II.A. MANAGEMENT OBJECTIVES

In presenting his views on some of the basic problems still to be overcome by the Councils, NOAA Administrator John Bryne told the Cancun fisheries conference that fishery management plans commonly lack specific long-range objectives, for example, establishing as a goal the restoration of depleted resources to a specific level in a given time. He also stated there was an urgent need for Councils to examine alternatives for limiting effort. Lee Alverson, in his February 10, 1984 letter to the Council, suggests that the lack of a master plan to develop the groundfish fisheries may, in part, be responsible for continued conflicts between developed and developing fisheries as each side attempts to influence the Council to protect its interests.

These and other comments suggest that our management objectives are not specific enough. Though each FMP prescribes management objectives for its particular fisheries [see item II.A.(1)], they are usually rather broad and unmeasurable. Three plans--Tanner crab, BSA groundfish, and GOA groundfish--have plan objectives in addition to their management objectives [item II.A.(2)]. All three FMPs have similar plan objectives: they are very broad and mainly paraphrase the National Standards.

The following questions may help in discussing ways the Council might improve its objectives:

1. How can objectives be specific enough so management actions can be measured against them?

2. How long-term should objectives be? Would both long-term and short-term objectives be better?

3. How often should objectives be reviewed?

4. Should allocative objectives be explicit?

In our experience with halibut, we've had considerable change in our objectives. A case study by Ron Miller is under item II.A.(3). Relating to the fourth question above, Doug Larson has put together a discussion of how conservation and allocation issues are involved with various proposed regulations recently placed before the Council for action. His discussion is under item II.A.(4). Some examples of measurable objectives are under item II.A.(5).

In our discussion, we should also be aware that Council Chairmen, meeting in Biloxi last fall, drafted recommendations for the future of fisheries management. We will review these under Agenda Item V. However, the first recommendation was as follows:

> Each Council and NMFS region, working together, should set specific, and to the extent possible, quantified objectives to be reached by

1990 or an earlier specified date for each fishery to provide a basis to:

a) Reshape FMPs progressively to meet the objectives, and

b) Enable NMFS to redirect its policies, programs and budgets to help meet these objectives.

Such plans should provide for a regime that permits a maximum continued use of stocks, equitable allocation to users, and provides fair opportunities for recreational fishermen and the full and efficient use of the commercial quota by domestic fishermen and processors.

While we may not want to go into the details of each plan at this meeting, if we decide that objectives need revision, how should we go about doing so?

1. How do we decide where we want to be in 5 to 10 years?

2. Should workgroups be assigned to each plan?

3. How do we best get public input?

4. What schedule should we adhere to for revising the objectives?

As a final enclosure to this section, I've placed comments received from Bart Eaton under item II.A(6). These were not sent to you prior to the meeting, but his views on the need for the Council to develop a comprehensive management philosophy are timely and relevant to our discussion of long-term management objectives.

Management Objectives

Bering Sea/Aleutian Groundfish FMP (1/1/82)

1. Provide for rational and optimal use, in a biological and socioeconomic sense, of the region's fishery resources as a whole;

2. Minimize the impact of groundfish fisheries on prohibited species and continue the rebuilding of the Pacific halibut resource;

3. Provide for the opportunity and orderly development of domestic groundfish fisheries, consistent with (1) and (2) above; and

4. Provide for foreign participation in the groundfish fishery, consistent with all three objectives above, to take the portion of the TAC not utilized by domestic fishermen.

Gulf of Alaska Groundfish FMP (12/1/78)

1. Rational and optimal use, in both the biological and socioeconomic sense, of the region's fishery resources as a whole;

2. Protection of the Pacific halibut resource, which for decades has supported the only significant U.S. groundfish fishery in the region, but which is currently in a state of grave decline;

3. Provision for the orderly development of domestic groundfish fisheries, consistent with (1) and (2) above, at the expense of foreign participation;

4. Provision for foreign participation in the fishery consistent with (1), (2), and (3) above, to take that portion of the optimum yield not utilized by domestic fishermen.

Tanner Crab FMP (12/1/78)

1. Minimizing fluctuations in stock abundance due to harvest by maintaining the full reproductive potential of the Tanner crab stocks.

2. Insofar as possible, preventing industry overcapitalization and minimizing economic distress due to extreme fluctuations in harvest based on naturally fluctuating stock abundance.

3. Integrating management of Tanner crab stocks with those of other fisheries to maximize economic returns and minimize adverse impact on other stocks.

