal agencies for related fisheries. Conservation is a limited entry objective in the sense that proposed measures should not impede and where possible should support, those conservation programs. In the first instance, limited entry measures should either provide economic incentives for accurate catch reporting by fishermen or, where this is not possible, should provide enforcement measures to minimize the extent of illegal unreported catch. They should also distribute the catch by time and area, both to place equal pressure on all substocks and to produce catch statistics from which stock abundance can be accurately inferred. Finally, measures should insure that, regardless of allocation and transfer provisions, total catch equals current conservation quotas, and that catches can be easily adjusted when conservation considerations dictate changes in either annual quotas or area designations.

Economic efficiency

MFCMA's mandate to recognize economic consideration is interpreted in this instance as calling for the evaluation of limited entry alternatives from the standpoint of their effect on economic efficiency, or the net economic

value of the halibut resource. Net economic value, as defined in economic theory, includes profits to fishermen, processors, and distributors, as well as "consumer surplus," the net value of halibut to consumers.

Net economic value can be increased in several ways through limited entry. Fishing costs can be lowered by reducing the number of vessels and increasing the ability of remaining fishermen to choose times, places, and methods of fishing without regulatory restraint. Processing and distribution costs can be reduced by relaxing regulations that prevent fishermen and processors from arranging the time and place of delivery to their mutual advantage. Net value to consumers is increased when producers are free to market halibut at times, places, and in forms (fresh or frozen) dictated by market demand rather than by fisheries regulations.

From the standpoint of this study, the economic efficiency objective dictates a benefit/cost analysis of the proposed individual quota program to determine, insofar as possible in monetary terms, whether total benefits exceed total costs inclusive of government costs of administration and enforcement.

Social considerations

The mandate to recognize social considerations in the design of limited entry programs is the least well understood of MFCMA's general objectives. In this case, though, prior council guidance gives more specific meaning to that mandate. The status quo distribution of effort by area, vessel size, and user group is to be preserved by basing initial allocations on historic catch. Allocation, transfer, and other measures are to insure, after transfers occur, that the fishery consists primarily of owner-operators rather than absentee rights holders; that a core of fishermen remains who earn most of their

annual income from halibut fishing; that monopoly does not result from concentration of rights; and that special consideration is given to the development efforts of certain Bering Sea residents.

Two other social objectives deserve consideration, even though not explicitly mentioned in prior legislative and Council guidance. The first is the recognition of the autonomy of individual fishermen. We know less about the noneconomic purposes of fishermen than about any other dimension of fisheries management. Past and ongoing studies of the social dimension should bring new information. However, in the meantime our current ignorance, as well as general principles of democratic government, dictate a strong preference for measures which relax regulatory restraints on individual action, and an aversion to new restraints on individual choice.

Finding a method for equitably allocating fishing rights will be essential to the success of any limited entry program. While limited entry is not the only management measure with allocative effect, it does involve government more directly than other measures in the allocation of fishing rights and resulting incomes. Hence a commitment to adopt limited entry implies an equal commitment to solve the resulting allocation problem.

Unfortunately, there is no objective way of identifying "fair and equitable" allocation rules. Each fisherman has his own concept of equity, usually one that favors himself and his group over others. We can, however, go further in defining an equitable allocation process than we can an equitable result. Such an equitable process would, if at all possible, involve negotiation among affected parties rather than imposed decisions. But if, as is likely, such negotiations fail to yield agreement, a decision must be made. That decision ought to be made after all parties have had a full hearing and should be made by individuals who are, and are perceived to be,

well informed about the circumstances of the fishery but who have no individual or group interest in the allocation itself.

Administrative/political feasibility

The meaning of administrative and political feasibility, apart from the above considerations, would include at least the following. Administrative feasibility, in this instance, requires that limited entry measures be implementable by existing agencies with minimal additions to staff and budget. In the current fiscal climate, new appropriations are unlikely, regardless of the public benefits they might produce. And, as the halibut fishery is small in terms of catch and value (the 1982 catch of 23.4 million pounds had a landed value of $25.4 million), the economic benefits of even an extremely attractive limited entry program could easily be consumed by the cost of any substantial additions to management responsibilities.

Political feasibility is an issue whose resolution lies beyond the purview of this study. However, it would seem impossible to achieve that feasibility if either of two cases held true: the first would be substantial opposition by political groups; the second would be any regulation resulting in uncompensated economic losses to a major sector of the industry. However such a provision might be viewed initially, the resultant losses would inevitably arouse sufficient opposition to impede the adoption and implementation of the overall program.

Two final objectives are taxability and transferability of participation rights. Taxability is unlikely to be a factor in choice among limited entry measures. While the Council has no taxing authority, gross and net halibut revenues will be taxable by state and federal governments under any circumstances. While market transferability provisions need not be an inherent element of limited entry, they are a part of most existing programs and have

been included in all the measures considered here. However, market transferability is a social and political issue which will stimulate further discussion as the share system and its alternatives are debated.

1.2 EVALUATION OF THE INDIVIDUAL QUOTA SYSTEM

We now evaluate the proposed individual quota system, including its various options, from the standpoint of resource conservation, economic efficiency, social considerations, and administrative/political feasibility.

Resource conservation

Under the individual quota system described in Chapters 3 to 6, the IPHC's annual area quotas would be assigned to fishermen as transferable individual quotas, based on initial entitlements established when the program is initiated. Transfer provisions and the framework for allocation (specific allocation rules yet to be selected) were designed to insure that legal catches could not exceed the area quotas from which they were calculated. Annual changes in area quotas would be automatically apportioned among permanent entitlement holders. However, management area adjustments would require reapportionment of permanent entitlements according to rules best devised at the time such adjustments are adopted.

Under the current regulatory system the Halibut Commission initially announces a tentative list of season openings along with its area quotas. As the season progresses the Commission determines how many of those openings will actually be permitted, based on daily catch information provided by Commission port samplers. While this system generally keeps the actual catch within conservation quotas, mistakes are inevitable because the daily catch of today's large halibut fleet is so difficult to project. The share system would provide more precise control over harvests. Once an area quota was apportioned, it could not be legally exceeded. With the total thus

controlled, the Commission's conservation objectives would not be adversely affected by the time that actual catches occur during the suggested March to October season or by whom halibut are caught, as determined by allocation and transfer.

As individual fishermen chose their fishing periods within the eight-month season, total catch would be distributed over a longer period, regardless of ultimate fleet size. This spreading of the catch would continue as long as transactions among fishermen consolidate the fleet into fewer, but longer running, fishing operations. Also with more fishing time, fishermen would be in a better position to explore new areas. All of these changes would benefit resource conservation. Taking the same catch over a longer period and from more areas puts more uniform pressure on all substocks and provides the Halibut Commission with catch data that better reflect overall stock abundance.

This conclusion that the share system would enhance resource conservation must be qualified with respect to unreported, and therefore illegal, catches. Assignment of individual quotas gives fishermen an incentive to underreport their catch so they can continue fishing. This need not be a problem if preventative enforcement is adequate or even if the amount of cheating can be determined. In the latter case the IPHC could, as a last resort, adjust its quotas to account for cheating. Enforcement and Halibut Commission personnel are confident that such cheating would not create conservations problems much more significant than those caused by current out-of-season poaching; that practice, in turn, would be reduced by keeping the seaon open for most of the year. A further offsetting factor would be provisions enabling other longline fishermen to legally land, and therefore report, catches of halibut that are now discarded.

Economic efficiency

There can be little doubt that the individual quota system would increase the net economic value of the halibut resource, defined to include fishermen, processor and distributor profits, and net value to consumers. In a general sense the nature of these economic benefits can be seen by comparing the economic performance of common property fisheries with agriculture, forestry, mining, and many other extractive industries in which primary producers own the basic resource or lease it on an exclusive basis. Many, if not most, of the problems confronted by fisheries managers originate in the "tragedy of the commons" that results from the absence of similar exclusive rights in the fishery.

This study has identified and, within the limits of available data, quantified the economic benefits likely to result from establishing a comparable exclusive rights system in the halibut fishery by adoption of the quota system. These benefits include reduced fishing and cold storage holding costs, improved utilization of bycatches in other hook and line fisheries, and consumer benefits from the increased availability of fresh halibut. Using a methodology explained in Chapter 5, gross annual economic benefits were found to have an expected value of $9.3 million. Other summary values are reported, first with and then without, inclusion of a factor that evaluates the costs of a significant enforcement problem. The resulting values are: net benefits, $8.9 to $9.2 million; ratio of total benefits per pound of 1982 harvest, $.44 to $.46. Other calculations which impose more severe tests of confidence yield lower but still positive economic gains out to the 95 percent confidence level.

Social considerations

Given the variety and complexity of social concerns at issue, it is not possible to defend any overall social comparison of the share system with the status quo or (with one exception noted later) with other limited entry alternatives. However, many of the specific social objectives mentioned earlier can be effectively addressed, either by the share concept itself or by modifications designed for that purpose.

Even without modification to achieve specific social goals the share system reflects the general preference for minimum interference in individual choice by preserving most of the halibut fishermen's present options. With initial allocations based on historic catch, most current fishermen would, depending on the allocation rule, be able to take approximately what they have in past years and, on average, more than they will be permitted to take if open access continues to shorten seasons. They could take those quantities by fishing exactly as they have in the past, or by fishing at times, places, and in ways not currently permitted. Those who wish to increase their catch could still do so, provided they were willing and able to buy the necessary quotas and to make the other capital expenditures required under any system. Others could reduce their catch or sell out their quotas entirely. For those leaving the industry, the only difference would be that under the quota system they would take with them a gain from the sale of their quotas. Many might consider this a fair reward for past efforts; and for now making a decision which would benefit the remaining fishermen and society at large.

Still greater flexibility could be permitted by retaining an optional common property fishery. Under this option, those disliking the process of allocation and exchange established by the share system could elect to refrain entirely from active participation. Instead, they could continue to compete

among themselves under common property conditions in a fishery that would guarantee them, in aggregate, what they would have received under the share system: that is, an amount which approximately equals their historic catch, and exceeds what they will get under continued open access.

New participants could still enter under the individual quota system. Those wishing to buy permanent entitlements would, to be sure, have to make a substantial front-end investment. But entrants could also lease quotas annually from other fishermen in order to reduce costs during their start-up years. The lowest possible entry cost would result from leasing the shares required to buy into the optional common property fishery. The fisherman willing to do so, and to bear the same risks he would currently face, could start halibut fishing for about what it now costs and, once in the fishery, could catch a quantity determined entirely by his luck and fishing ability.

Other provisions are designed to preserve favored patterns of owernship. These include a ceiling on the cumulative total quotas any fisherman can lease, which prevents long run absentee ownership or the control of several fishermen through leasing arrangements; a ceiling on the size of any single quota ownership which precludes monopoly control; and a three-year exemption for Bering Sea residents which permits that group to continue its current fisheries development initiative.

It is possible that voluntary transfers might eventually lead to changes in the distribution of participation both by vessel size and by geographic area. As proposed here, the share system contains no special provisions to preclude such change. However, since current data are used in determining initial allocations, the present distribution should be protected both for near-term participation and for the receipt of income from initial quota sales.

While there is no stated federal interest in a particular geographic distribution, the State of Alaska has frequently declared its interest in increasing participation by Alaska residents in Alaska fisheries. Moving from open access to the individual quota system would, if anything, facilitate efforts to achieve this end. Funds received under current or newly devised state financial assistance programs could now be used to help Alaska residents buy into a larger share of the fishery. Gains from such programs would no longer be subject to dissipation due to competition from other fishermen, including those from out of state.

The question of equitable allocation is only partly addressed in this report. The format for allocation described in Chapter 6 has been designed to acknowledge historic catch as the basis for allocation and to conform with IPHC management practices. It provides that quotas be assigned on a management area (2c, 3, 4) basis. Historic (1978-1982) catch would determine, for each management area, who qualifies and the permanent poundange entitlement to be assigned to each qualifying fisherman. Annual quotas would be the product of those individual permanent entitlements and an adjustment factor equal to the IPHC area quota divided by the sum of each area's entitlements. A number of candidate allocation rules set in this format are examined from the standpoint of how they would distribute initial rights by region and by vessel size class.

What remains is to select a single formula relating historic catch to permanent entitlement, and also to deal with other allocation issues such as the current debate over assigning rights to vessel owners or to operators. Historically, making such allocation decisions has been the most difficult of all fisheries management tasks, because they vitally affect the interests of each fisherman and because there is no objective way of resolving them. The

list of otherwise desirable programs that have faltered for want of an acceptable allocation of benefits is too long (and too familiar to this audience) to require reciting, the most immediate example being the U.S.-Canada salmon negotiations.

