MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke
Executive Director

DATE: November 27, 1996

ESTIMATED TIME

3 HOURS

SUBJECT: Improved Retention and Utilization (IR/IU)

ACTION REQUIRED

(a) Receive report from IR/IU Committee
(b) Review and define Gulf of Alaska IR/IU parameters
(c) Review options paper for 'limited processing allowance for catcher vessels' and provide direction

BACKGROUND

(a) Committee Report

The Council's IR/IU Committee met on November 14 in Seattle to discuss VIP program revisions, general IR/IU implementation issues, and specific elements and options for a GOA program (to be implemented concurrently with the already approved BSAI program). The majority of the Committee's time was spent on issues related to the VIP program. The Committee report is contained under Item C-5(a)(1) and will be presented by Committee Chair Joe Kyle.

(b) Gulf of Alaska IR/IU program

As is reflected in the Committee report, the parameters for the GOA IR/IU analysis have the potential to be very straightforward, basically mirroring what was done for the BSAI, though the problem statement for the GOA may be different and could be clarified. We just need Council direction at this meeting to confirm the specifics for the GOA analysis, so that it may be completed for initial review in April, with a final decision scheduled for June 1997. Item C-5(b)(1) is a table showing major species discard levels in the GOA. Item C-5(b)(2) is a Draft Problem Statement for Council consideration.

(c) Limited processing allowance for catcher vessels

Part of the Council's June 1995 action on the groundfish and crab license limitation program was to create catcher vessel (CV) and catcher/processor (CP) license designations. A proposal to allow limited processing allowances for CVs was not included as part of the license program, though the Council directed that the proposal be considered as part of the IR/IU initiative. We need some feedback from the Council on a few specifics in order to complete an analysis of this proposal. In the original set of IR/IU alternatives approved by the Council, the following three options were identified:

Option 1: Allow processing of bycatch amounts of any groundfish species up to the directed fishing standards.

Option 2: Allow processing of targeted levels of species for which 'restricted market opportunities' exist.

Option 3: Allow processing of up to 5 mt round weight per day of any species for vessels under 60' and up to 18 mt round weight per day for vessels greater than 60' (the Council also requested that we examine a range of potential tonnages, up to and beyond 18 mt per day).

The IR/IU Committee discussed this issue briefly at their spring 1996 meeting (see Committee minutes from June of 1996) and advised that the analysis should focus on Option 3, which provides for a specific quantity of processing to be allowed. This was due largely to difficulties in estimating potential volumes of processing associated with Option 1 and Option 2. These are discussed in the attached paper (Item C-5(c)(1)), particularly the difficulty associated with defining when 'restricted market opportunities' exist. The attached paper discusses the following specific examples of this difficulty:

* The existence of a 'market' at any given point in time may be wholly in the eye of the beholder - would it require that some price is offered for the product? Would it be based on some minimum price offer for the species in question?

* If a given species is being purchased at any plant, located anywhere in the State, would that mean that a market exists, regardless of where the catcher vessel traditionally delivers its catch?

* Even if the above questions were answered and defined, markets for fish change from week to week, and from year to year - if markets become available in the future, would a catcher vessel then be precluded from processing that species, even though significant economic investments had been made?

It has been suggested that current discards could be used as a proxy for defining 'when no market exists'. To illustrate the difficulties in this approach, some preliminary numbers were aggregated on 1994 and 1995 discards from two perspectives: (1) fish which were reported harvested but not retained, when no poundages of that species were retained by anyone in that week; i.e., a proxy for 'no market must have existed', and (2) total discards of species associated with onshore deliveries by week. The amounts of fish are minimal, over the year, for weeks when no retention of that species was observed (when 'no market existed'). For example, the total amount of all species in the BSAI in 1995 (including pollock and cod) under this definition is only 760 mt, some of which is regulatory induced in any case. If we only look at CVs over 60', there are 271 which qualify in the BSAI, but which will receive a CV only designation (from the License Limitation data set). This calculates to 2.8 mt per vessel *for the entire year.*

When we examined all discards from onshore delivery vessels in 1995, the total amounts increase considerably, but are still nowhere near the 18 mt per day suggested in the proposal. In this instance we have excluded pollock and Pacific cod, under the assumption that these species have markets and will be required to be retained and delivered. The total amount of discards reported of all other species in 1995 (associated with all vessels in this sector) was 10,500 mt. Using this more liberal definition of 'non-marketable' results in 39 mt per vessel *for the year.* The current proposal is for up to 18 mt per vessel *per day.* These examples are offered simply to illustrate that discards cannot be viewed as a useful proxy for 'non-marketability'.

A final, and perhaps important consideration relative to both Option 1 and Option 2 above is that any allowance for processing by CVs will likely create incentives for targeting those species. With the investment in processing equipment, and the economic incentives to process fish instead of discard them, vessels may now target those species, resulting in increases in catch, and processing, of those species relative to historical discard estimate, and

bycatch rates, used for analysis. This incentive could result in a transfer of fish from target to non-target fisheries, and perhaps from onshore to at-sea processing.

These are some of the primary reasons that the analysis will be unable to deal, quantitatively, with the criterion of 'marketability' in the context of this proposal. We would be able to provide 'upper bound' estimates of the potential amount of processing which might occur under this proposal, based simply on the number of catcher vessels multiplied by mt of groundfish per day for which processing may be allowed. In this case, we would still need guidance on which species the Council intends to be considered for this processing allowance. Since pollock and cod are required to be retained and delivered, can we assume that these species are not to be included in the list for processing upgrade allowances? Can we assume that in five years yellowfin sole and rock sole will also be excluded from that allowance?

From an analytical perspective, we will have difficulty determining, quantitatively, (1) how many vessels would take advantage of this allowance, (2) whether those vessels would process up to the maximum allowed for each species, (3) whether the allowances would represent a *transfer* of processing activity (from onshore to offshore), as opposed to *additional* processing capacity (simply utilizing fish which would otherwise be wasted), and (5) what the costs and benefits are of that increased processing potential.