King Crab FMP

Primary objective: maintain resource base by optimizing the reproductive potential of individual king crab stocks.

Secondary objectives:

1. Optimize the net value of the fishery.

2. Minimize the socioeconomic impacts of conservation and management measures.

3. Minimize adverse interactions among fisheries.

4. Optimize the cost effectiveness of management and enforcement.

Salmon FMP (9/6/79, modified 11/19/81)

1. Manage the troll fishery in conjunction with other Southeast Alaska salmon fisheries to obtain the number and distribution of spawning fish capable of producing the optimum total harvest on a sustained basis from all wild salmon stocks harvested in Southeast Alaska.

2. Allocate the optimum yield to the various Southeast Alaska user groups as directed by the Alaska Board of Fisheries and the North Pacific Fishery Management Council.

3. Decrease directed and incidental harvest of smaller, immature fish and reduce sublegal chinook hook/release mortalities where possible, consistent with allocation decisions and with the objective of maximizing benefits to user groups.

4. Control and reverse recent trends of expanding effort and catch in outer coastal and offshore Southeast Alaskan waters to accomplish conservation goals.

5. Develop fishery management techniques which allow full utilization of salmon returning to supplemental production systems while providing necessary protection for intermingling natural runs which must be harvested at lower rates.

6. Work toward the development of an integrated coastwide management plan for chinook salmon.

Herring FMP

1. To conduct any harvest of herring in the FCZ in such a manner to insure:

   (a) Maintenance of the herring resource at a spawning level that will provide the maximum production of recruits.
   (b) Maintenance of the subsistence herring stocks and the subsistence fishery.

(c) Maintenance of the herring resource at a level that will sustain populations of predatory fish, birds and mammals.
(d) Development and maintenance of the inshore commercial fisheries.

2. Consistent with Objective 1, promote full utilization of the herring resources by domestic offshore fisheries.

3. Provide to the extent possible a unified management regime between federal and state jurisdictions.

Plan Objectives

Gulf of Alaska Groundfish FMP

Bering Sea/Aleutian Islands Groundfish FMP

Tanner Crab FMP

Primary Plan Objectives

1. Promote conservation while providing for the optimum yield from the Region's fishery resource in terms of: providing the greatest overall benefit to the nation with particular reference to food production and recreational opportunities; avoiding irreversible or long-term adverse effects on fishery resources and the marine environment; and insuring availability of a multiplicity of options with respect to the future uses of these resources.

2. Promote, where possible, efficient use of the fishery resources but not solely for economic purposes.

3. Promote fair and equitable allocation of identified available resources in a manner such that no particular group acquires an excessive share of the privileges.

4. Base the plan on the best scientific information available.

Secondary Plan Objectives

1. Conservation and management measures have taken into account the unpredictable characteristics of future resource availability and socio-economic factors influencing the viability of the industry.

2. Where possible, individual stocks of fish are managed as a unit throughout their range, but such management is in due consideration of other impacted resources.

3. In such instances when stocks have declined to a level below that capable of producing MSY, management measures promote rebuilding the stocks. In considering the rate of rebuilding, factors other than biological considerations have been taken into account.

4. Management measures, while promoting efficiency where practicable, are designed to avoid disruption of existing social and economic structures where fisheries appear to be operating in reasonable conformance with the Act and have evolved over a period of years as reflected in community characteristics, processing capability, fleet size and distribution. These systems and the resources upon which they are based are not static, but change in the existing regulatory regime should be the result of considerated action based on data and public input.

5. Management measures should contain a margin of safety in recommending allowable biological catches when the quality of information concerning the resource and ecosystem is questionable. Management plans should provide for accessing biological and socioeconomic data in such instances where the information base is inadequate to effectively establish the biological paramenters of the resource or to reasonably establish optimum yield. This plan has identified information and research required for further plan development.

6. Fishing strategy has been designed in such a manner as to have minimal impact on other fisheries and the environment.

AGENDA II.A(3)
APRIL 1984

HALIBUT FISHERY MANAGEMENT OBJECTIVES: A CASE STUDY

The establishment by the North Pacific Fishery Management Council of management goals for the North Pacific commercial halibut fishery has been a five-year process marked at the beginning and end by statements of general objectives while specific goals were adopted and abandoned during the interim. Should the Council wish to examine its objective setting process, a consideration of what has transpired with regard to the halibut fishery may be beneficial.