What is recommended here is that the Council recognize the crucial nature of its allocation decisions by separating them entirely from the rest of the process for devising and reviewing a limited entry plan. Experience in other policy areas shows that special bodies can be designed to accomplish the essential negotiation, mediation, or arbitration. Valuable guidelines can be found in the experience-tested methods used by government and private groups in commercial arbitration, labor-management relations, and elsewhere.

Administrative and political feasibility

The new administrative functions required to implement the individual quota system can be grouped into categories: entitlement allocation and transfer; quota accounting; and enforcement of catch reporting. Chapters 4, 5, and 6 discuss each in more detail and make tentative recommendations concerning agency responsibilities. Initial discussion with the affected agencies (IPHC, Alaska Commercial Fisheries Entry Commission, and enforcement agencies) indicates that these functions could be carried out with minimal additions to staff and budget. The subjects would, of course, have to be more fully discussed during subsequent phases of limited entry planning. If and when it occurs, implementation of an individual quota system for the Canadian halibut fishery will provide additional information on administrative feasibility and costs.

Political feasibility--the relative freedom from voiced opposition or uncompensated economic losses likely to generate it--is another matter. There is considerable opposition as well as support for halibut limited entry in

general and for the share system in particular. Opposition to the share system, as judged from press and public statements, appears to involve lifestyle rather than what income it produces and who gets it. More specifically, many opponents have declared that current open access arrangements, including short seasons, provide a work and lifestyle they prefer to what they expect would prevail under the share system.

The optional common property arrangement has been proposed here as a response to this lifestyle argument against the share system. It is hoped this measure provides a way to avoid the socially undesirable, and politically difficult, step of forcing all halibut fishermen to take part in a system that some quite evidently dislike. Given the option, fishermen could make their own choice: to participate in the share system or to follow their preference for the present common property competition.

The question of potential economic loss has not, as yet, roused much opposition, nor would one expect it to appear until the issues of allocation are more definitively stated. There may be some merit to deferring choice of allocation rules and the inevitable conflict over "dividing the pie" until other biological, economic, and social goals of this program have been widely discussed and generally understood within the industry.

1.3 ALTERNATIVES

The above discussion indicates that, with further development, a limited entry program based on the individual quota concept could advance, in varying degrees, all of the Council's limited entry objectives as they are stated in Figure 1-1. More to the point, though, is how such a program would compare with license limitation and other limited entry methods that have been applied elsewhere or proposed in the fisheries economic literature. While no in-depth analysis of these alternatives has been attempted in this study, a general

understanding of the limited entry literature and experience permits the following tentative comparison, again on the basis of resource conservation, economic efficiency, social considerations, and administrative/political feasibility.

To compare the many types of license limitation with the individual quota system we group them into programs which do not reduce the fleet, and those which do so through government purchase (buy-back) or through uncompensated exclusion.* For reasons discussed below we treat the case of no fleet reduction as being similar to continued open access, at least under the circumstances prevailing i today's halibut fishery.

1.3.1 License limitation without fleet reduction

The limited entry programs that now cover the salmon fisheries of Alaska, British Columbia, Washington, Oregon, and California, typify the situation where license limitation is implemented without fleet reductions. This is not precisely accurate, as Alaska and British Columbia excluded (without compensation) some casual participants, and British Columbia and Washington initially experimented with government buy-back. However, fleet reductions were so small that the experience of these fisheries is comparable to the effects to be expected if a limited entry program were to admit virtually all present fishermen via license limitation under a grandfather clause.

Changes in the composition of the Pacific Coast salmon fleet following limited entry also illustrate why license limitation without fleet reduction can be considered equivalent to continued open access, at least from the standpoint of probable future trends in the halibut fishery. With total but not individual catch controlled, license fishermen continued to compete among

*For completeness it should be noted that heavy taxation of fishermen or assignment of the entire resource to a single owner have also been suggested as methods of limiting effort. However, neither would appear to be a viable option under present conditions.

themselves as before. In the early British Columbia program, where a unit of gear was loosely defined, fishermen simply transferred their licenses from small to large vessels. Tighter rules prevented that practice, but not the alternative increases in fishing power that resulted from upgrading engines, gear, electronics, and the like. Nor did those rules prevent casual and intermittent fishermen from going full time or selling their licenses to those better able to do so. The result has been control over the number of license vessels or fishermen, and perhaps a somewhat restrained growth in fishing power, but there is general agreement that effective fishing power now substantialy exceeds its pre-license limitation levels and that biological, economic, and other problems created by increased effort have worsened as a result.

For several reasons, the same trends would be likely to occur in the halibut fishery. One is simply the large number of participants--6,264 fishermen (Alaska interim-use permit holders) in 1982. The wide variety of vessel types now in use would also complicate efforts to control upgrading. Also, in recent years the discussion of limited entry has brought in many casual participants eager to establish speculative grandfather rights.

Resource conservation

From a conservation standpoint we can therefore expect the unfortunate trends of the last few years to continue, although at a slower rate than has occurred recently and than can be expected under continued open access. Ever shorter seasons will be set and catches will be more concentrated by time and area, thus focusing effort more sharply on certain substocks and making the Halibut Commission's data base less representative. The projecting of daily catches will also become more difficult leading to more serious errors in setting seasons lengths.

There will be no incentive to underreport catches (as with the share system), but today's incentive to fish out of season will still be present. Also, as Alaska's salmon programs have illustrated, there will be new problems of license fishermen "sharing" their licenses with unlicensed fishermen, thus possibly biasing the effort component of the biological data base.

Since the current halibut conservation program copes with these conditions today, it can presumably do so in the future as well. And some of the problems might be mitigated by fine-tuning a license limitation program, as this report has done with the share concept. Additional regulation might include further season splitting, trip limits, layups, or other catch-spreading techniques. It might also be possible to divide the fleet into subgroups to fish at staggered intervals. Further analysis is required to determine if such measures could reverse the tentative conclusion reached here, that license limitation would make resource conservation more difficult than today, and more difficult than it would be under the share system.

Economic efficiency

A program of license limitation cannot be expected to produce economic gains due to fleet and harvest cost reductions. Instead, fishermen's profits would decline further as the application of greater fishing power to fixed area quotas increases aggregate costs but not revenues. The same would be true of shorter seasons which further restrict the fisherman's flexibility of operation.

Unless fine-tuning could produce better outcomes, other economic consequences would be equally unfavorable. Shorter seasons would mean higher cold storage costs, reduced fresh market sales, and more discards of halibut not legal for landing by other longline fishermen. To a degree, storage and fresh marketing problems could be addressed by the various season-stretching

devices discussed above. Only further anlaysis can determine whether such measures could yield economic benefits commensurate with those attainable under the quota system or could keep the halibut fishery's net economic value at current levels in the face of increasing effective effort.

Social consideration

The social consequences of license limitation without fleet reduction will differ both from those expected under the share system, and from those prevailing today. Sectors of the fleet categorized by area, size class, etc., would gain or lose position under the transfer mechanism set up by the share system just as they do under today's open access competition. But one cannot say in advance what pattern would emerge in either event.

Political/administrative feasibility

As to administrative/political feasibility, recent events make it imperative to distinguish again between open access and license limitation without fleet reduction. Both would seem administratively feasible, as open access in the halibut fishery (pending establishment of the moratorium) exists now and license limitation is well represented in other Pacific Coast fisheries. From the standpoint of political feasibility, neither course requires government to directly inflict economic losses on important user groups.

But the Council has already committed itself to some form of limited entry, at least for the duration of the proposed moratorium. And recent hearings indicate, with the exception of Kodiak, overwhelming support for that commitment, albeit with predictable disagreement on the way allocations are to be set, specifically the boat-versus-man issue. To return to open access, the

Council would have to reverse itself and ignore the now fairly clear message from industry which calls for some form of limited entry, regardless of differences over exactly where to go next.

1.3.2 License limitation with fleet reduction

If it were possible, in addition to adopting a license limitation program, to significantly reduce fleet size by either government buy-back or uncompensated exclusion, then many of the conservation and economic gains previously attributed to the share system could be achieved. Reductions in fishing power, however accomplished, would lengthen seasons, increase the profits of remaining fishermen, provide for more uniform harvests of substocks, improve market flexibility, and so on.

However, as one moves to the objectives of social concern and administrative/political feasibility that picture fades. A vessel buy-back program large enough to have any significant effect on seasons would require far more funding than could realistically be expected in the present fiscal climate, and financing such a program by taxing the remaining fishermen would undoubtedly meet with vigorous resistance from the industry. A self-financing buy-back program would also involve the special earmarking of federal revenues, a procedure requiring new legislation of a type historically opposed by the Office of Management and Budget.

The other alternative, evicting large numbers of fishermen without compensation, would seem unacceptable from a social standpoint, and politically at least as unlikely as raising enough money for a major buy-back program. Thus it would appear that, barring invention of some entirely new management techniques, the Council has essentially three feasible alternatives: continue with development of the share system; begin devising,

from past experience, a license limitation program without fleet reduction; or proceed with the parallel development of both. Regardless of how effective this study may have been in building a case for the share system's overall superiority, it would seem that it makes a convincing argument for including the share system among whatever options the Council decides to pursue further.

STAFF SYNOPSIS

History and Description of the Northeast Halibut Fishery

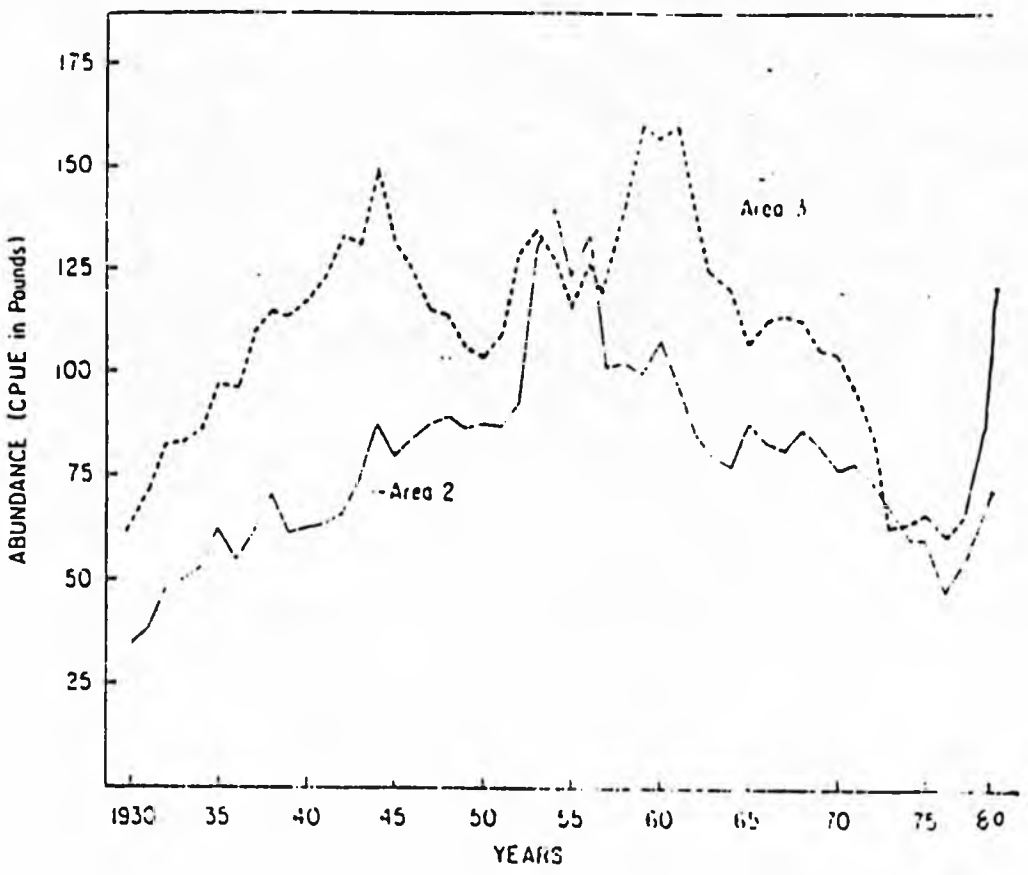
Most of the world harvest of halibut occurs on the eastern side of the Pacific Ocean, in waters now controlled by the U.S. and Canada. Asiatic halibut make modest contributions to world production. Atlantic halibut were once a significant resource that supported fisheries in both Europe and North America; as late as 1940 there was a directed halibut fishery on the U.S. Atlantic coast as far south as Virginia. Overfishing has, however, considerably diminished Atlantic halibut production in recent years.

The halibut stocks in the eastern Pacific have also varied in abundance. The unregulated period prior to the 1930s saw a substantial decline, particularly in the more accessible fishing grounds off Oregon, Washington, and British Columbia. A U.S.-Canadian management program initiated in 1923 restored halibut stocks to the mid-50s, early-60s peaks reported in Figure 2-4, but thereafter abundance again declined. This time the primary cause was uncontrolled incidental catches by Japanese and Russian groundfish trawlers. The past few years (1975 to the present) give some hope this decline has again been reversed.