We can provide the Council with an analysis containing upper bound estimates of the additional processing capacity implied by this proposal - given the number of vessels which could potentially take advantage of the processing allowance (including under 60' vessels - GOA and BSAI combined), and assuming the lower bound 5 mt/day allowance, the additional at-sea processing capacity could be substantial, as much as 11,000 mt *per day* at the extreme. As another example, if we only look at vessels greater than 60', but use the 18 mt/day limit, the potential is still about 7,000 mt/day, for GOA and BSAI vessels combined. The actual amounts would depend on species for inclusion and a number of other factors mentioned in Dr. Queirolo's discussion paper. Clarification on the following issues will greatly facilitate the analysis:

1. The species for which CV processing will be allowed, and whether the mt allowed would differ between species and/or seasons.

2. Whether the primary intent of the proposal is to allow for value added processing by the CV sector, or to simply reduce the amount of fish which is currently discarded, regardless of the reason for discarding.

3. Whether the proposal is intended to apply to the BSAI crab fisheries, in addition to groundfish fisheries (the BSAI crab fisheries will present its own unique set of issues, for which we would likely request further guidance from the Council in February).

SUMMARY REPORT

NPFMC IMPROVED RETENTION AND UTILIZATION COMMITTEE

November 14, 1996

The Council's IR/IU Committee met on November 14 in Seattle with the following persons present:

Committee members: Joe Kyle - Chair, Denby Lloyd, Chris Blackburn, John Iani, Arni Thomson, John Henderschedt, Steve Hughes, John Gauvin (for Paul McGregor), Thorn Smith, Teresa Kandianis, Bob Mikol, Vince Curry

Agency/staff: Chris Oliver, Sue Salveson, Lew Queirolo, Connie Sathre, Bill Karp, Martin Loefflad, Kent Lind, Jay Ginter, Dave Colpo, Seth Macinko, Ron Antaya

Industry: Mike Zubco, Mike Szymanski, Brent Paine, Dave Benson, Karl Haflinger

The Committee's agenda was divided into three basic areas - (1) Vessel Incentive Program issues, (2) BSAI program implementation issues, and (3) Gulf of Alaska (GOA) program design. Major discussion points are summarized below - specific Committee findings and recommendations are in **bold** print:

VESSEL INCENTIVE PROGRAM (VIP)

This discussion was structured to look at VIP issues from two perspectives: (1) the short-term adjustments necessary to accomodate the Council's IR/IU program, and (2) longer-term, more fundamental changes to the program. As a backdrop to these discussions, **the Committee reached a fundamental consensus that the VIP program, despite its shortcomings, is indeed a useful program, it provides incentives for the majority of the fleet to minimize PSC bycatch, but adjustments do need to be pursued that will both maintain and improve its effectiveness.**

Long-term issues

For the longer term, fundamental adjustments to the program (such as basing the standard on retained versus total catch) are not where we need to devote our limited resources at this time. Some of the tools necessary for basic adjustments, such as total catch measurement, are on the horizon and will, when implemented, make more fundamental changes to the program possible. In the interim, the Committee was very concerned, and spent considerable time discussing, the issue of limited prosecutorial activity regarding VIP violations, and potential methods for increasing the effectiveness of the program.

For example, **the burden of proof currently required to take a VIP violation to prosecution may restrict the program's ability to be a successful deterrent (approximately 400 violations - only**

4 cases prosecuted). The Committee recommends the following items be pursued in an effort to facilitate improvements:

(1) a review of the specific list of the criteria used by enforcement and NOAA GC to determine when to prosecute a VIP case. There were 11 specific criteria mentioned by Enforcement representatives - the Committee recognizes that some of the criteria may be deemed confidential by the agency. The Committee welcomes whatever information can be provided by the agency on this issue.

(2) identification of which of the 11 criteria most often prohibit the agency from moving forward with a prosecution; i.e., where are the bottlenecks. Related to this is a request that the agency identify areas or methods most often noted which cause a case to be dismissed before going to NOAA GC.

(3) the Committee recommends that the agency explore ways to create more 'real-time' incentives to adhere to the VIP rate standards. The possibility of interim permit sanctions was specifically discussed (the case of an East Coast violation was used as an example, where a vessel has had its permits revoked for fisheries violations, prior to case resolution), noting that even the threat of a permit sanction may provide direct and immediate results.

(4) NMFS Regional office should prioritize the practice of issuing 'warning' letters to operators who are in violation of VIP rate standards.

Short-term issues

The most immediate issue related to the IR/IU program will be the inability of operators to move toward bycatch reduction practices, such as larger mesh size, without penalizing themselves. The consensus of the Committee is that VIP rate standards will have to be modified (increased) to allow for the use of larger mesh. Simply doubling the rate, however, may not be the appropriate path to take, due to differences in various fisheries, and because of differences in PSC species rates within target fisheries. We also need to be careful of creating disincentives which might allow for increases in overall PSC bycatch, thereby closing fisheries even earlier. Though NMFS presented one potential methodology for re-calculating VIP rate standards by fishery, the Committee feels that a more rigorous, gear/species-based methodolgy would result in obtaining the appropriate rates for each fishery.

Some Committee members are developing a proposal for experimental fishing permits which would be used to help arrive at the appropriate rates for specific fisheries and specific PSC species. Such proposal(s) would be for experimental fishing in 1997, with the intent of implementing revised VIP rate standards for the 1998 fishing year (target date for IR/IU implementation). The Committee endorses this in concept, though details of proposals have not been discussed by the Committee. It is understood that such proposals to NMFS also undergo Council review.

Recommendation of the Committee is that VIP rate standards, and perhaps species groups within VIP, will have to be adjusted. These adjustments should be held off until information is available to determine appropriate rates by fishery. The Committee encourages the use of scientifically defensible methods to arrive at the new rates, and notes that the use of experimental fishing permits may be one way to achieve that. The Committee also recommends inclusion of bairdi Tanner crab under the VIP program.

MISCELLANEOUS IMPLEMENTATION ISSUES

The Committee had only two general implementation issues for discussion at this time:

Mandatory retention VS Maximum Retainable Bycatch

Throughout Committee and Council discussions of the IR/IU program, the necessity of maintaining directed fishing standards has been acknowledged, despite the fact that these standards mandate discarding when a species goes to bycatch or PSC status. It is the expectation of the Committee that such discards will be minimal, particularly when we are able to get a better handle on 'natural' bycatch rates and make the necessary adjustments in the directed fishing standards. The immediate problem involves primarily catcher vessels who do not sort at sea - they are required to *retain* fish up to the allowable retention rate (20%), but then are required to *discard* any fish above that amount; i.e., they must hit 20% on the nose. This will likely be very difficult to achieve for vessels delivering unsorted catch to processors.