The first goals proposed by the Council for the management of the halibut fishery were in a draft fishery management plan approved at the November 2 - 3, 1978 Council meeting. This FMP was prepared after the United States gave notice it was withdrawing from the halibut management treaty with Canada. If this had occurred, the FMP would have provided for the continued management of the Alaska portion of the fishery. The objectives for that plan were to:

1. rebuild the depleted halibut resource to a level of abundance which will produce long-term optimal yields; and

2. provide for a viable halibut set-line fishery for U.S. fishermen.

The draft fishery management plan was never implemented because the U.S. and Canada entered into a new fishery management protocol in 1979.

At the May 24-25, 1979 Council meeting, a workgroup was appointed to, primarily, study access limitation in the FCZ troll fishery and, secondarily, consider the applicability of limited entry in other fisheries such as shellfish and bottomfish. The workgroup met for the first time on June 4, 1979 and, among other things, issued a recommendation that the Council develop better objectives for all FMPs in order that the need for access control in a particular fishery be readily identified.

The workgroup next met on August 7, 1979 to further discuss limited entry in the troll fishery and also to begin the consideration of limited entry in the halibut fishery. The possibility of a study of the applicability of limited entry in the halibut fishery was also discussed at this meeting. At its December 5, 1979 meeting, the workgroup recommended that an RFP for a study on halibut limited entry be issued by the Council. This RFP was released by the Council after its December 12-14, 1979 meeting.

On March 13 - 14, 1980, the limited entry workgroup met in Juneau and, among other things, recommended the following goals for any halibut limited entry system the Council may adopt:

1. Prevent any expansion of effort.

2. Reduce the current number of entrants.

3. Maintain the economic viability of the halibut longline fishery so that it can continue as a professional fishery. The group feels that if halibut is allowed to continue to degenerate into a very short, intensive fishery, the industry will soon lose interest in defending that fishery. It will eventually turn into an incidental catch in the trawl fishery, and the halibut longline fishery, as it has been developed in the Pacific, will disappear. No one fights for a fishery that cannot produce an economic return to them.

4. The season should be stretched over six or seven months so that the harvest is made across all the stocks in the range. A longer season will allow improved analysis of fishing effort and stocks and reduce sudden gluts of fish and subsequent heavy industry dependence on cold storage fish.

5. Continue the small, part-time fishery with the existing fishermen.

6. Develop a system that will allow the greatest number of people possible to make a good return (living) from the fishery.

The Council neither adopted nor rejected these goals.

The next action on halibut management objectives by the Council or any subcommittee of the Council was adoption of the two objectives from the draft 1978 halibut FMP at a Council halibut workshop in Seattle May 14 - 15, 1981. This workshop, attended by fishery scientists and economists, was held to determine the desirability of a limited entry program for the Alaska halibut fishery. The workshop participants concluded that to achieve the draft FMP objectives, the Council would have to:

1. initially prevent any expansion of fishing effort in the halibut fishery; and,

2. move to implement a program which would reduce the level of potential effort in the halibut fishery over time.

At its July 23 - 24, 1981 meeting, the Council voted to seriously examine limited entry for halibut. Also at this meeting, Council member Don Collinsworth advised the Council to set goals for the management of the fishery. In this regard, a special workgroup was appointed by the Council to formulate these objectives. The workgroup met on August 27 - 28, 1981 and recommended the following goals to the Council:

1. Distribute the hook and line fishery, both in time and space, to ensure conservation of the resource.

2. Avoid further overcapitalization, thus encouraging development of an economically viable and efficient year-round multi-species domestic hook and line fishery that:

    (a) is made up of owner/operator rights holders; and

    (b) makes it possible for some fishermen to earn a major share of their income from hook and line fishing.

3. Make certain costs of administration and enforcement while effective are not excessive relative to the benefits of the program.

4. The program would not preclude the extraction of rents or royalties from the fishery 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 the 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. Use the market to transfer halibut fishing privileges after initial distribution.

These objectives were adopted by the Council at its September 24 - 25, 1981 meeting.