THE EASTERN PACIFIC HALIBUT FISHERY

The commercial fishery for Pacific halibut began in earnest in the late 1880s. The earliest halibut vessels were small two-man dories carried to the fishing grounds on larger sailing vessels. Catches were delivered to Seattle, Washington, Vancouver, British Columbia, and later to Prince Rupert, British Columbia.

The major technological change of the early 20th century was development of the diesel powered halibut schooner ranging from 50 to 80 feet in length.



Figur 2-4,

Abundance indicated by setline CPUE in Areas 2 and 3

NOTE: This Figure has been duplicated from the full Northwest Resources Analysis report.

These vessels were capable of mechanically hauling longline gear directly from the deck, as well as independently running between the fishing grounds and port.

Vessel technology since the 1930s has emphasized diversity. Vessels recently entering the fishery are capable of seining or gillnetting salmon, as well as participating in several other fisheries.

In 1981 the U.S. fleet's 3,210 vessels harvested 20.078 million pounds of halibut. The Canadian fleet's 360 vessels harvested 5.654 million pounds. The number of Canadian vessels is controlled by a license limitation program instituted in 1979. As of this writing, entry into the U.S. fishery is still open, subject only to nominal licensing requirements imposed by IPHC and the State of Alaska. However, the North Pacific Fisheries Management Council has recommended a moratorium on entry with implementation still pending as of the date of this report.

The standard unit of gear in the setline fishery is the "skate," an 1,800-foot section of ground line. Two to ten of these are connected together, anchored at both ends and marked at the surface with buoys, flags, lights or radar detectors. Typically there are one hundred gangions (4 to 5 foot branch lines) per skate, each holding hooks baited with fresh or frozen bait. The groundline is generally left to "soak" for about 12 hours, after which it is retrieved and the catch of halibut gilled, gutted, and iced for delivery to port.

The recent development of snap-on gear means that the gangions can now be removed each time the gear is retrieved, allowing the groundline to be conveniently stored on a drum. This procedure is of considerable advantage to the operators of smaller vessels because it eliminates the need for a crewman

to coil the line. Snap-on gear also permits the easy adaptation of salmon gillnet vessles to the halibut fishery. Because the gillnetter already has the required drum, he need only replace the gillnet used during the salmon season with groundline for the halibut fishing.

Vessel crews range from one on the smaller boats using snap-on gear to as many as eight on the larger schooners. Many fishermen with the longest history in the halibut fishery are Norwegians whose ancestors moved directly from Norway's Atlantic halibut fishery to the developing Pacific Coast halibut fishery. Recent entrants come from a variety of social, ethnic, and occupational backgrounds and include many "part timers" whose primary income is from other fisheries or shoreside employment.

Halibut fishermen are paid according to a crew share system similar to that in other commercial fisheries. The crew share formula divides gross revenue between expenses, and payments to owners, masters, and crewmen. For the larger boats the crew share formula is established by collective bargaining between fishermen's unions and associations of vessel owners.

Record high halibut catches occurred in 1915 (69 million pounds) and 1962 (75 million pounds). The former was the best of many early years during which the original halibut stocks were being "mined" down by the developing fishery. The latter was the best annual catch produced by the IPHC conservation program. The low points in 1931 (44 million pounds) and 1974 (21.3 million pounds) were the result of prior overfishing. Recent combined U.S. and Canadian catches have been 25.7 million pounds in 1981 and 28.7 million in 1982. Historic annual catches are plotted in Fig. 2-7, along with an IPHC projection of possible future catches by the hook and line fishery. The IPHC

estimates that the hook and line halibut catch by the year 2000 could be between 35 and 44 million pounds, depending on the incidental catch in other fisheries.

By area, the largest current catches occur off central Alaska (IPHC Area 3, 1981 catch equals 57 percent of U.S.-Canadian total). The second most important area is British Columbia (Area 2B, 22 percent), followed by southeast Alaska (Area 2C, 16 percent). The Bering Sea (Area 4, 5 percent), and finally Washington/Oregon (Area 2A, 1 percent). By country, the U.S. catch dominates (78 percent in 1981).

The major ports for halibut landings are: Prince Rupert and Vancouver, British Columbia; Kodiak, Seward, and Ketchikan, Alaska; and Seattle, Washington. Through a reciprocal landing agreement U.S. and Canadian fishermen are free to land halibut in the ports of both countries. They choose their port by balancing the higher prices ordinarily paid in southern ports against the added time and dollar costs required to get to them. Recent short seasons have made the time factor more important, to the disadvantage of southern ports. For this and other reasons Seward, Kodiak, and Petersburg have gained in volume, with Kodiak leading all ports in 1981, while landings at Seattle and Ketchikan have declined.

The historically modest halibut sport fishery has been gaining ground recently, particularly off central Alaska. Over the period 1977-1981, British Columbia and Washington sport catches were relatively stable, ranging from 17 to 12 and from 17 to 20 thousand pounds respectively. By contrast, Alaska has seen considerable growth, from 437 to 1104 thousand pounds. The sport catch in the Kenai Peninsula/Cook Inlet area alone went from 285 to 517 thousand pounds.

A=Incidental catch reduced to 50 percent of current levels
B=Incidental catch maintained at current levels
C=Continuation of current incidental catch trends

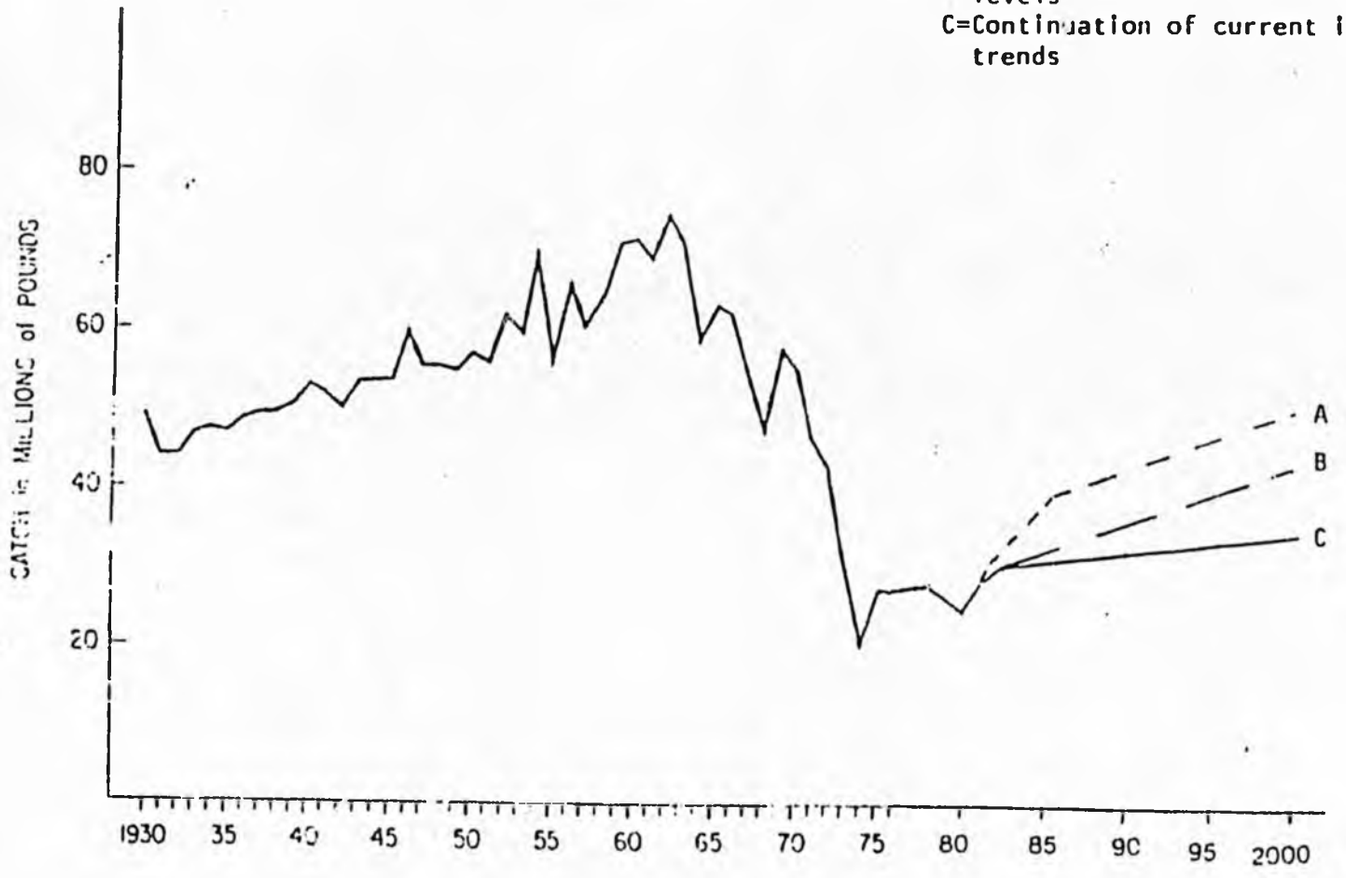


Figure 2-7, Past and projected setline catch of Pacific Halibut.

NOTE: This Figure has been duplicated from the full Northwest Resources Analysis Report.

PROCESSING AND MARKETING

A number of factors other than price determine where and to whom the halibut will be sold. These include time and dollar costs of running to ports, the quality of services available for the vessel and crew, and finally any non-price inducements being offered by processors.

In some cases (notably Prince Rupert, British Columbia, and Bellingham, Washington) halibut are sold to fisherman-owned cooperatives. Under the typical arrangement, the fisherman agrees to sell exclusively to the co-op in return for a guaranteed market. The cooperative makes two payments: an initial payment on delivery, and a post-season settlement calculated to distribute the operation's profits among participating fishermen.

Grading by size and quality also affects prices paid for halibut. Size classes are medium (10-59 lbs), large (60-79 lbs), and "whales" (80- lbs). The small or "chicken" size class (under 10 lbs) was eliminated when the Halibut Commission increased minimum size limits from 26 to 32 inches. Within each size class fish are graded No. 1 or No. 2. Most now fall in the former category, partly due to the fact that split seasons discourage holding halibut on board for long periods. When halibut are graded No. 2 it is usually because of flesh damage (seal bites, etc.) that preclude use of the entire carcass.

The bulk of northeastern Pacific halibut is now landed and initially processed in Alaska, for eventual sale as frozen products in the lower 48 states. The other major U.S. port of landing is Seattle, Washington.

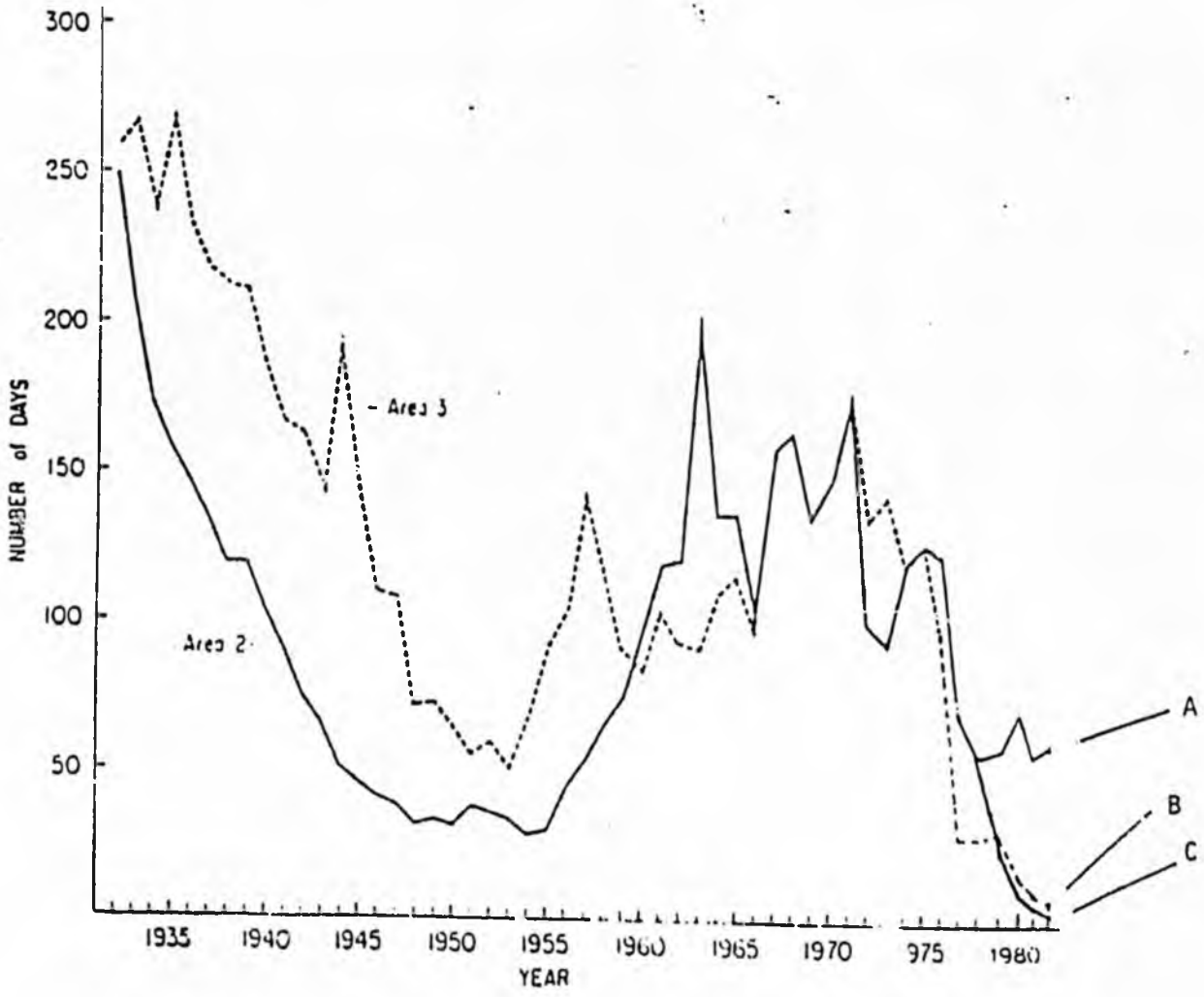
Eastern Pacific halibut dominate U.S. and world production and therefore price patterns. In 1980, eastern Pacific halibut accounted for 67 percent of

world halibut production. In 1981, halibut prices were 96 cents to $1.17 per pound at ex-vessel level, $1.80 to $2.15 at wholesale, and $3.91 to $5.54 at retail.