One solution discussed would be to lower the percentage required to be retained (say to 15%) in order to provide a buffer for compliance. However, this might provide an incentive to hit the lower level, thereby increasing discards. Understanding that the program is designed to penalize the egregious violator, **the Committee recommends that no changes be made to accomodate this situation, recognizing the discretionary latitude of Enforcement to enforce the spirit of the program.**

Transfer of whole fish at sea

This issue arose due to an inquiry regarding the donation of unwanted fish to food bank organizations for subsequent distribution. The question was whether a transfer of whole fish is allowable, and whether the transferee would be required to adhere to the Utilization standards (15% overall PRR), and how such compliance would be monitored. The discussion broadened to the overall issue of transfers at sea, and whether transfers could be used to circumvent the no discard provisions. The understanding of the Committee is that discards of whole fish, of the subject species, will not be allowed in the EEZ. Though Enforcement cannot track fish all the way to the household, the regulations for this program are assumed to disallow the 'deep ocean block' scenario (freezing whole fish and calling it processing) as well as disallow discarding of whole fish, regardless of whether a 'transfer' has occured.

GULF OF ALASKA IR/IU PROGRAM

The Committee's final task was to structure parameters for the GOA program, pursuant to the Council's stated intent of concurrent implementation with the BSAI program. **Though the Committee recognized, and discussed, the differing aspects of the GOA groundfish fisheries, the program should be structured essentially the same as for the BSAI - pollock and Pacific cod would be implemented in year one with a delayed implementation for the shallow-water flatfish species complex. As with the BSAI, no exemptions would be granted for GOA vessels and processors.**

Considerable discussion occured regarding the purpose of a GOA IR/IU program, and whether it was intended to address a potential preemption issue, or to address a waste and discard issue. For example, it was noted that arrowtooth flounder in the GOA comprise the vast majority of discards, both in rate and total volume, though the Committee has not identified it as a subject species for IR/IU. If the issue for the GOA is primarily one of preemption, then the analyses would need to focus more on that aspect of the issue, as opposed to species for inclusion. It may be useful to articulate a problem statement, due to the implications this distinction holds for the analyses to be prepared. **The Committee recommends that the analyses address both aspects, waste/discards and potential preemption, if the Council articulates specific guidance.**

OTHER BUSINESS

Some Committee members inquired as to the status of the proposal to allow limited processing for catcher vessels under the license limitation program. Staff informed that the issue is being treated separately and would be on the December agenda for Council discussion and direction.

Catch and discards of groundfish , GOA 1995-96

[PRELIMINARY]

	Catch metric tons	Species percent of catch	Discards metric tons	Species percent of discards	Discard rate.
1995					
Pollock	**73,194**	**33.4%**	**7,927**	**20.2%**	**10.8%**
Pacific cod	**68,984**	**31.5%**	**3,539**	**9.0%**	**5.1%**
Sablefish	20,569	9.4%	1,072	2.7%	5.2%
Arrowtooth	18,003	8.2%	15,884	40.4%	88.2%
Deep flat	1,994	.9%	440	1.1%	22.1%
Shallow	5,116	2.3%	1,433	3.6%	28.0%
Flathd sole	2,078	.9%	575	1.5%	27.7%
Rex sole	3,941	1.8%	388	1.0%	9.8%
Rockfish	18,915	8.6%	3,624	9.2%	19.2%
Atka mack.	425	.2%	198	.5%	46.6%
Oth/unk	5,603	2.6%	4,192	10.7%	74.8%
Groundfish total	**218,823**	**100.0%**	**39,272**	**100.0%**	**17.9%**
1996 [1]					
Pollock	**50,022**	**26.2%**	**5,069**	**14.0%**	**10.1%**
Pacific cod	**67,097**	**35.2%**	**6,389**	**17.7%**	**9.5%**
Sablefish	16,273	8.5%	755	2.1%	4.6%
Arrowtooth	17,408	9.1%	14,831	41.0%	85.2%
Deep flat	1,937	1.0%	508	1.4%	26.2%
Shallow	7,021	3.7%	1,008	2.8%	14.4%
Flathd sole	2,316	1.2%	594	1.6%	25.6%
Rex sole	5,158	2.7%	288	.8%	5.6%
Rockfish	17,686	9.3%	3,437	9.5%	19.4%
Atka mack.	1,238	.6%	100	.3%	8.1%
Oth/unk	4,580	2.4%	3,177	8.8%	69.4%
Groundfish total	**190,735**	**100.0%**	**36,157**	**100.0%**	**19.0%**

Source: NMFS Alaska Region blend estimates (target calculated by AFSC staff).

11/14/96

[1] **Blend data for 1996 are "preliminary", covering only January through September.**

DRAFT PROBLEM STATEMENT FOR GOA IR/IU ANALYSIS

1.1 Purpose of and Need for the Action

On September 20, 1996, the Council unanimously approved an amendment to the BSAI Groundfish Fishery Management Plan implementing an "improved retention/improved utilization" (IR/IU) program for the groundfish fisheries of that management area. The Council further moved to develop an equivalent program for the groundfish fisheries of the Gulf of Alaska management area. Specifically, the Council proposed that commercial groundfish fisheries operating in the GOA be required to reduce discards by retaining species which have historically been non-retained bycatch.

The objective of the Council in undertaking an examination IR/IU regulations for GOA centers on the same basic concern that motivated action in the BSAI. That is, under present fishery regulations, groundfish catches are believed to be "underutilized", resulting in discard levels which are perceived to be unacceptably high. A GOA IR/IU amendment would be expected to, *"provide an incentive for fishermen to avoid unwanted catch, increase utilization of fish that are taken, and, thus, reduce discards of whole fish."*

In addition, however, the Council recognized the potential risk of "preemption" of certain existing GOA groundfish fisheries, if substantial fishing capacity and effort was displaced from the Bering Sea and redeployed to the Gulf. This could occur if equivalent IR/IU regulations were not simultaneously implemented for GOA. Therefore, as part of the BSAI IR/IU management action, the Council proposed an implementation date of January 1, 1998, with the expectation that the GOA IR/IU program could be developed, evaluated and, if warrented, adopted by the Council and submitted for Secretarial approval, for implementation on the same, January 1, 1998, date.