At the March 29 - April 1, 1983 meeting, the Council directed the workgroup to reevaluate the adopted objectives. This was considered necessary because the goals had not been reviewed for relevance since adoption. The workgroup met on May 24, 1983, and recommended the objectives be amended slightly in form and reaffirmed by the Council. This was done at the May 25 - 26, 1983 Council meeting. The amended objectives were to:

1. Distribute the hook and line halibut fishery in time and space 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, potentially could provide high quality fresh and frozen fish to the consumer twelve months of the year and that:

    (a) is made up of owner/operator holders of halibut fishing privileges; and

    (b) makes it possible for 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. Ensure that the extraction of royalties from the fishery at least sufficient to cover program costs is not precluded 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 halibut fishing privileges.

7. Attempt to be compatible with IPHC objectives.

8. Minimize disruption of the present fleet by using past participation to distribute initial halibut fishing privileges.

9. Use the market to transfer halibut fishing privileges after initial distribution.

After the halibut moratorium was disapproved, the Council directed its Halibut Workgroup to determine whether the objectives adopted in September, 1981 and amended in May, 1983 should be adopted as general management objectives for the halibut fishery. While those objectives were formally labeled as halibut management objectives, they had become known as "objectives for halibut limited entry." There was concern, therefore, that no general objectives had been established that would apply to any management system the Council may adopt for the fishery.

The Council workgroup met in Anchorage on September 7-8, 1983. Every specific economic goal was removed from the Council's nine objectives and the following list was recommended to the Council:

1. Distribute the hook and line halibut fishery in time and space to insure conservation of all components of the stock.

2. Preserve halibut as a hook and line fishery.

3. Retain the International Pacific Halibut Commission as the primary management authority in cooperation with the North Pacific Fishery Management Council as established by the 1979 Protocol amending the Convention between the U.S. and Canada for the Preservation of the Halibut Fishery in the North Pacific Ocean and Bering Sea, and the Northern Pacific Halibut Act of 1982.

4. Provide high quality fresh and frozen fish to the consumer throughout the year.

5. Develop the means for reducing the taking of incidentally-caught, non-targeted species by all gear types.

At its September 28-29, 1983 meeting, the Council accepted these recommendations as draft objectives and released them for public review. The workgroup was directed to meet before the December Council meeting to consider any public comment received.

On November 17, 1983 the workgroup met again in Anchorage and voted to amend the draft objectives in light of the public comments. The Council was presented with the following list of objectives at the December 7-8, 1983 meeting:

1. Ensure survival of the North Pacific halibut resource.

2. Distribute the halibut fishery in time and place to ensure the harvest of the available surplus of all components of the halibut population over all areas of the North Pacific Ocean including the Bering Sea.

3. Continue to limit the harvesting of halibut to hook and line as the best means of utilizing and maintaining the resource at its highest sustained level of abundance.

4. Retain the International Pacific Halibut Commission as the primary management authority over the coastwide range of the halibut population.

5. Provide high quality fresh, frozen or preserved halibut to the consumer throughout the year.

6. Strive to reduce incidental halibut mortality by gear that is not legal for a directed halibut fishery.

These objectives were approved by the Council and are currently the only stated objectives for any management system the Council may propose for the halibut fishery. The essence of these goals, with the exception of No. 5, is similar to that found in the objectives of the 1978 draft halibut FMP, i.e., to protect stocks and preserve the longline fishery. While they represent admirable intentions, these goals contain no benchmarks by which progress is measured. A strong argument may be made, therefore, that these objectives are too general to serve as effective management guidelines. This result may have been preordained by the goal-setting process.

In 1981 the Council appeared intent upon implementing limited entry in the halibut fishery because of dramatic increases in fleet size and decreases in the length of fishing seasons. To this end, the management goals adopted at this time were to ensure optimum economic efficiency in the fishery as well as protect the resource.

After opposition to limited entry in the fishery was voiced by many recent entrants and the moratorium was disapproved in Washington, the Council appeared intent upon disassociating its actions concerning the fishery from any connection with limited entry. It was in this atmosphere that the current goals were adopted.

Also influencing the nature of the current halibut management objectives was the fact that the Halibut Workgroup during the latter half of 1983 included many who had not participated in the 1981 deliberations and who saw no need for effort limitation in the fishery. These limited entry opponents were new to the fishery compared to the traditional halibut fishermen who generally supported limited entry. It was in the best interest of the recent entrants that the management regime in the fishery not be changed to one that would restrict their future participation. This position placed them in direct opposition to those who had been in the fishery longer and were witnessing a reduction in their fishing seasons. Also represented on the 1983 workgroup were processors, the trawl fleet, and Bering Sea native communities which were developing commercial halibut fisheries. Because of these widely varying interests concensus was only possible on the most general management goals.