CONSERVATION MANAGEMENT

The eastern Pacific halibut fishery is managed under terms of a U.S.-Canadian treaty that established the IPHC and mandated it to achieve maximum sustained yield (MSY), or the greatest average catch which can be sustained in the long run, given environmental and other factors that determine natural productivity. Historically the IPHC has pursued this goal by setting catch quotas and seasons for the hook and line fishery.

Regulation of the 1982 fishery illustrates the basic system. In 1981, Commission scientists concluded that the next year's surplus production (recruitment less natural mortality) would be 64 million pounds. From this they subtracted the 28 million pounds expected to be caught in 1982 as an incidental catch by fleets over which the IPHC has no control. This incidental catch cannot be retained, but must be returned to the sea. The IPHC also decided to reserve 9 million pounds of the surplus production to increment the stock, in furtherance of the MSY goal. This left 27 million pounds for the hook and line fleet, apportioned into quotas for the major regulatory areas. Given fleet sizes in those areas, a sequence of 1982 openings in Alaska varying from 5 to 27 days was possible; after which area quotas had then been filled, and the fishery was closed for the year. Because the IPHC has no regulatory power over the size of the halibut fleet, its only recourse in the face of fleet growth is to close the season earlier. The resulting decline in season lengths, illustrated in Figure 2-12, is much



1977-1982
A= Overall US and Canadian season in area 2
B= Area 3A season only
C= Area 2 season for US fishermen, or area 2C season.

Figure 2-12
Length of fishing season in Areas 2 and 3A, 1932-1982

NOTE: This Figure has been duplicated from the full Northwest Resources Analysis report.

like that in many other season-regulated fisheries. A variety of factors, including changes in resource abundance and catch per unit effort contributed to changes in season length. However, the major factor was fleet size.

The greatest decline in halibut seasons began with the start of the season regulation during which time the fleet grew from 284 vessels in 1933 to 661 in 1953, and the season declined from 268 days to 52 days.

The industry initiated voluntary layup and trip-limit programs during the 1930s and 1950s to limit this tendency toward short intense seasons. However, both attempts were abandoned, the first during World War II, and the second in 1977 after many new, smaller operators refused to participate. Thereafter, seasons again declined rapidly, culminating in the 1981 situation where 1590 vessels took the quota for Area 2C (Southeast Alaska) in 7 days and 1620 vessels took the quota for Area 3A (Central Alaska) in 13 days.

The incidental harvest of halibut in other fisheries, primarily the groundfish trawl fisheries, is a major conservation problem that largely falls beyond the control of the IPHC conservation program. Trawl-caught halibut are typically smaller than those caught in the hook and line fishery. Incidental catch rates (halibut per hour of trawling) appear to be increasing since the mid-1970s.

Groundfish trawlers from all nations are prohibited from retaining and selling halibut caught in the U.S. and Canadian 200-mile zones. Foreign trawlers, who have until recently dominated the Alaska trawl fishery, are also subject to time/area restrictions designed to control their halibut catch. U.S. trawlers who are increasing their share of groundfish catch are not subject to comparable restraints.

The IPHC's present regulatory system for the hook and line fishery culminates a process which began with a post-World War I initiative to achieve

international (U.S.-Canadian) regulation of the Pacific Halibut Fishery. Negotiations (begun in 1919 by those in the halibut industry concerned about the biological and economic consequences of three previous decades of unregulated fishing) led to a 1923 convention which closed the fishery for a three-month winter period starting in 1924. That convention also established an International Fisheries Commission (renamed International Pacific Halibut Commission in 1953) to study the halibut resource and to recommend further management measures.

In 1928 the Commission presented its recommendations. These included, among other things, establishment of regulatory areas with separate quotas, a vessel licensing program, and Commission control over vessel departures. These measures became the basic halibut management regime mentioned earlier. Notable among these measures was a provision permitting split seasons, which allowed the Commission to spread effort over a longer period. This in turn led to a more even harvest of all substocks, instead of a focus of effort on just those most accessible during the single open season.

More recent changes have adapted Pacific halibut management to the extension of national jurisdiction to 200 miles offshore and have begun the process of limiting entry. In 1979 the U.S. and Canada agreed that 60 percent of the Area 2 quota should be taken by Canadian fishermen in Canadian waters off British Columbia, and the remaining 40 percent by U.S. fishermen in U.S. waters off Washington, Oregon, and Southeast Alaska. Areas 3 and 4, Central Alaska and Bering Sea, became the exclusive preserve of U.S. fishermen. This ended the longstanding practice of allowing both nations' fishermen to compete throughout the IPHC area. In terms of total fishing opportunities, Canadian fishermen were the greater losers.

Canada's response to this decline in accessible halibut resources and to the recent growth in its halibut fleet was a 1979 license limitation program which limited the fleet to vessels landing at least 3000 pounds in either of the preceding two years. The 1982 Pearce Commission report on Canadian Pacific Coast fisheries also recommended application of the individual quota system to several fisheries, including Pacific halibut.

The U.S. Congress adopted the 1982 Halibut Act which authorized the North Pacific Fisheries Management Council to consider limited entry in the Alaskan halibut fishery.

The Individual Quota Approach to Limited Entry

The problems that caused the North Pacific Council to consider limited entry for the halibut fishery have been with us as long as that fishery has been under any form of management. The IPHC was successful in bringing the fishery back from its depleted condition to nearly maximum sustained yield by the late 1950s; however, as stock abundance and catch rates increased, so did the number of fishermen, repeatedly forcing the Halibut Commission to shorten the season.

Growth in effort has been a major reason for many of the industry's historic economic and conservation problems. This growth has caused fleet overcapitalization and often requires fishermen to operate "flat out" when the season is open, regardless of the state of equipment, personal condition or weather.

More vessels and shorter seasons have also impeded the IPHC's efforts to achieve maximum sustained yield. It is increasingly difficult to decide when seasons should be closed and thus to prevent a large and growing number of vessels from exceeding annual quotas. Data on catch per unit of effort, now confined to a week or two, are more subject than before to transitory influences such as weather rather than stock abundance. Finally, short periods of intensive fishing expose vulnerable substock to overfishing while leaving others unexploited.

EVOLUTION OF HALIBUT LIMITED ENTRY

The North Pacific Council's 1979 decision to begin consideration of limited entry to the halibut fishery led to several specific actions. The first was formation of an ad hoc limited entry working group which designed and reviewed the progress of this study. The Council also proposed a

moratorium on entry into the halibut fishery. Although not yet approved by the Secretary of Commerce, that moratorium is expected to take effect during 1983.

Federal legislation adopted in 1982 explicitly authorizes the North Pacific Council to implement a limited entry program for the halibut fishery. See Section 5(c) of the Northern Pacific Halibut Act of 1982.

The Council's limited entry study group decided early on to explore more effective limited entry measures than the restrictive licensing programs already in effect in the salmon fisheries of British Columbia and Alaska. Experience has shown that such licensing programs can only retard but not stop growth in fishing effort, or reduce fleet size unless government is also prepared to remove a significant number of fishermen from the fishery through buy-back programs or legislating current fishermen out of the fishery.

To explore alternatives to the licensing approach the North Pacific Council, on recommendation of the study group, chose to focus its attention on the individual quota option concept. This approach has been little used to date, but many who have studied it have concluded that it can achieve a variety of benefits through fleet rationalization, without impairing conservation objectives, and without creating the undesirable side effects resulting from license limitation. The North Pacific Council began further exploration of the individual quota concept by setting the following objectives for a limited entry system:

1. Distribute the hook and line halibut fishery by time and area to ensure resource conservation.

2. Reduce capitalization, thus encouraging development of an economically viable and efficient year-round domestic halibut hook and line fishery that, unconstrained by regulatory seasons,
   (a) potentially could provide high quality fresh and frozen fish to the consumer twelve months of the year;
   (b) is made up of owner/operator rights holders; and
   (c) enables some fishermen to earn a major share of their income from hook and line halibut fishing.
3. Ensure that the costs of administration and enforcement do not exceed the benefits of the program.
4. Provide that royalties from the fishery at least sufficient to cover the program costs may be recoverable at some point in the future.
5. Minimize adverse biological impacts of the program on related fisheries.
6. Ensure that no particular entity acquires excessive control of rights to participate in a fishery.
7. Attempt to be compatible with IPHC objectives.
8. Minimize disruption of the present fleet by using past performance to distribute initial rights.
9. Let the market govern transfer of fishing rights after initial distribution.

As the effort to develop an individual quota system has proceeded, several objections have surfaced. No one, it is argued, should be granted a property right in any fishery, nor should any system be established that protects fishermen from the competition inherent in the present common property fishery.

Small boat fishermen protest that the share system would freeze the distribution of catch just when they have begun to make gains at the expense of larger operators. Others assert that the individual quota system would make fishing so much like other shoreside businesses and occupations that the

unique lifestyle it now provides would be destroyed. In the process, they say, the share system would also close one of the last avenues through which someone without a great deal of money or credit can get into Alaska fisheries. A final concern is that groundfish trawlers historically prohibited from marketing their incidental halibut catch might, under same share system, argue that "their money is as good as anyone else's." That is, if market forces are going to determine allocation among hook and line fishermen, why might they not equally well determine allocation between hook and line fishermen and trawlers.

DEVELOPMENT OF THE INDIVIDUAL QUOTA CONCEPT IN THE ECONOMIC LITERATURE

Early discussions of halibut limited entry alternatives largely eliminated taxation and sole ownership of fisheries on political and social grounds. Restrictive licensing has usually taken the form of a simple moratorium on effort, which merely defers the problem of effort reduction. In some cases, however, initial effort reductions have been attempted by disqualifying some historic participants (in Alaska and British Columbia) or by the government purchase (buy back) of licenses (in British Columbia and Washington).

In most cases, though, the economic performance of restrictive licensing has been disappointing. Because the fishery remains the object of unrestricted competition among licensed fishermen, there has been a tendency to overcapitalize the license fleet. To achieve significant effort reduction, managers must use other measures.

Proposals have been made to divide total quotas among nations in international fisheries, or among individual fishermen in the case of domestic fisheries. These measures are seen as a means to achieve economic efficiency in the fishing industry.

Proposals to allocate quotas among individual domestic fishermen went one step further in the pursuit of economic efficiency by recommending transferable shares. The intent behind this was to permit some participants to buy out others, and thus more efficiently take the allowable harvest throughout a season determined by weather, availability of fish, and other factors. Because this is the economic effect hoped for in the Pacific halibut fishery, we examine it in more detail below.

ECONOMIC THEORY OF INDIVIDUAL QUOTAS

The bare elements of a fishing fleet's response to the current season/quota arrangement in the halibut fishery and the expected response to an individual quota system are illustrated in Table 3-1. Current and potential fishermen are assumed to be identical with respect to both productivity and opportunity costs of participation.

Under season regulation, the fisherman's economic choice is whether or not to participate for the fixed season. He arrives at this decision by estimating daily net revenues (total revenue less variable costs) and comparing their sum over the season with his fixed costs of annual participation. If a significant number of potential as well as current fishermen conclude that the sum of daily net revenues more than covers annual fixed costs then entry will occur and the season will have to be reduced because of the new entrants in order to keep fishing mortality within the allowable quota.