An Examination of Permitting Limited Processing Upgrades

prepared by

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October 31, 1996

An Examination of Permitting Limited Processing Upgrades

In the Council debate over License Limitation for the BSAI and GOA groundfish fisheries, the issue of allowing limited processing of groundfish by vessels designated "catcher" under the program was raised. The Council rejected a series of amendments to the License Limitation proposal and voted, instead, to restrict the ability of "catcher" vessels to add processing capacity. Nonetheless, several Council members expressed a desire to obtain additional information about the implications of allowing some at-sea processing by designated catcher boats, within the context of an "Improved Retention/Improved Utilization" program.

To this end, a preliminary analytical framework has been proposed which would permit an examination of the key questions raised in the Council debate, and identify any additional considerations which might accompany such an analysis. The Council posed the following questions (contained in a letter, dated October 19, 1995, from Clarence Pautzke to Richard Marasco):

1. Should processing upgrades be allowed?
2. How much processing capacity should be allowed; 10 mt/day; 18 mt/day; an unlimited quantity?
3. Which species may be processed; all species, all but "the target" species; or all species except pollock and P.cod?

Answers to these questions depend upon the policy objectives of the Council. An examination of historical catch and discard data, by fishery and vessel "category", may provide insights necessary for Council consideration of this issue. At a minimum, a preliminary examination of the available data will indicate whether the policy questions can, at present, be addressed, or whether additional information will have to be collected in order to evaluate the implications of each.

An analysis of the economic implications of allowing or prohibiting catcher vessels to upgrade would, perhaps, frame the initial enquiry as follows: "Assume that catcher boats are permitted to process some amount of their groundfish catch at-sea. What are the probable economic costs and benefits?"

To answer such a question empirically, one would turn to the historical catch record. By examining the data from the NMFS-observer program, Alaska fish ticket files, the Region's "Blend" files, and NMFS Weekly Processor Report files, it may be possible to create an empirical profile of each groundfish target fishery. This profile would contain the available information on:

1. The analytical "universe" of catcher boats, in the specific target fishery, for the period of analysis.

That is, how many catcher boats participated in a given target fishery, in a given period of time? It is this number which will define the initial population of "potentially affected entities," upon which the analysis would be based.

2. The number of catcher boats in each of three size categories (based on LOA).

These categories would coincide with the length thresholds for required observer coverage; i.e., vessels greater than or equal to 125'; vessels less than 125' but greater than or equal to 60'; and vessels under 60'.

3. The aggregate catch (estimated total catch if possible, landed catch if not) of all catcher vessels in the analytical "universe", by target fishery, by area, by vessel size category, by at-sea or onshore.

These data will provide an indication of the relative contribution to total harvest attributable to the "catcher boat" segment of the fishery.

4. The number of catcher vessels, by size category, by target fishery, which had observer coverage, during the base-period under analysis.

That is, what proportion of the total number of catcher vessels in the "universe" were observed, and at what level of coverage (e.g., 30%, 100%)?

5. The total catch of the observed vessels, by target fishery, by size category.

When compared to the total catch of the analytical "universe," a judgement can be made as to the proportion of the total catch by catcher vessels which is documented by observer coverage, and how much is not.

6. The composition, by species or species group, of the total catch of observed vessels, by fishery and vessel size category.

Any assessment of how much processing might be feasible by upgraded catcher boats (and for which groundfish species) is, in large part, dependent upon the availability of data on species composition and quantity in their individual total catch, by target fishery. Because observer data contain detailed information on catch composition, retention, and discards for the catcher boat sector, the relative size of the "observed" portion of the sector to the total size of the sector may suggest how much confidence one should place in the analytical findings. For example, if only 1 in 10 catcher vessels in a given target fishery had any observer coverage, the strength of the conclusions reached in an analysis might reasonably be expected to be lower than if, say, 9 of 10 boats had observers on-board. If, on the other hand, numerical coverage was relatively low, say 4 in 10, but those vessels with observers accounted for a significant portion of the total catch in that fishery, then somewhat greater confidence might be placed on the analytical findings. Thus, it becomes important to compare not only numbers of vessels but the relative share of the total catch between "observed" and "unobserved" segments.

A decision will have be made as to the "appropriateness" of extrapolating from the data on observed vessels to unobserved vessels (or observed hauls to unobserved haul). This decision may vary by vessel size category within a given fishery, as well as from target fishery to target fishery. Once a judgement has been made about the adequacy of these empirical data (assuming that judgement supports proceeding to an analysis) an examination of the quantity and species mix of "bycatch" and "discards" in the respective fisheries can be made.

Ideally, by examining the historical patterns of bycatch and discards, by target fishery and vessel size category, judgements may be possible concerning the "appropriate" size of processing upgrades to be authorized under the proposed action.[1] This may also vary, by target fishery, catcher vessel size category, area, and (perhaps most importantly) the programmatic objectives of the Council. For example, assume that the objective of the Council is to provide an economic opportunity for traditional *catcher-only* vessels, in a given target fishery, to increase the "value-added" utilization of previously under- or unutilized bycatch species, thus reducing discards of whole fish, while discouraging excessive growth in (especially at-sea) groundfish processing capacity. Then, if the historical record indicates that, for a given target fishery, the

[1] The necessary daily catch data with which to assess these options are not available. Indeed, reliable individual catch, discard, and retention data on a boat-by-boat basis for the catcher vessel fleet is, for the most part, lacking in existing data sets. If some relatively 'heroic' assumptions about fishing behavior are made, the average weekly catch data could be used to derive an approximate daily rate, for some non-existent 'average' operation. This obviously diminishes the precision of any estimate made on the basis of these data.

bycatch and discard of a given species with "value-added potential" to catcher boats is, on average, say, five tons per day, round weight, a provision limiting processing upgrades on catcher vessels in this target fishery to 18 tons (or even 10 tons) per day may be inappropriately high. Depending upon the number of catcher vessels in the fleet, such a provision may be contrary to the objective of discouraging excessive growth in processing capacity, and may be "unnecessary" to provide the value-added economic opportunity (and thus, reduction in discards) desired by the Council.