The management objectives of the halibut fishery may be considered to have evolved from very general objectives in 1978 to specific guidelines in 1981 in order to address overcapitalization in the fishery; however, the goals then devolved from the specific to the general, not because overcapitalization no longer existed, but because of opposition to any method of implementing the specific objectives. In order for the Council to adopt specific management objectives for any fishery, it may have to implement a goal-setting process that is responsive to conditions in the fisheries and not to external factors.

II.A.4. Should Allocative Objectives Be Explicit?

One of the foremost purposes of the North Pacific Fishery Management Council, as well as the other regional fishery management councils, is to "prepare and submit to the Secretary (of Commerce) a fishery management plan with respect to each fishery within its geographical area of authority that requires conservation and management, and from time to time, such amendments to each such plan as are necessary" (Sec. 302(h)(1) of the Magnuson Fishery Conservation and Management Act). Plans for the management of fisheries necessarily involve regulation of the industry, and regulation of the industry necessarily involves allocative effects. This was recognized by Congress when it established National Standards 4 and 5 of the Magnuson Act in 1976. Standard 4 provides that conservation and management measures shall not discriminate between residents of different states, and sets out criteria for the assignment of fishing privileges among various United States fishermen, should that become necessary for any fishery. Standard 5 provides that conservation and management measures should promote efficiency, except that no measure should have economic allocation as its sole purpose.

That every regulation has allocative effects is no surprise to anyone. The harvesting sector of the fishing industry is composed of a wide spectrum of vessels with varying efficiencies and capabilities. Virtually any change in today's regulations will create opportunities for some and restrict opportunities for others. These increased or decreased opportunities translate into different catch patterns for the fleet, which is an allocative effect of the regulation.

Setting fishing seasons is a good example. In winter fisheries, such as the crab fisheries, weather can play an extremely important role. A regulation changing the season for a fishery so that it must be prosecuted during times of worse weather creates an advantage for larger vessels which are better able to withstand the rigors of winter fishing. Conversely, a movement toward the spring, or earlier in the fall, permits smaller vessels to take a more active role, thus creating a greater opportunity for them. In each instance, it is likely that the differences in weather conditions will cause differences in fishing efficiency and safety and will redistribute the catch patterns somewhat. Similarly, in the halibut fishery, many small vessel fishermen argue for a later opening in IPHC Area 3, because they feel that provides them greater opportunity to catch a larger share of the fixed quota of halibut. With openings in April or May, they have argued that they are at a relative disadvantage because of the rougher weather conditions. All other things being constant, they feel that this would translate to lower catches for them. June (or later) openings are preferred by these fishermen because weather does not hinder them as much.

Weather, of course, is not the only factor that comes into play when fishing seasons are changed. Another very important factor is the scheduling with respect to other activies, fishing or otherwise, which an individual vessel owner might engage in. Salmon fishermen prefer halibut openings that occur before, instead of during, the salmon season, so that their halibut fishing time and catches do not come at the expense of lower salmon catches. Changing

the opening date of the Southeast Alaska Tanner crab fishery from November to February made that season concurrent with the Westward Tanner crab fishery. This (intentionally) created a scheduling conflict for certain larger, more mobile fishing vessels. Before the season change, these vessels had the opportunity to fish in Southeast Alaska before heading to the Bering Sea. After the change, the larger vessels were forced to choose between fishing Southeast Alaska or the Westward area. The change did not create a scheduling problem for smaller vessels which only fish in Southeast Alaska. As a result, participation by the larger vessels in Southeast Alaska was reduced, and the localized effect (on the Southeast Alaska fishery) was to increase the catch of smaller vessels at the expense of the catch of larger vessels.

These are some of the many examples of the allocative effects that attend regulation changes. Gear restrictions, vessel size limits, time/area closures, exclusive areas, and other regulations passed by the Council do have allocative effects, either intentional or incidental. Even the setting of quotas can have allocative effects. For instance, increasing the OY for pollock in the Gulf of Alaska, in accordance with increased estimates of annual surplus production from the fish stocks, could increase the foreign pollock catch, if all other things (e.g., DAH) remain constant. An increase in the foreign pollock catch would tend to allocate salmon, crab, or halibut away from domestic fishermen and to foreign fishermen, even though they cannot utilize these prohibited species.