Conversely, if the current season is too short to cover fixed costs exit will occur and the season can be lengthened. In Table 3-1 the equilibrium situation (no entry or exit) occurs where 900 fishermen harvest a hypothetical 10 million pound quota in a 22-day season.

Now consider implementation of the same quota by allocating it equally among current fishermen in the form of freely transferable individual quotas, rather than by setting a seaon. Present and potential fishermen can now choose among the entire range of fishing programs described in Table 3-1. The economic goal of each fisherman is to select the most profitable combination of quota transactions and fishing operations open to him, given his own costs and productivity and the willingness of others to trade in quotas.

Over an initial range (20-40 fishing days) the spreading of fixed annual costs over increased output yields a decline in average cost. Eventually, however, increasing daily variable costs dominate, causing average costs to rise. The general economic principle of diminishing returns and, more specifically, the economic alternatives open to diversified fishermen support this conclusion that average costs will reach a minimum rather than decline continuously. Much of the opportunity of participating in the halibut fishery reflects income opportunities foregone in other fisheries or in shoreside employment.

The point of minimum average (40 days of fishing in Table 3-1) would be the economic equilibrium under an individual quota system. Fishermen who select that program can pay up to the difference between price and average cost for quotas; therefore they can, if necessary, outbid fishermen who select other programs. In a reasonably competitive quota market, one would therefore expect the price of quotas to move toward the difference between price and minimized average cost.

In the long term the economic advantages of this arrangement over season regulation will be reflected in the value of quotas and in economic rent earned by fishermen with inherently lower opportunity costs than others. In a sense, many fishermen will break even under either system. But with

Number of Vessels	Catch per day (pounds)	Season length (days)	Total revenue (at 1.50/lb)	Annual fixed Costs	Daily variable costs	Average cost (dollars per pound)	Total cost	Profit	Quota value (dollars per pound)
1000	500	20	15,000	3,000	614	1.53	15,280	-280	-.03
900	500	22	16,500	3,000	615	1.50	16,530	-30	.00
800	500	25	18,750	3,000	616	1.47	18,400	350	.03
700	500	29	21,750	3,000	617	1.44	20,893	857	.06
600	500	33	24,750	3,000	620	1.42	23,460	1290	.08
500	500	40	30,000	3,000	625	1.40	28,000	2000	.10
400	500	50	37,500	3,000	650	1.42	35,500	2000	.08
300	500	67	50,250	3,000	700	1.49	49,900	350	.01
200	500	100	75,000	3,000	750	1.56	78,000	-3000	-.06
100	500	200	150,000	3,000	800	1.63	163,000	-13000	-.13

Table 3-1 Hypothetical Halibut
Vessel Costs
Revenues and Profit

NOTE: This table has been duplicated from the full Northwest Resources Analysis report.

individual quotas only a portion of the opportunity cost of fishing represents the sacrifice of real economic resources and opportunities. The remainder is represented by quota prices which reflect net economic gains to initial quota holders.

It is within this general framework that we now address specific tasks of share quota program design, benefit cost analysis and allocation.

Recommended Program and Options

This section describes the recommended elements of an individual quota system for the Pacific halibut fishery. Provisions discussed below were developed through discussion with industry leaders, fisheries management officials, and others.

ALLOCATION

No recommendation is made concerning specific individual quota allocation rules. Here we describe only a format for allocation which meets Council objectives of reliance on historic harvest and conformance with the IPHC conservation management program. All allocation options should be structured as follows.

1. Allocations should be based exclusively on recorded historic catch for the period 1978 to 1982, except as specified in the 1982 Halibut Act for certain residents of rural Alaskan coastal villages who fish in the Bering Sea north of 56°N latitude.
2. Assignment of individual catch quotas should proceed in two stages: initial assignment of permanent entitlements with an annual individual catch being calculated by application of an annual adjustment factor. The reader is referred to Table 6-1 of this synopsis for an example of how this allocation approach would work.
3. Permanent entitlements should be allocated on the basis of IPHC management areas rather than Alaska-wide; provision should be

made for automatic adjustment or apportionment of entitlements in the event IPHC subsequently changes management areas or boundaries.

4. Multiple area qualifications should be dealt with in one of the following ways:

   (a) No restrictions. Fishermen with recorded landings in two or more management areas would be allocated entitlements and annual quotas in each area based upon their history of fishing in each area. Fishermen would also be permitted to buy and sell quotas in two or more areas. Misreporting the area of catch would subject fishermen to the same legal pealties as not reporting their catch at all. Such misreporting is most likely to occur between Areas 2C and 3. To prevent this practice, one of the following measures could be adopted.

   (b) Restrictions on transfer. Only the original group of fishermen would be permitted to qualify in both Area 2c and 3. Thereafter, transfers would be permitted only if they reduced the extent of multiple qualification in those two areas. All initially qualified and subsequently entering fishermen would elect one of the two areas in which they could both buy and sell rights. New fishermen would be prohibited from buying entitlements in both Areas 2c and 3.

   (c) Combining initial rights. Under this option fishermen who would have qualified in both Areas 2c and 3 under (a) or (b) could sum their catch in both areas and use it as a basis for entitlement in the area where their historic catch was the greatest. Thereafter no one would be permitted to buy quotas in both Area 2C and 3.

   (d) Rights calculated for only one area. Each fisherman qualifying in both 2c and 3 would be required to elect his desired area of operation. His entitlement and annual quota would then be calculated from his historic catch in that area.

Supporting Analysis

Management area quotas. Assignment of quotas by management area rather than on an Alaska-wide basis seems the most compatible with the conservation objectives of the IPHC. Assignment of quotas on an Alaska-wide basis would allow fishermen to overharvest some management areas and underharvest others.

Multiple area qualification. It would seem that in deciding between these options the tradeoff is between enforceability and equitable treatment of fishermen who have historically fished in two or more areas. Enforcement problems may not be as serious as initially foreseen. In particular, Alaska fisheries officers already enforce a variety of area-type restrictions, notably in the shrimp and crab fisheries. If the enforcement problems should actually prove more serious, it could be dealt with by partly or totally restricting multiple area qualifications.

QUOTA ACCOUNTING

Possible quota accounting methods include a system of deducting overages during a season's harvest from the individual's quota the following season. An underharvest would result in additions to the permitted catch the following year. A system of penalties for overharvest and underharvest above a certain level, e.g., 10 percent of an individual's quota, could also be implemented as an incentive to comply with quota guidelines.

Another method that may be used is to cancel underages at the end of each season and levy fines for any overharvest. This might reflect the view that the flexibility provided by longer seasons is sufficient to allow fishermen to respond effectively to changing in-season conditions.

The recommended system for implementing either of these accounting approaches is a "reverse money" system. This sytem would require establishment, for each qualifying fisherman, of a checking account

denominated in pounds of annual halibut quota rather than dollars. Landings would be subtracted by writing checks against that balance and attaching them to fish tickets.

In-season transfers would be handled much like second party checks. One fisherman would buy quotas from another and attach the purchased check to his fish ticket, if necessary, along with a check of his own to cover the balance of the landing.

The poundance checks would be cleared through each fisherman's account just as a monetary check is cleared through the bank. And, in similar fashion, penalties or enforcement actions would be initiated against fishermen who overdraw, or otherwise abuse the system.

ENFORCEMENT

The enforcement system proposed would rely primarily on established recording procedures including the IPHC logbook system and the State of Alaska fish ticket system. Failure to comply with reporting provisions would subject fishermen to substantial penalties including, for repeated or flagrant offenses, the permanent cancellation of entitlements.

TRANSFERABILITY

Permanent entitlements would be freely transferable, subject to the following conditions: A limit on the number of shares owned; an individual's entitlement account would designate a single vessel on which fish harvested on that account must be taken; all transactions in permanent entitlements would have to be completed by December 1 of the year prior to their becoming effective.

To discourage absentee ownership, entitlement owners may be required to be present on the vessel whenever a catch is made on their account. This may, however, also restrict fishermen's flexibility.

The transfer of annual quotas between entitlement holders might be permited anytime during the year of their assignment. Such sales would be recorded through the annual quota accounting system.

Supporting Analysis

In general, entitlement transfers would reflect long run decisions to begin, expand, reduce, or terminate halibut fishing. In-season quota transfers would result from short-term changes in circumstances.

Fishermen could also pyramid their quotas by making in-season transfers by selecting one of their number (who was previously designated a permanent entitlement holder) to fish the entire group's quota.

These transfer provisions should prevent speculative ownership or the amassing of rights beyond the fishing capability of a single vessel. Entitlements and quotas would be owned by an "entity" consisting of an individual and his vessel. The individual who bought more quotas than he actually intended to harvest would run a considerable risk of either losing some portion of those quotas due to the penalty provisions or of being forced to sell them at distress prices near the end of the season.

It may, however, be desirable to restrict or eliminate in-season transfers further in order to more effectively preclude speculation or absentee ownership. Total elimination of in-season transfers would achieve this objective, but at the cost of restricting active fishermen and increasing entry costs. An intermediate approach might be to limit quota sales to 40 percent of the entitlement holder's past five-year total allocation. This would prevent absentee ownership because the owner must actively fish in at least three of any five years.

Other restrictions on transferability might have to be imposed, such as limiting ability to fish in multiple areas. The share system would not

guarantee any long-run maintenance of the present distribution of effort by area and vessel size but market forces should do much to preserve the status quo. To see the reason for this, we must distinguish between two kinds of costs incurred in halibut fishing. Out-of-pocket expenditures such as fuel, bait, ice, interest, etc. will be unaffected by whether an individual is a long time or a new participant. However, foregone income alternatives are unique to each participant with present participants bearing lower opportunity because they only give up the chance to find better employment, while potential new entrants must give up jobs already held. Because of these lower opportunity costs, current participants will have a greater economic interest in holding their quotas than potential entrants will have in buying them out.

APPEALS

Because the agencies that may be given responsibility for administering this program already handle appeals under established procedures, no specific appeal procedures are recommended in this report; however, if necessary, a special appeals board might be advisable.

Supporting Analysis

No specific appeals procedures would be necessary if the Council chooses a clear-cut allocation rule which minimizes the number of hardship cases. To achieve this goal it may be necessary to base entitlements on the best catches over a certain perid. It would not then be necessary to explain why events beyond a fisherman's control prevented him from making an adequate harvest during any one of several years. Allocation rules based on the harvest in one specific year would create many hardship appeals. The same is true to a lesser degree of allocation rules based on the average of several years.

Under any rule, disagreements will still arise between fishermen and managers over the accuracy of records, but present appeal procedures should be able to handle this kind of dispute satisfactorily.

TAXATION

The issue of taxation would not seem relevent to this analysis, as the Council has no independent taxing powers.

ADMINISTRATIVE RESPONSIBILITY

The Alaska Commercial Fisheries Entry Commission should be given responsibility for administering those aspects of the program having to do with assignment and transfer of entitlements and quotas, and the IPHC be given responsibility for quota accounting with one of these agencies designated as lead agency for the entire program. Catch reporting would be supervised by existing state and federal agencies as part of their overall enforcement responsibilities.

Supporting Analysis

These recommendations are highly tentative. A separate NOAA legal analysis deals with the question in more detail.

Currently, neither the North Pacific Council nor the National Marine Fisheries Service has the capability to administer a limited entry program.

The IPHC is not subject to personnel limitations currently placed on Federal agencies. Since the IPHC would be involved in quota accounting if the proposed Canadian system is adopted, it seems most efficient that it should consolidate such accounting for the entire halibut fishery. However, under its treaty mandate, the Halibut Commission cannot take responsibility for the allocation issues inherent in the assignment of initial rights and the administration of transfer provisions.

The agency with the most experience in these matters is the Alaska Commercial Fisheries Entry Commission which also maintains the catch, vessel, and license holder data required to make initial assignments of entitlements. To satisfy Alaska's confidentiality rules, any other agency would have to gain access to Entry Commission records through an intermediary.

PROVISION FOR BERING SEA RESIDENTS

The Northern Pacific Halibut Act of 1982 includes a provision for residents of rural coastal villages of Alaska to develop a halibut fishery in the Bering Sea north of 56° latitude. The following provisions are recommended to implement that special provision.

1. The qualification of these residents should be based on pre-1983 residence criteria rather than on historical participation in the fishery.
2. Entitlements and annual quotas should be calculated under the same allocation rules applied to other fishermen, except that one or more of the years 1983-1985 may be substituted for years otherwise included in the allocation formula.

Supporting Analysis

The above provisions, it is felt, reasonably incorporate the letter and spirit of the 1982 Halibut Act that certain rural Alaskan coastal residents may be granted three years to develop a local commercial halibut fishery. One legal point that may arise is exactly which future years should be included in the grace period allowed that group. A generous approach (1983-1985) would be reasonable, as relatively few fish or fishermen will be involved, and because a more restrictive approach (1982-1984) would likely result in litigation.