On the other hand, if the historical record indicates that, on average, these boats have bycatch and discard levels of under/utilized species with "value-added potential" on the order of 20 tons per day, and the number of operations is relatively small, then limiting the processing upgrade to five tons per day probably will not produce the economic opportunity or reduction in discards potentially available through a more appropriate (i.e., some what higher) upgrade threshold.

Once again, ideally, these data would also reveal, for a given target fishery, which "under/unutilized" species are present, and in what relative quantities, in the historical catch composition record. If available, this information could indicate what discard savings might potentially be realized by the proposed action. But in addition, the relative quantities of these "under/unutilized" species could be an important consideration in establishing the parameters of the "processing upgrade" program, for any given target fishery. If a given species, or species complex, is not present in significant quantities historically in a target fishery, the Council may wish to consider whether or not to authorize processing of that species by *catcher-only* vessels. To do so could induce covert targeting on a species not traditionally taken in that specific target fishery, perhaps increasing bycatch and discard of other species beyond historic levels by these vessels. In addition, if the species in question is utilized by other fisheries, authorization of its processing by catcher vessels not traditionally dependent on its catch could have unanticipated distributional impacts on other sectors of the domestic industry. The effective result could be a net increase in at-sea processing capacity, unrelated to the objective of providing some modest opportunity for *catcher-only* vessels to utilize their traditional bycatch discards.

The probable level of participation in an upgrade program cannot be precisely anticipated, *a priori*. Participation would likely vary, by target fishery, depending on, 1) the species or species groups authorized to be processed, 2) the authorized daily quantity of processing, 3) the average abundance of the "authorized" species or species groups present in the catch, 4) the presence of potential markets for the "authorized" species or species groups, 5) the unit value of the processed output, 6) the age, size, and configuration of the existing catcher boat fleet, 7) the regulatory constraints on "upgrading" the processing capacity of the specific vessel in question [e.g., class and loadline certifications], and 8) the cost of acquiring, installing, operating, and maintaining the necessary equipment to permit "limited processing" of under/unutilized bycatch.

It may only be possible, given information currently available on these operations, to project the "upper bound" of the potential increase in at-sea processing (and thus reduction in bycatch discarding) by catcher vessels. It is implicit in the Council's questions that by reviewing the catch, retention, and discard data for the "catcher" vessel fleet, by target fishery, the "appropriate" processing upgrade threshold will emerge. This may not be the case, given available data on this sector of the domestic fishing industry.

In the absence of these data it will be very difficult to determine, on the basis of objective historical data, *"Whether processing upgrades should be allowed?"*, for a given target fishery; *"How much processing capacity should be allowed, 10 mt per day (round weight equivalent), 18 mt per day, or unlimited amounts?"*; and *"Which species may be processed...?"*

Under these circumstances, alternative approaches will be needed to establish the "upgrade" thresholds. These may range from conducting surveys of catcher vessel operators to establish "characteristic" bycatch

patterns and rates (OMB issues may arise here), ... to making some fundamental structural assumptions about these catch and discard relationships, by vessel categories, then applying these to the raw catch records to derive 'proxy' variables for the missing data. Either approach will have strengths and weaknesses that must be assessed before a rigorous analysis (e.g., like that required of an RIR) could be initiated.

Preliminary Findings on the Issue of "Upgrading

A very *"preliminary"* examination of the available data on BSAI groundfish catcher vessels was undertaken. Alaska fish ticket data files show the most complete "by vessel" catch data for this fleet. Using 1994 as the base year, a profile of catcher vessel activity in BSAI groundfish target fisheries was prepared (see Tables 1.0 and 1.1).

The cursory profile selected only records of catcher boat deliveries to "on-shore" processors, under the assumption that at-sea deliveries were "unsorted" codends, precluding the opportunity to undertake "value-added" processing of unused bycatch species, as proposed for the "upgrade" action. Only catch in the EEZ was included. All trawl gear types were combined into a single category. Prohibited species bycatch and non-TAC species were omitted. The "target" designation was made using the Alaska Region formula, but based upon vessel, processor, week, and gear-level of aggregation. Week ending date was derived from reported "landing date."

The calculation of "observed" percentages was obtained by flagging those fish ticket records that matched inseason observer data, by vessel, processor, week, BSAI, and gear. To these data was added "vessel length" information from Federal permit data or Alaska vessel registration files. The estimates of observer coverage were measured in two ways. First, as the percentage of total weeks fished by the "target" catcher boat fleet and, second, as the percentage of total metric tons of catch for that fleet. The tonnage represents the fish ticket landed weight, expanded to round weight equivalent catch, using the Alaska Region's standard product recovery rates.

The "match" of inseason observer data to corresponding fish ticket records was *not* 100%.[2] Therefore, the reported "observed percentages" will potentially be slightly lower than the actual statistic. In categories where the number of weeks is relatively high, the difference may be 0-3 percentage points. For categories where there is less data, the difference may be 0-20 percentage points. At the same time, it must also be acknowledged that the "observer" statistics are *estimates*. Hauls which are observed are "sampled" and this sample is extrapolated to the balance of that particular haul. The fraction of the total haul sampled can be very small. In addition, on average, approximately 60% of all hauls made by a "100% observed" vessel are actually sampled. (The percent of total hauls sampled from the "30% fleet" is substantially lower, although the percentage of sampled hauls while the observer is on-board any given vessel may be more than 60%.) Therefore, on the basis of the extrapolated catch and composition estimates for *observed hauls*, an additional extrapolation is made to the balance of the hauls of the "observed" vessel which were unobserved. It is a measure of this latter "estimate" which appears in the tables.

As these preliminary data indicate, the level of observer coverage, either as a percentage of the number of vessels in the fleet or as a percentage of the total catch, varies significantly by target fishery and vessel size. For example, in the BSAI pelagic pollock fishery in 1994, approximately 61% of the catcher boat fleet's total weeks of operation were "observed". These "observed" weeks accounted for roughly 73% of the total catch. For the bottom pollock target, the "weeks observed" dropped to about 52%, while total catch "observed" was approximately 68%. In other fisheries, the available catch and composition data are much more limited.