The Council has justified many of its proposed regulations on conservation grounds. This may be because of the stricture in National Standard 5 that "no such measure shall have economic allocation as its sole purpose." This requires that each regulation have some conservation (or other non-economic allocation) basis. However, it would seem reasonable to interpret National Standard 5 as not being overly restrictive.

Stating, where appropriate, that allocation is the primary or a purpose (but not necessarily the sole purpose) of a regulation makes it easier to evaluate the effectiveness of the regulation. If a regulation is argued to be conservation-based, when in fact it is intended to accomplish an allocation purpose, it may be judged insufficient to meet the stated objective, because the conservation effects in question are too slight. However, if it is stated that the primary purpose of the regulation is allocative, then its intended effects could be evaluated against that standard, while at the same time the admittedly slight conservation aspects of the regulation would prevent violation of National Standard 5. The issue here is that the effectiveness of a regulation needs to be measured against its stated purpose. A regulation which five years ago was designed to "protect the halibut resource" might actually be more effective today in protecting the halibut fishermen, since the halibut stocks are not in as great a need of protection as they were then.

Each FMP currently has objectives which recognize the importance of socio-economic considerations and which address, directly or indirectly, the need for allocation to achieve those socioeconomic purposes. [See the listing of FMP management objectives under item II.A.(1).] However, they are typically fairly vague restatements of the socioeconomic goals in the Magnuson Act (e.g., "provide for rational and optimal use, in a biological and socio-economic sense.")

Is this a sufficiently explicit statement of allocation goals? It is possible to state more explicit goals, such as: "Maintain the share of halibut catch by longline fishermen at 82% of the harvestable surplus;" or "maintain the share of catch by local fleets at historic levels." These statements provide more exact standards to measure the effectiveness of a given regulation, but the advantages of being more explicit may be offset by other problems which the increased explicitness brings on. One is timeliness, while 82% of the halibut catch being caught by longliners may provide for ". . . optimal use, in a biological and socioeconomic sense" today, changes in conditions may warrant that that number be changed in the future. Another concern is that allocation objectives must not discriminate between residents of different states, so they must be carefully thought out and worded. These concerns aside, it may well be preferable to specify more explicit goals that need to be changed, instead of having general goals that make measuring progress difficult.

While this discussion is not intended to offer answers to the question "Should allocative objectives be explicit?," the question is one that the Council should address. Increasingly, the issues the Council will consider will be of an allocative nature, and it will surely be very helpful for industry and all concerned to have a statement of the Council's intentions for the short- and long-term course of the fisheries it manages.

TWO EXAMPLES OF MEASURABLE OBJECTIVES

1. Bering Sea/Aleutian Islands Groundfish FMP

Objective: Incrementally reduce the prohibited species catch by the foreign trawl fleet.

Strategy: Establish scheduled decreases in by-catch rates for halibut and crab, and in by-catch numbers for salmon. Actual performance can be measured against these established rates.

Example for halibut and crab:

Year	Halibut[1/]		King Crab[2/]		Tanner Crab[2/]	
Base Catch Rates						
1977-80	3,182		916,804		16,003,329	
Average	1,301,250		1,301,250		1,301,250	
	base R=0.00245		base R=0.70456		base R=12.29843	
Rate Reduction Schedule, R						
(1981)		--		--		--
(1982)	R=.00220	90%	R=.66933	95%	R=11.6840	95%
(1983)	R=.00196	80%	R=.63410	90%	R=11.0686	90%
(1984)	R=.00171	70%	R=.59887	85%	R=10.4537	85%
(1985)	R=.00147	60%	R=.56365	80%	R= 9.8387	80%
(1986)	R=.00122	50%	R=.52842	75%	R= 9.2238	75%

1/ Metric tons per metric ton of groundfish.

2/ Number of individuals per metric ton of groundfish.

2. High Seas Salmon FMP

Objective: Rebuild Southeast Alaska natural chinook stocks to optimum escapements by 1995. (Not formally in plan, but was accepted by the Council in discussions with the Board.)

Strategy: Shorten seasons and reduce OY. Performance can be measured through escapements. In 1981 and 1982, escapements were considerably above the established schedule, but in 1983 they were well below the goal. The Council has not established a policy about achieving the desired escapement annually or on how to adjust fishing regulations to maintain the schedule.