AN OPTIONAL COMMON PROPERTY FISHERY

Allowing fishermen the option of remaining in a common property fishery is recommended as a way (1) of allowing for individual preferences among

fishermen; (2) of testing the share concept by experience; and (3) of achieving greater acceptance of, and compliance with, the share system. The proposed system works as follows. After assignment of entitlements, fishermen would be given a choice between participating in the share system or continuing in a common property fishery much like that in effect today.

Those in each area electing not to participate in the quota system would, on an annual basis, surrender their entitlements to a common pool in return for being allowed to continue fishing during a season established as follows. The total quota for the common property fishery would be the sum of quotas held by those electing not to participate in the share system. The IPHC would estimate how long it should take non-share fishermen to harvest the sum of their quotas. Based on these estimates a season (or series of seasons) would be announced during which non-share fishermen could fish without any limits on their individual catches.

Fishermen electing the share system might or might not be permited to fish during the common property season. But they would still be subject to their annual catch quotas. Catches taken by share fishermen would not be considered in determing the length of the common property season.

Initially qualifying fishermen would be permitted to continue using their present vessels (or vessels of no greater tonnage) in the common property fishery, in return for surrendering an amount of quotas equal to the ratio of total area catch to total area tonnage (e.g., say 800 pounds of quotas per net vessel ton in Area 3). Any fisherman wanting to increase the size of his vessel, or any new entrant, would also be required to contribute to the pool an amount of quotas equal to that ratio.

Supporting Analysis

By providing the common property option it may be possible to satisfy many of the objections raised against the quota system while imposing no losses on fishermen who prefer the share system.

In either the dual option or the status quo, stock abundance would be determined by natural conditions and the IPHC conservation program. Similarly, seasons would continue to be shortened in either type of fishery. However, under the optional common property fishery the decline would be less rapid because of the required ratio between quota contributions and new tonnage. Those electing the optional common property fishery would have access to the same resources for at least as long as under the status quo. Thus fishermen who relish the risk of fishing under common property condition, who feel that they can do better than in the past, or who just don't want to change, can achieve all those aims independently of those who prefer the quota system.

To enter the quota fishery a fisherman would have to buy enough entitlements to allow him to land his expected harvest. By contrast, the same fisherman could enter the optional common property fishery by contributing to the common pool an amount of quotas less than his expected harvest. He would have the opportunity to catch his expected catch, possibly a larger harvest or a smaller harvest.

Entry costs would be even lower if a fisherman were to lease annual quotas and contribute to the common pool because annual quotas would sell for much less than permanent entitlements.

The second advantage of the optional common property fishery would be the opportunity to test the quota system. The analysis reported here indicates that the share system will offer economic advantages to the fisherman who

first choose it. With additional time to catch their quotas and the opportunity to trade quotas among themselves, quota fishermen would be able to plan their fishing to take account of weather, tides, participation in other fisheries, shoreside employment, and other options. They would also have more time to search out higher prices for their catch in existing markets or to penetrate more attractive markets. Other fishermen taking note of these advantages would be expected to opt for the share system the next time around.

If the prospective benefits fail to appear, initial participation would attract no followers. Indeed, they might themselves choose (and be allowed annually) to return to the common property fishery.

This capability to move incrementally toward a new management regime and to learn by doing is almost imperative when one considers the essentially irreversible nature of the step the Council is preparing to take. Once exclusive fishery rights are established under a limited entry system it is unlikely that they could later be significantly altered or canceled.

An optional common property fishery would avoid any such irreversible commitment. Instead, the two systems would coexist, or one or the other would wither away, as determined by the individual choices of fishermen based on their own continuing experience.

Economic Benefits and Costs of the Individual Quota System

This section discusses some of the changes in the halibut industry which are expected to occur if the share system of limited entry is adopted, and the types of economic benefits and costs which would likely result.

The method used for evaluating these changes is known as benefit/cost analysis, or B/C analysis. It has been used fairly widely in situations where a decision must be made concerning whether or not to commit public funds to a

project or activity. Simply put, the method compares two situations: the "status quo," or the current situation before any action is taken, and the situation after the project is undertaken.

Undertaking a major project will necessarily affect industries, individuals, and geographic regions which are in some way related to the project. Building a dam, for example, will provide jobs and increase economic activity in the nearby area during its construction, generate electricity, possibly reduce the habitat or populations of fish and wildlife, and change the nature of recreation activities in its vicinity. Benefit/cost analysis is used to measure and compare the beneficial and adverse economic consequences of the dam, compared to the situation where no dam is built, as an aid to making the decision whether or not to build it.

In the present case, the decision being evaluated by B/C analysis is whether or not to institute a share quota system for the halibut fishery off Alaska. Compared with the current situation in the halibut fishery, the benefits from adoption of the quota share system identified and discussed in this report are: (1) reduced fishing costs; (2) reduced inventory holding costs; (3) increased product value because of an increase in fresh market sales; and (4) better utilization of halibut taken incidentally in other hook and line fisheries. The costs of adopting the share quota system (again, compared to the present condition of the industry), have been identified as: (1) additional public (i.e., government) expenditures on administration and enforcement; (2) the economic cost of unreported catch; and (3) losses due to "hygrading," or throwing back lower grade fish to try to replace them with higher grade fish.

Before discussing each of these benefits and costs in turn, some further comments about benefit/cost analysis might be useful. The actual process of

measuring economic costs and benefits is a difficult one, largely because of limitations in the data which is available. Complex economic models typically must be simplified to be of use in estimation. Even then, there may be questions about the accuracy or representativeness of the data which is used. To help in making the decision, then, it is useful to know how much the data used in the model could be in error without changing the decision which results. That is, if your economic models tell you that benefits of the project are greater than the costs, the project should be undertaken; the question is, how much could the basic data be in error before the costs are greater than the benefits and the project should not be undertaken? This "what if" process of changing values of different variables (usually one at a time) to see how the results change is known as sensitivity analysis.

BENEFITS OF THE SHARE SYSTEM

Reduced Fishing Costs

The share system's effect on fishing costs will be determined by adjustments fishermen make if the current, short seasons are replaced by a longer (say eight months or so) season. With current season lengths, many fishermen's production of halibut is determined (constrained) by the length of the season rather than by economic conditions (cost of production vs. exvessel price). Their fishing in a given area is cut short because of closures before they reach their proft maximizing output, or the point where the cost of catching a halibut just equals the gross earnings received from it. As a result, the average cost of production for these fishermen is greater, and their profits are lower, with short seasons than would be the case if there were not season closures.

With a share quota system, each fisherman would be awarded a permanent entitlement to the resource based on historical participation in the fishery

(how they are awarded is discussed at some length elsewhere in the report). Each year, a catch quota will be determined for each fisherman, based on his entitlement and the condition of the stocks. The fisherman will have the choice, then, to harvest that amount, increase his catch by buying more quotas, reduce his catch by selling some of his quotas, or not fish at all that year by selling all his quotas (while still retaining his entitlement).

The price of quotas will fluctuate year to year, depending on what the exvessel price and fishery-wide average cost of harvest is. The quota price should be equal (or very close) to the difference between exvessel price and minimum average cost per pound of harvest (excluding quota costs). If it were less than that, more fishermen could figure to make a profit by acquiring and fishing additional quotas from someone else than there would be fishermen willing to sell their quotas. Demand for quotas would outstrip the supply, and the price charged would rise. The point at which demand would just equal the supply of quotas would be when the price of quotas equals the difference between exvessel price and minimum average cost per pound of harvest.

Given this situation, each fisherman would be free of season length constraints to make the business decisions best for himself. Each fisherman's average cost of production would guide him to find the profit-maximizing output. For some fishermen it would involve buying additional quota shares if their average cost of production for those additional shares were lower than the fishery-wide average. Other fishermen might find that they increase profits by fishing less than their annual quota and selling off part of it. High cost producers (those whose average cost of production is higher than the fishery-wide average) might find that they could fish their annual quota and make a profit, but they could make a larger profit by selling the entire annual quota and not fishing at all that year.

The benefits of the share system would be the increased profits of fishermen who are currently constrained by short seasons from finding the profit-maximizing production level, where the cost of producing the last halibut just equals the gross earnings from its sale.

Cold Storage Holding Benefits

The quota system will also affect costs of processing and marketing halibut, particularly cold storage holding costs. Because of the present short seasons, the amount of halibut held in storage far exceeds levels required for orderly marketing. The share system could significantly reduce the levels held in storage.

With very short seasons, most of the annual supply of halibut must be added to inventory rather than being immediately consumed. Larger inventories are more costly to hold than smaller ones, both because of cold storage rates and interest costs to finance the inventory. In the case of self-financed inventories, there is still a cost, which is the foregone interest income of the money tied up in financing inventory.

Without any season constraints, the supply of halibut would be more spread out over the course of the year, as fishermen scheduled halibut fishing around other activities. More halibut could be marketed directly for consumption instead of being added to inventory, thereby reducing the costs of holding frozen product. There would be considerable incentive for processors and fishermen to work together on scheduling deliveries, splitting the savings on holding costs.

Spread-out deliveries of halibut should not increase processing or transportation costs, since the plants which process most Alaska halibut operate year-round to process other species, and would be able to handle small

quantities of halibut without much disruption. Halibut shipments could, if necessary, be combined with other species to ensure that full shipments were made.

Consumer Benefits

A substantial share of the Pacific halibut catch was marketed in fresh form before drastically shortened seasons reduced that practice. Consumers who are willing to pay premiums for fresh-marketed halibut will benefit if fresh halibut becomes available during a greater portion of the year.

Current demand for fresh halibut is less than it will likely be under the quota share system, because it does not now pay retailers and distributors to invest in the necessary equipment and market development efforts with fresh halibut so seldom available. As fresh halibut becomes available more regularly, these efforts will be made and the fresh market should grow. As the market grows, there will be an increase in consumers' surplus associated with the increased marketing of fresh halibut.

Consumers' surplus is the difference between what people are willing to pay for a commodity and what they actually have to pay at the going market

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Consumers' surplus is the difference between what people are willing to pay for a commodity and what they actually have to pay at the going market price. Downward sloping demand means that people are willing to pay higher prices for the first units of a commodity (like halibut), but they are willing to buy increased amounts only at lower prices. At the intersection of supply and demand, where the market price is actually determined, that price is lower than what the demand curve says people would have been willing to pay for the first units purchased. Thus, consumers enjoy a surplus from not having to pay as much as they would have been willing to for the first units; the amount of the surplus is the difference between what they would have been willing to pay

and what they actually paid. Because demand is downward sloping, the consumers' surplus decreases with each successive unit purchased at a given market price. the consumer's surplus for the last unit sold is zero.

One of the benefits of the quota share system, then, is the increase in consumers' surplus resulting from greater marketing of fresh halibut.

Another important benefit to consumers of the quota share system is an improvement in the quality of the frozen fish marketed, because of the shorter cold storage time. The improvement in quality should increase the demand for frozen halibut, and result in an increase in consumers' surplus similar to that described for fresh halibut.

Benefits to Other Hook and Line Fisheries

Another benefit of the quota system would be a reduction in the wastage of halibut caught in other hook and line fisheries. Currently all halibut caught out of season must be discarded (including those taken incidentally to other species), even though many do not survive. Much of this loss could be avoided if incidentally-caught halibut could be landed legally.

The quota share system provides a mechanism for this to occur. Fishermen targeting on other species could land halibut, regardless of when taken, if they had a sufficient quota. Many, like salmon troll fishermen, for example, would be allocated a quota based on historic halibut fishery participation. Others would be in a good position to purchase quota shares, because as multiple-species fishermen, they can reduce their fixed costs of operation by spreading them out over more species. Lower fixed costs attributed to halibut fishing means lower average cost of producing halibut and a greater chance of bidding successfully for halibut quotas.

One important exception might be the trawl fisheries, where for conservation reasons it is expected that the ban on retention of trawl caught halibut will be left in place.

Another benefit of the share quota system, then, is the value of incidentally-caught halibut in hook and line fisheries, times the proportion which, when discarded, do not survive to be caught again in the directed halibut fishery.

COSTS OF THE SHARE SYSTEM

Public Management Costs

Public management costs of the share quota system must be compared with those associated with the major alternatives to the share system, which are continuation of the current open-access system or adoption of a conventional license limitation program like that used for Alaska's salmon fisheries. Four major functions of public management were identifed, and the effect of the share quota system on each was compared to the effects of the other alternatives.

(a) Stock Assessment - None of the alternatives change the nature of the IPHC stock assessment activities required for the setting of annual area quotas.