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[2] The actual match between these two data sets was on the order of 89%.

It will be necessary to use these estimates on catch and composition to extrapolate from the "observed" to the "unobserved" segments of each target fishery, in order to empirically address the "Catcher Boat Upgrading" questions, posed by the Council. It must be understood that, in order for any quantitative evaluation to be conducted, a number of strictly limiting assumptions will have to be articulated and adopted.

NOTE: It would be necessary to know with some certainty the cost structure (certainly before, but perhaps also after adoption of the amendment) of each potentially affected operation in order to predict the economic response to the regulatory change. It would also be necessary to have some knowledge of the required physical plant changes that would be necessary for the vessel to take advantage of the limited processing opportunity, as well as the associated design, engineering, installation, operating, and maintenance cost of the new processing capacity.

Table 1.0. -- Observer Coverage, by Target, BSAI, On-shore Delivery, 1994.
(Catch in thousand metric tons).

Category	Number of vessels	Weeks fished	Weeks observed	Percent weeks observed	Catch	Observed catch	Percent catch observed
Pollock							
bottom	25	33	17	52%	9.5	6.5	68%
pelagic	77	891	547	61%	423.8	310.5	73%
Sable fish	48	87	6	7%	.4	.1	17%
Pacific cod	148	871	300	34%	59.9	34.3	57%
Rock sole	1	1	0	0%	-	-	-
Turbot	23	33	10	30%	.9	.3	36%
Yellowfin	16	42	25	60%	10.1	6.7	66%
Flat, other	2	2	1	50%	-	-	-
Rockfish	2	2	0	0%	-	-	-
Atka mack	1	3	0	0%	-	-	-

Note: Where categories contain 3 or fewer vessels, catch amounts are not reported.

Table 1.1. -- Estimated Observer Coverage, by Target and Vessel Length, for BSAI, On-shore Delivery, 1994.
(Catch in thousand metric tons).

Category	Number of vessels	Weeks fished	Weeks observed	Percent weeks observed	Catch	Observed catch	Percent catch observed
Pollock							
bottom							
> 124	8	14	11	79%	5.2	4.6	88%
60-124	17	19	6	32%	4.3	1.9	44%
pelagic							
> 124	26	325	267	82%	216.6	194.9	90%
60-124	51	566	280	49%	207.2	115.6	56%
Sable fish							
> 124	1	1	0	0%	-	-	-
60-124	24	44	6	14%	.3	.1	22%
< 60	23	42	0	0%	.1	.0	0%
Pacific cod							
> 124	22	87	47	54%	13.2	7.8	59%
60-124	80	500	253	51%	45.3	26.5	59 %
< 60	46	284	0	0%	1.4	.0	0%
Rock sole							
60-124	1	1	0	0%	-	-	-
Turbot							
> 124	1	1	1	100%	-	-	-
60-124	17	24	9	38%	.8	.3	41%
< 60	5	8	0	0%	.1	.0	0%
Yellowfin							
> 124	6	16	10	63%	4.3	3.2	76%
60-124	10	26	15	58%	5.8	3.5	60%
Flat, other							
60-124	2	2	1	50%	-	-	-
Rockfish							
60-124	1	1	0	0%	-	-	-
< 60	1	1	0	0%	-	-	-
Atka mack							
> 124	1	3	0	0%	-	-	-

Note: Where categories contain 3 or fewer vessels, catch amounts are not reported.

Under the status quo, catcher boats are permitted to add processing capacity, subject to vessel stability requirements, loadline restrictions, etc. Therefore, the following observations may apply equally to the "with" and "without" license limitation situation.

How "Upgrading" Might Interact with BSAI IR/IU[3]

* Only the retention of pollock, P.cod, (and subsequently rock sole, and yellowfin sole) are regulated under the IR/IU Program, as currently proposed.

* "Catcher-only" boats are not directly regulated under the proposed IR/IU, beyond the universal prohibition on discarding any whole fish of an IR-regulated species.

* If, under provisions of and consistent with the 'upgrading' proposal, a designated "catcher-only" boat adds processing equipment, it, in effect, becomes a "catcher/processor" (C/P), ***at least for reporting and IR/IU compliance purposes.***

    * This presumably implies that the vessel would [at a minimum] be required to; 1) maintain all records currently mandated in regulation for a C/P, including catch and production records; 2) comply with all observer coverage requirements *[including (if adopted) the "double coverage" proposed under IR/IU Option 2 for all processors]*; and 3) meet all other applicable legal and regulatory requirements for C/P operation, e.g., EPA discharge requirements, U.S. Coast Guard class, safety, and loadline certification, etc.

* The Council's 'upgrade' proposal strongly suggests that, *"... only groundfish species for which there is no market for the delivery of raw catch"...* would be made available for processing at-sea by *'upgraded catcher boat operators'* (U/O). It would seem to follow then, because provisions of the IR/IU amendment **require** that shoreside (and, for that matter, mothership) processors accept any pollock, P.cod (and subsequently yellowfin, or rock sole) offered for delivery, no catch of these IR-regulated species would qualify as available for U/O authorized processing. ***If this is not the intent of the Council, explicit clarification is required before an EA/RIR analysis can be performed.***

* There appears to be some confusion and uncertainty on this point. Some of the discussion of the 'upgrade' proposal conducted by the AP (in December 1995) suggested that, at least in the minds of some on the panel, "... any amount of a groundfish species, bycaught in the prosecution of a 'target' fishery, that would not justify retention and delivery along with the target catch, (e.g., because the bycatch would not hold in-the-round as long as the target species) should be made available for processing at-sea by the U/O catcher vessel." That is, for example, even though a market for, say, P.cod exists onshore, if a U/O catcher boat, operating in the rock sole target fishery, took P.cod as bycatch, but did not believe it could hold it in-the-round along with its rock sole until it could be delivered onshore, that P.cod should be made available to the U/O for processing at-sea. ***If this is the intent of the***

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[3] Under the status quo, catcher boats are permitted to add processing capacity, subject to vessel stability requirements (e.g., loadline certification). Therefore, the following observations may apply equally to the "with" and "without" license limitation situation.