Comments by Bart Eaton for distribution to Council
March 1984

In developing a conceptual view of the exploitation of the ocean's living resources, we must move from the narrow view of full exploitation of each individual species, to a view that includes predator-prey relationships, environmental processes and harvesting interactions. If we can develop this kind of comprehensive view, then it becomes evident that the total of any accounting system meant to determine the amount that can be extracted from the ocean becomes less than the sum of its parts.

Be it maximum sustainable yield, equilibrium yield, allowable biological catch, or optimum yield, in biological jargon, or the real yardstick used to allocate fish, call it "bio-political yield," contemporary fisheries management continues to occur on a species-by-species basis. Users continually put pressure on politicians and managers to extract the maximum amount from each species, and the whole continues to suffer.

One striking example of this problem occurs in the "incidental" catch of halibut and crab in Alaska trawl fisheries. There is nothing "incidental" about the fact that 60 percent of the halibut taken in the Bering Sea are taken by trawls. These fish are discarded, so that this "allocation" to the trawl fishermen represents an economic loss to the longline fleet that is allowed to utilize the species, and a pure biological loss since few of the creatures survive a trip to the surface in a trawl.

The status of king crab stocks in Bristol Bay was so dismal in 1983 that there was no directed commercial harvest, yet there was an "allocation" of king crab made to the bottom trawl fishery for yellowfin sole that occurs in the same area. Domestic joint venture trawlers took 500,000 crab with no size or sex restrictions, and yet the penalty for killing females or crabs under 6½ inches would have been a $5,000 fine and up to a year in jail for a crab fisherman.

These are "allocations" in every sense of the word. They result in a biological loss just as targeted fisheries do, and yet they produce no economic return. Nor are they part of any conscious allocation scheme.

The first step in developing a comprehensive approach toward real accounting for ocean resources is to eliminate terms like "incidental," "trash" and "discard" from the lexicon of fisheries management.

All catch is an exploitation no matter what euphemisms we use to describe it. And, once we have determined what we are going to exploit and at what biological rate, all else is allocation and must be regarded in terms of its total impact on the resources and the fleets. The question becomes, is it worth it to subsidize one fishery by withdrawing allocations from another?

We have to get away from the concept that incidental catch, or more properly "by-catch," is a technical problem that can be solved by simple gear adaptations like tinkering with foot ropes on a trawl. By-catch is a social, economic and ethical problem. Only by viewing it in this way can the system make logical allocations among the various users.

We have to determine the cost both to the industry and to the resource of allocating species among different user groups, particularly when one fishery can turn the product into dollars and the other merely discards a prohibited catch. We may not like some of the conclusions that result from this form of comprehensive resource management, but the questions should be asked, and asked early on.

In 1976, when there was no offshore trawl fishery in the Bering Sea conducted by domestic fishermen, the crab and halibut fleets supported the 200-mile legislation that ushered in the era of offshore domestic trawling in Alaskan waters. In fact, it was the Kodiak crab organization that insisted that one of the major purposes of the 200-mile bill should be the development of a domestic bottomfish fishery off of Alaska.

Another major reason the crabbers and halibut fishermen supported the 200-mile legislation was to control the enormous incidental catches that occurred in the foreign trawl fleets. For example, in 1974 the tanner crab quota for domestic fishermen in the Bering Sea was 42 million pounds, yet the foreign trawl fleet was "allocated" 155 million individual crabs--far more than the domestic fleet caught, without restrictions as to size or sex. That level of incidental catch was estimated to have resulted in a loss of 43 million recruit crabs in 1978-1980. The halibut resource also sustained substantial losses due to the foreign operations.

In retrospect, it is clear to me that the crab fleet actually lost ground after the implementation of the 200-mile limit. We were actually making more progress using the Creatures of the Continental Shelf legislation and the process of direct negotiation. We made gains in the form of time and area closures, the elimination of tangle nets and the curtailment of directed foreign fishing during bilateral negotiations between, alternately, Japan and the USSR, but the gains occurred on a quid pro quo basis. For every crab and halibut won for the domestic fleet, we had to give something--finfish. For those of us involved in the process, it was evident that we were playing a zero sum game because we would soon run out of fish to give, and may already have given too much for the health of the domestic trawl fishery.

It has become obvious that there will be no winners, only losers, created in the domestic fishing industry by the practice of single species management, and the consequent emergence of adversarial relations between different gear types. In the end, only a comprehensive management philosophy that makes a full accounting of the impact of each and every resource allocation will serve the domestic fleet. Some of the choices imposed by comprehensive management may be painful, but they must be made and made early for the best utilization of ocean resources.