(b) Enforcement - Enforcement activities related to halibut may change significantly depending on which alternative is in place. Under open access or license limitation, there is no incentive to misreport quantities caught during the open season, and no reason to closely monitor individual catch reports; however, with the very short seasons characteristic of these alternatives, there is a considerable incentive to "poach" during the closed period, and a requirement for expensive at-sea patrolling.

The quota share system increases the need for accurate catch monitoring. Since each fisherman must quit when his own quota is reached, there is a strong incentive to misreport or underreport. (See Economic Costs of

Unreported Catch, below). However, with longer fishing easons, the need for patrolling to deter poaching is reduced.

(c) Catch monitoring - Daily catch monitoring is needed under the open access or license limitation alternatives as a guide to closing the season. The share system should lessen, and possibly elminate, this need since total catch is controlled by fixing catch per fisherman. The share system would, however, require some revision of the present fish ticket and logbook programs (see the "reverse money" discussion earlier in in this report), though costs should not be significant.

(d) Establishment and adjustment of fishing rights - Assignment and adjustment of permanent fishing rights would be similar under quota share and license limitation systems. For a given number of fishermen, the quota share system would generate a larger number of appeals, and adjustments to and transfers of fishing rights, compared to conventional license limitation, since it governs the amount of permitted fishing in addition to access. However, the quota system, unlike conventional license limitation, has incentives which may reduce the total number of fishermen, so the effects on public management costs are partially offsetting. Continued open access would produce the largest number of fishermen but the smallest number of per-capita transactions.

Economic Costs of Unreported Catch

The share system reduces the incentive to fish out of season, or on someone else's permit, but it increases the incentive to underreport catch. It also affords a relatively greater chance of avoiding detection, since the time that the perpetrator is vulnerable to detection is shorter.

An economic model of "rational cheating as a business choice" is discussed. This is useful for estimating the likely maximum level of under-reporting, since it ignores factors such as personal ethics and social sanction, which tend to discourage cheating. The expected value of cheating in this model is the profit from cheating less the penalties paid weighted by

the chance of getting caught. Once the profit from cheating and the penalty for violation are known, the probability of detection required to ensure that "crime does not pay" can be calculated.

Additonal enforcement costs might be required to raise the probability of detection to the point where cheating didn't pay. If this were infeasible, the effect of cheating on the health of the resource must be addressed. Underreporting of individual catches would lead to an overharvest of the resource unless it were detected and compensated for. If there are delays in the detection of cheating or the adjustment of harvest levels to compensate for it, the cheating could cause reductions in total physical yield of the resource, since harvest in subsequent years might have to be reduced to rebuild stocks depleted by cheating-induced overharvest. If no mechanism for controlling cheating can be found, it must be offset by permanent reductions in legal harvest.

The economic value of the loss is calculated by adopting prices for these physical gains and losses and an interest rate appropriate for comparing economic gains and losses over time.

Hygrading Costs

Under the quota share system, an individual fisherman catching a lower-priced halibut (a smaller or No. 2 fish) would gain by throwing it back and trying for a higher-valued fish if the difference in gross revenue (the difference in price times the weight of the fish) exceeded the additional cost of catching the higher-valued fish. The discard mortality of these fish represents a loss to society.

RESULTS

Each of the preceding benefits and costs were computed from empirical models described in a separate report. These models compared the share system

with present (1983) economic conditions in the halibut fishery. From those empirical models, it was possible to calculate the benefits, costs, the net economic benefits (benefits minus costs), benefit-cost ratio (benefits divided by costs), and net economic benefits per pound of fish landed in 1982. Each of these estimates is reported in Table 5-4.

Using the method of sensitivity analysis benefits and costs were determined at increasingly high confidence levels. Also, for each confidence level, results are calculated two ways: where the costs of unreported catch are included, and where they are excluded. Both calculations are provided because the liklihood of cheating and, therefore its costs depend on ethical and social factors rather than on economic condition. Thus, we can have a 70 percent confidence that the net benefits (with costs of unreported catch) are at least $5.373 million, and 80 percent confidence that net benefits are at least $3.644 million. Net benefits are positive under all but the severest (99%) confidence test.

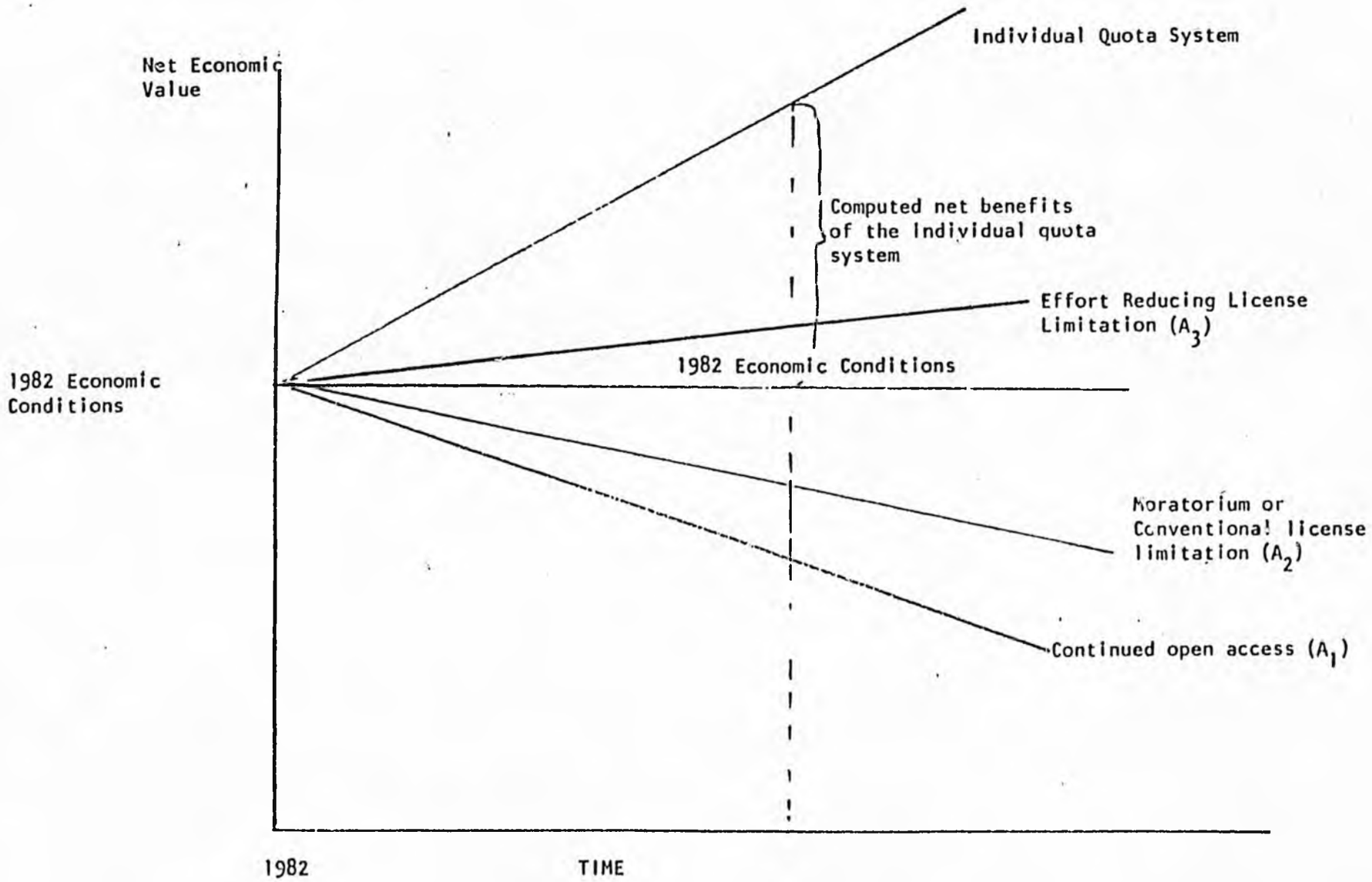

Figure 5-9 : Economic Comparison of the Individual Quota System with Major Alternatives

NOTE: This Figure has been duplicated from the full Northwest Resources Analysis report.

Table 5-4 Net Economic Benefits of the Individual Quota System

	Net benefits		Benefit/cost ratio		Net benefits per pound	
	with unreported catch	without unreported catch	with unreported catch	without unreported catch	with unreported catch	without unreported catch
Sample mean	8.869	9.230	19.477	78.563	.44	.46
Values at confidence of: 70 percent	5.373	6.400	5.542	42.026	.27	.32
80 percent	3.644	5.101	3.226	29.339	.18	.25
90 percent	2.104	4.135	1.94	20.505	.11	.21
95 percent	.856	3.357	1.312	15.046	.04	.17
99 percent	(-)1.179	2.223	.681	8.692	(-).06	.11

NOTE: This Table has been duplicated from the full Northwest Resources Analysis report.

ALLOCATION

The effects of an individual quota system on the initial make-up of the halibut fleet are examined in this section in terms of specific allocation rules.

A Numerical Example of the Proposed Allocation Format

The mechanics of quota allocations are illustrated by the hypothetical example in Table 6-1. Total harvest before and after implementation of an individual quota system is 20,000 pounds in Area 2c, 100,000 pounds in Area 3, and 10,000 pounds in Area 4.

Three allocation rules are examined in this example. Under the first, a fisherman must have made landings in 1979, 1980, or 1981, a condition all four fishermen satisfy. Each qualified fisherman is then granted a permanent entitlement equal to his best annual catch in the base period. Summing these yields total permanent entitlements of 23,500 lbs. in Area 2, 120,000 lbs. in Area 3, and 16,000 lbs. in Area 4.

Because these amounts exceed the area quotas, an adjustment must be made to keep the actual harvest within those quotas. To do this, each fisherman's entitlement is multiplied by an adjustment factor equal to the ratio of area quota to entitlements. In Area 2 this adjustment factor is 20/23.5 = .851. As long as the Area 2 quota and total entitlements remain unchanged each fisherman's annual quota would be determined by multiplying each fisherman's entitlement by the adjustment factor.

Under the next rule a fisherman must have made landings in all three years to qualify with each qualifying fisherman's entitlement being his best annual catch during the base period. Permanent entitlements for qualifying fishermen and their adjustment to annual quotas are calculated as before.

	Fisherman 1			Fisherman 2			Fisherman 3			Fisherman 4			Total		
Historic catch	2c	3	4	2c	3	4	2c	3	4	2c	3	4	2c	3	4
1979	10	30	3	7	40	2	0	20	2	3	10	3	20	100	10
1980	9	30	2	0	40	4	2	20	4	1	10	0	20	100	10
1981	10	50	5	7	30	2	2.500	10	1	.500	10	2	20	100	10
Rule A															
Qualified fishermen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	4	4	4
Permanent entitlement	10	50	5	8	40	4	2.500	20	4	3	10	3	23.500	120	16
Annual adjust. factor													.851	.833	.625
Annual quota	8.510	41.650	3.125	6.808	33.320	2.500	2.128	16.660	2.500	2.553	8.330	1.875	19.999	99.960	10.000
Rule B															
Qualified fishermen	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	3	4	3
Permanent entitlement	10	50	5	8	40	4	-	20	4	3	10	-	21	120	13
Annual adjust. factor													.952	.883	.769
Annual quota	9.520	41.650	3.845	7.616	33.320	3.076	-	16.660	3.076	2.856	8.330	-	19.992	99.960	9.997
Rule C															
Qualified fishermen	Y	Y	Y	Y	Y	Y	N	Y	Y	N	Y	N	2	4	3
Permanent entitlement	9.667	36.667	3.333	7.333	36.667	2.667	-	16.667	2.333	-	10	-	17	100.001	8.333
Annual adjust. factor													1.176	1	1.200
Annual qta.	11.368	36.667	4	8.624	36.667	3.204	-	16.667	2.800	-	10	-	19.992	100.001	10.004

Table 6-1 Illustration of qualification and allocation rules

A = 1979, 1980, or 1981 catch greater than zero.

B = 1979, 1980, and 1981 catch greater than zero.

C = 1979, 1980, and 1981 catch greater than 1000 lbs.

NOTE: This Table has been duplicated from the full Northwest Resources Analysis report.

The final example differs in two respects: fishermen must land at least 1,000 lbs. in each base year, and their entitlement is the average catch over all base years rather than the best year's catch. Entitlements are the lowest under this rule, both because it excludes more fishermen and because average catch is usually lower than the best year's catch.

ANALYSIS OF CANDIDATE ALLOCATION RULES

Fleet Size and distribution

The effect of various allocation rules on the halibut fleet is discussed in this section. Base case (1982 season) conditions are compared with those expected under three allocation rules: Rule A (the most liberal), fishermen qualify if they landed any halibut in two of the years 1979 to 1982; Rule B (the intermediate) requires landings greater than 200 pounds in three of those years; Rule C (the most restrictive) requires landings greater than 500 pounds in each of the years 1979 to 1981.