Council, it must articulate this preference in order for the analysis to proceed appropriately.

If this is the direction the Council intends, then several potential complications emerge with respect to monitoring and enforcement (see references below to covert targeting, redistribution of catch among fisheries, transference from onshore to at-sea processing, etc.).

* Note that, while the IR/IU amendment (as proposed) is expected to **require** a processor to accept any delivery of pollock, P.cod (and subsequently, yellowfin, or rock sole) offered, it does not address the details of the "sales" agreement. That is, some have suggested that deliveries of undersized, or otherwise unwanted, catches of the species of concern, might be accepted by a processor only at a "zero" price. Others have gone even farther to suggest that, under these circumstances, the catcher boat might actually have to "pay" the processor to take the catch off their hands. Neither IR/IU nor the 'upgrade' proposal address these potentialities. It does, however, raise the question, "how does one define when... *no market exists*?" ***This is a subject the Council must address before an EA/RIR analysis can be performed.***

* If U/O **are permitted** to process any of the four species of concern (i.e., pollock, P.cod, yellowfin or rock sole) at-sea, they would presumably be subject to all the IR/IU provisions, e.g., must retain all pollock, rock sole, yellowfin sole, and P.cod present in their catch; must produce specific product forms, proportions, and amounts prescribed by IR/IU.

* Monitoring could be a problem, since, for some target fisheries, the level of current observer coverage on *'catcher-only'* boats is relatively low (see Table 1.1). *[However, if adopted, provisions of the (proposed) IR/IU amendment could effectively double the required level of observer coverage for all IR/IU regulated operations, i.e., two observers on all vessels 125' or greater; one observer onboard during 60% of a vessel's fishing/processing activity for vessels > 60' but < 125'; no change for vessels under 60'.]*

  But, because the U/O are not 'technically' full-time catcher/processors (e.g., as defined under License Limitation), how would observer coverage requirements be accommodated? It is the "opportunity" to process (small?) amounts of "non-target" bycatch, in the event it becomes available in the course of prosecuting a fishery for another species for delivery in-the-round onshore, that is to be provided under the 'upgrade' proposal. If these fish are truly non-target bycatch, they may not be present at all times and in sufficient numbers in the catch to justify processing. Thus, to require the presence of an observer onboard a U/O vessel so that, *if* it acquires a bycatch of an authorized species sufficient to process, processing can be observed, may be economically burdensome. It could induce an operation to 'covertly' target these heretofore non-target bycatch species to assure that it is at least able to recover the cost of the mandated observer(s).

* Under the situation wherein U/O are permitted to process the four species of concern under IR/IU, the upgrade provision could increase total at-sea processing capacity for these species and reduce the total supply of unprocessed pollock, P.cod, yellowfin or rock sole to shoreside processors.

* Depending upon the number of vessels participating, the quantity of processing authorized, the capacity added, and the specific species approved for processing, U/O could have unanticipated impacts on existing target fisheries for some species or species groups.

* While the intent of the 'upgrade' proposal appears to be to permit *catcher-only* boats to process a modest amount of their (heretofore unmarketable) groundfish bycatch, as suggested, authorization to process any given species or species group could, in the absence of restrictions to the contrary, induce targeting of that (those) species. This could, 1) increase total catch of that [those] species, 2) redistribute the catch among participating operations - from traditional harvesters to U/O harvesters, 3) reduce revenues to operations traditionally targeting these species, 4) increase at-sea processing of that [those] species, and 5) reduce supplies of raw materials to shoreside processors.

* Use of the concept of an *"absence of a market"* as the triggering mechanism for authorization for U/O processing for a given species could be very difficult to define, monitor, verify, and enforce. Absence of a market will, presumably, have multiple dimensions, e.g., geographic, temporal. If anyone will accept a delivery, at any price (or cost), is there a market? If not, what is the "minimum" compensation that must be offered? Who will monitor this (as well as how)?

How far is too far from a "buyer" for a market to be available? Will this vary by vessel size, sea condition, weather, season, species? If so, who will set these standards and how will they be monitored and enforced? Consider the following hypothetical case:

If a "buyer" for a given species of groundfish is available in, say, Kodiak, but not, for example, in Dutch Harbor, "does a market exist" for a catcher vessel operating, say, on the Bering Sea side and northeast of Unimak Island?

If not, assume the same boat, fishing the same location, discovers that there is a "buyer" at Dutch Harbor, but not at Akutan which would be closer. Does a market exist, i.e., would the U/O be prohibited from processing its bycatch?

If no "buyer" is accepting deliveries of a given species during, for example, the first week of an opening, but one is subsequently willing to accept deliveries (e.g., due to a change in markets) beginning in the second week, how shall a U/O determine this? Whose responsibility is it to determine whether or not the "market availability" has changed? Since catch and production reports are based on a "reporting week", does the absence of a "buyer" on the first day of the accounting week mean that the operator is free to process all catches of the authorized species (up to the maximum limit) for that entire week, even if a buyer becomes available during the week? If not, what is the governing rule? How will this be monitored and enforced, and by whom?

Assume Atka mackerel is, for this example, one of the species authorized for processing by a U/O... *"in the absence of a market"*. Assume further that, in a given geographical area, there has been no market for Atka for several seasons. Subsequently, an onshore buyer, in a relatively nearby port, decides to begin buying unprocessed Atka mackerel for $0.03/lb, thus, "a market does now exist...". However, a *catcher-only* boat that has fished this area for several seasons, and bycatches a relatively small but consistent amount of Atka mackerel, discovered and then developed a market opportunity in Korea for IQF Atka mackerel fillets, at $1.00/lb...(incidently, a price which nets the operator substantially more than would delivering raw fish to the local processor at $0.03/lb). Having made that (perhaps significant) investment in U/O processing capability specifically to respond to such "value-added" opportunities, is the U/O nonetheless **obligated**, under the 'upgrade' proposal, to

deliver all of its Atka bycatch, in the round, to the newly available domestic onshore buyer at $0.03/lb.?

If not, one may ask, "what purpose is served by the stipulation that bycatch processing by U/O is authorized only ... *when no market exists*"? Doesn't then the 'upgrade' proposal simply authorize the conversion of any and all *catcher-only* boats into small catcher/processors?

If, alternatively, the operation would, under the 'upgrade' proposal, always be required to deliver its bycatch to a willing domestic processor, where is the economic incentive to the catcher boat operator to risk the investment in U/O, since that investment could be made useless (and therefore unrecoverable) by **any** offer, by any shoreside plant (or mothership) operator. ***The Council will need to provide guidance on this issue if it wishes an analysis to proceed.***

The forgoing is a brief summary of the preliminary examination which has been undertaken in response to the Council's request for information on its "Limited Processing Upgrades" proposal. All of the programmatic and structural issues identified in this initial assessment will require explicit attention by the Council before a formal EA/RIR/IRFA analytical process can begin, should the Council chose to proceed with an FMP amendment.

AGENDA C-5
DECEMBER 1996
Supplemental

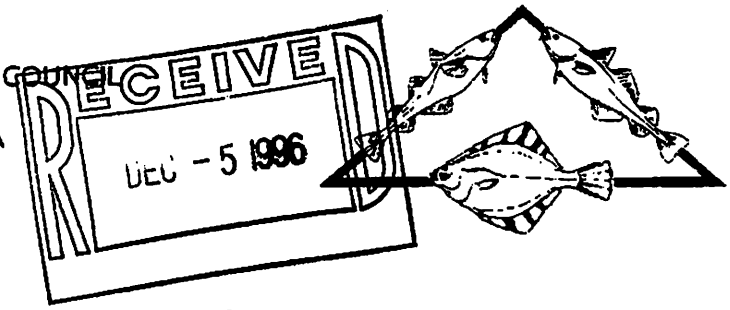
Alaska Groundfish Data Bank — P.O. Box 2298 • Kodiak, A...

TO: RICK LAUBER, CHAIRMAN
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

RE: COMMENTS ON IR/IU ANALYSIS FOR GOA

DATE: DECEMBER 5, 1996

SENT BY FAX: 1 PP



AGDB COMMENTS ON IR/IU ANALYSIS FOR GOA
NEED FOR AN APPROPRIATE PROBLEM STATEMENT
Replacement for comments sent Dec. 4

At the November meeting of the North Pacific Fishery Management Council's IR/IU industry Committee there was discussion that the Gulf of Alaska actually had two problems it was attempting to address by being included in IR/IU: reduction of discards in the current fisheries and a potential shift in effort from the Bering Sea to the Gulf if there was not an IR/IU program similar to the Bering Sea 's in the Gulf of Alaska.

This potential shift in effort would occur if there was an economic advantage in fishing where Pacific cod and pollock could be discarded. Discussions in the IR/IU committee strongly indicate that such an economic advantage would exist and the net effect of not including the Gulf of Alaska in an IR/IU program would be an increase in discards in the Gulf of Alaska -- a result directly counter to the Magnuson Act requirement that economic discards be lowered on an annual basis for a period of not less than four years.

The analysts expressed their opinion that the Gulf problem statement for IR/IU should address both reducing discards and preventing shifts in effort. Should the Council decide that a Gulf specific problem statement is necessary, AGDB offers the following language as a starting point.

> The purpose of this amendment to the Gulf of Alaska is to comply with the Magnuson Act provision requiring reductions in economic discards. The Gulf IR/IU provisions chosen for analysis are the same IR/IU provisions chosen for the Bering Sea and intended to follow the same time line -- 1998 for full retention of Pacific cod and pollock and a delayed implementation of full retention of shallow flatfish, the Gulf category which most closely mirrors the Bering Sea provisions regarding yellowfin sole and rock sole.
>
> Beginning the reduction of discards in the Gulf of Alaska with provisions as identical to those in the Bering Sea as possible is necessary to prevent any economic incentive to shift effort from the Bering Sea to the Gulf of Alaska and thereby increase discards in the Gulf of Alaska. As a corollary, IR/IU provisions in the Bering Sea should be identical to those in the Gulf of Alaska to prevent effort shifts to the Bering Sea and increased discards in the Bering Sea.

We appreciate the Council's consideration of these comments.

Sincerely,

Chris Blackburn, Director
Alaska Groundfish Data Bank

Chris Blackburn • Director • (907) 486-3033 • FAX (907) 486-3461 • e-mail 7353974@mcimail.com

DRAFT

'INTEGRATED' GULF OF ALASKA IR/IU PROBLEM STATEMENT

The objective of the Council in undertaking improved retention and utilization regulations for Gulf of Alaska groundfish fisheries centers on the same basic concern that motivated an IR/IU program in the BSAI groundfish fisheries - that is, economic discards of groundfish catch at unacceptably high levels. An IR/IU program for the GOA would be expected to "provide incentives for fishermen to avoid unwanted catch, increase utilization of fish that are taken, and reduce overall discards of whole fish", consistent with current Magnuson-Stevens Act provisions.

In addition, the Council recognizes the potential risk of preemption of certain existing GOA groundfish fisheries which could occur in response to economic incentives displacing capacity and effort from BSAI IR/IU fisheries. This risk can be minimized if substantially equivalent IR/IU regulations are simultaneously implemented for the GOA.

AMIW
C-5

ISA WOULD LIKE TO POINT OUT THAT ANY INCREASE IN PROCESSING CAPACITY IN THE CENTRAL GULF WOULD HAVE A DISRUPTIVE EFFECT, OUR PROCESSING COMMUNITY IS DEPENDANT ON THE STATUS QUO SYSTEM.

THE DEBATE OVER INCREASING PROCESSING CAPACITY SHOULD BE LIMITED TO THE NEEDS OF MEETING I.R. I.L. IT SHOULD BE SPECIE SPECIFIC AND SHOULD EXCLUDE GREY COD, BLK COD, REX SOLE, ROCK SOLE, POLLACK

KODIAK WILL HAVE LITTLE OR NO PROBLEM MEETING THE NEEDS OF THE PRESENT REQUIREMENTS PROPOSED FOR I.R. I.L. ~~THEREFORE NO ADDITIONAL~~

Dana Carlos
DANA CARLOS
ASST. PLANT MNGR.
EASTERN/WESTERN SEAS / ALASKA