The total number of fishermen in 1982 was 2,939, rising to 3,205 under Rule A, declining to 1,220 under Rule B, and 589 under Rule C.

The number of fishermen falling into each vessel size class and region follows a similar pattern, Alaska-wide and in Area 2c, increasing relative to 1982, under the most liberal rule, and then declining under more restrictive rules. In Area 3, though, all rules caused decline. Area 4 data is insufficient to reveal a trend.

Under the most liberal rule, Rule A, 2,804 Alaska residents would qualify, compared with 2,594 participating in 1982 and 1,060 under the intermediate Rule B. Finally, 398 non-Alaska residents would qualify under the most liberal rule versus 328 participating in 1982, 160 under Rule B, and 87 under Rule C.

Distribution of catch by vessel size

The way an individual quota system might change the distribution of catch between "small" and large" fishermen is a matter of considerable concern. This distribution is examined in terms of a base year (1982) and under the three rules discussed immediately above. Figure 6-1 illustrates these distributions. In general, Figure 6-1 shows modest changes in the distribution of catch between vessel size groups.

Geographic distribution of catch

The question of how an individual quota system will affect the geographic distribution of rights has much in common with the previous discussion of distribution of vessel size. These distributions are illustrated in Figure 6-2.

OTHER INCOME DISTRIBUTION EFFECTS

Owners and operators

One issue that has been widely discussed in the industry is the allocation of fishing rights between the vessel owner and operator. For solely perator-owned vessels this distinction is of no consequence. However, many halibut vessels, particularly the larger ones, are owned by several partners, and in some cases wholly owned by retired fishermen or other non-operators who lease their vessel or hire operators.

Some segments of the industry have objected to the possibility that the operator may be assigned all limited entry rights. They feel this unfairly deals with non-operating owners. If the licensed operator can take the vessel's limited entry rights with him, he can impose severe losses on non-operating owners, either by walking away from the vessel, or by forcing the renegotiation of income sharing arrangements.

Crew

If the allocation of rights is to be based on an individual's economic dependence on the fishery, or some notion of what he has earned by past effort, then crewmen should be included in the allocation as well. But doing so would raise many problems of defining who should be included because the identity of crewmen, like non-operating owners, is not easily determined from established record.

For the most part these allocation issues must be addressed as part of any limited entry program. If anything, the quota system provides more flexibility in resolving them, as individual quotas, unlike vessel licenses, can at least theoretically be divided between owners, operators and crewmen, if such a policy were deemed desirable.

The individual quota system will also affect the position of crewmen and their incomes via changes in the structure and operation of the fleet. The first of these possible changes is the effect on the numbers of crewmen. To the extent that the quota system achieves its goals of lengthening the halibut season, it will most likely also lead to a corresponding reduction in the number of vessesl and hence crewmen. However, remaining crewmen should earn greater per capita incomes, through longer seasons and reductions in non-labor costs.

Development of hook and line fisheries for sablefish and other groundfish species will provide additional employment opportunities for halibut crewmen. As discussed earlier, the development of these fisheries should be stimulated by adoption of the individual quota system.

The distribution of total revenue between owners, operators and crewmen may change through a share system if the size distribution of the fleet changes. Owner/operators could provide more labor if the season were longer.

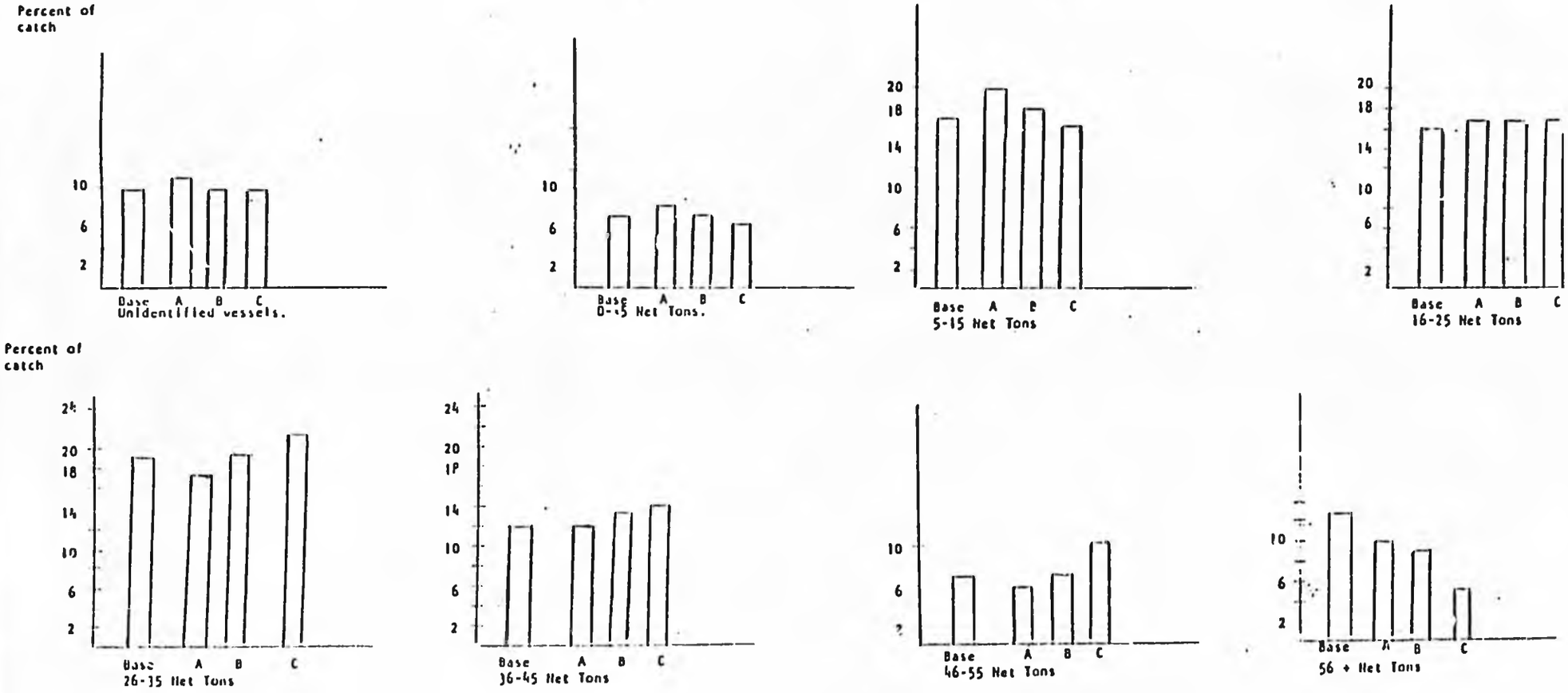

Figure 6-1, Distribution of catch by vessel size class.

NOTE: This Figure has been duplicated from the full Northwest Resources Analysis report.

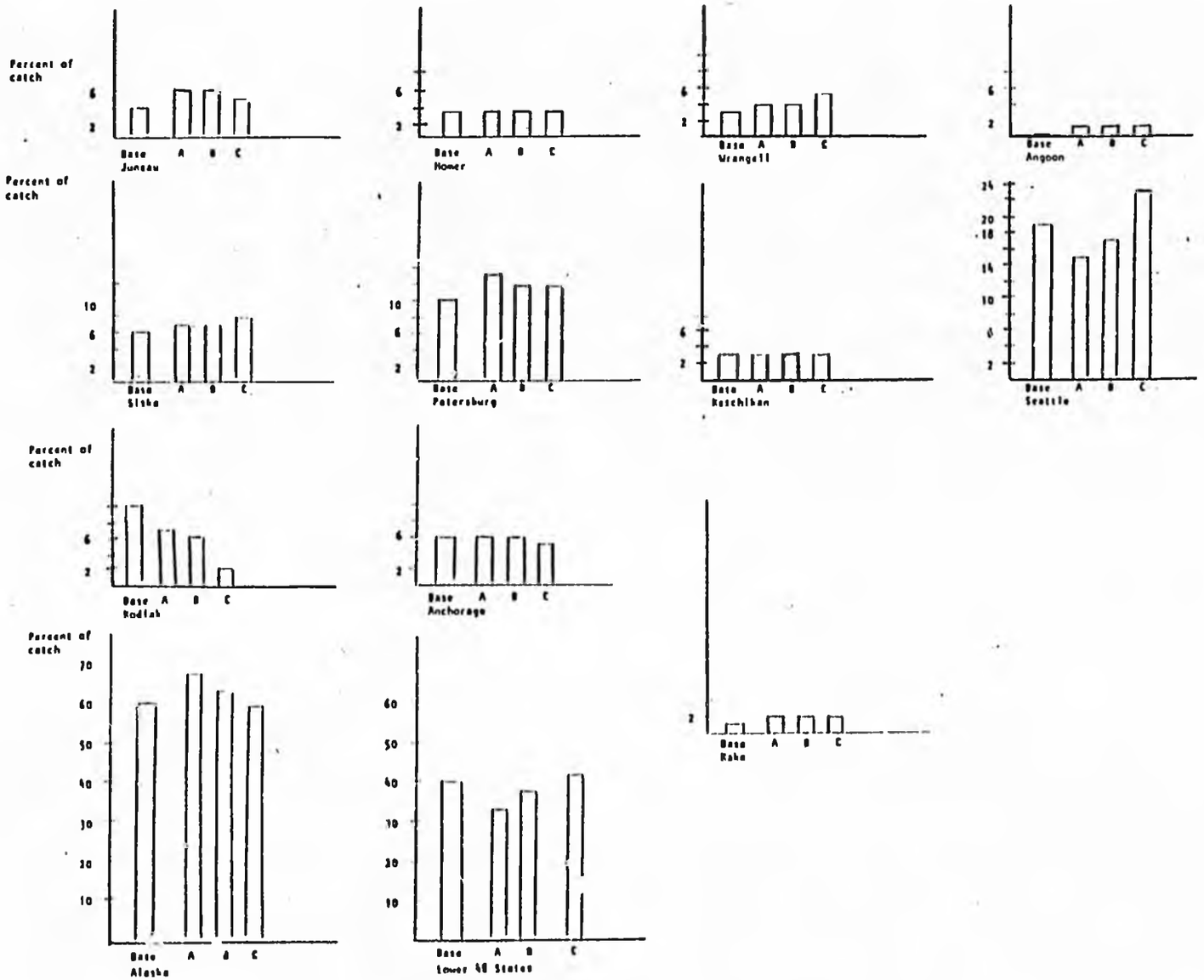

Figure 6-2, Distribution of catch by residence of license holder

NOTE: This Figure has been duplicated from the full Northwest Resources Analysis report.

If the limited entry program and industry collective bargaining agreements permitted, operators might also pyramid their shares on fewer boats, serving in effect as each other's crewmen.

Fishermen, processors, distributors and consumers

Increased product value is the sum of the increased value of fresh products, any quality gains due to reduced storage periods and reduced cold storage and interest charges. A variety of factors will influence how this additional value will be shared between higher prices to fishermen, increased profits to processors and distributors, and increased net value to consumers. That additional value would be shared in a equitable manner determined by free market forces.

Today's short seasons put fishermen under intense pressure to deliver their catch to the closest market, regardless of price. Under the share system's eight month season they could pick and choose among more ports, still balancing running costs against prices, but not giving speed the attention that is now necessary. With months to plan, fishermen could respond to depressed prices (whatever their cause) by seeking entirely new marketing arrangements such as retailing halibut themselves, forming cooperatives, or making deals with entirely new buyers.

Coastal communities

The individual quota system is not likely to have a significant effect on local communities. The effect will be imperceptible in larger cities (Seattle, Anchorage, and Juneau) where the entire local fishing industry makes only a small percentage contribution to the economy. Even in smaller communities (Kodiak, Homer, Petersburg) which depend more heavily on fishing, changes in the halibut fishery are unlikely to be very noticeable. This is

because of the halibut fisheries small size relative to the salmon and shellfish fisheries, and because most processing and fleet activities will go on in the same places and at much the same levels, regardless of which local halibut fleets gain or lose due to the share system.

COMMITTEE REPORT

SENATE

1/19/83

FURTHER:

Date: 2-11-83

Mr. President:

The Committee on RESOURCES has had SJR 7

Opposing the imposition of a halibut moratorium and the establishment of a shares system for halibut in Alaska

under consideration and (a majority of the committee) (the committee) reports it back with the following recommendations:

[X] do pass [ ] do not pass

[ ] do pass with attached amendments(s)

[X] replace with CS for SJR 7 [X] same title [ ] new title

and recommends _____

[ ] AND attaches a "Letter of Intent" [ ] New Fiscal Note

[ ] reports it back without recommendation

[ ] referred to the _____ Committee

MEMBERS SIGNING
DO PASS

MEMBERS HAVING
OTHER RECOMMENDATIONS:

_____ CHAIRMAN

S 60 (Rev. 12/78)