

# North Pacific Fishery Management Council

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## MINUTES Scientific Statistical Committee June 23-26, 1991 Anchorage, Alaska

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met June 23-26 at the Anchorage Hilton. Members present were:

Bill Clark, Chair  
Terry Quinn, Vice Chair  
Bill Aron  
John Burns

Doug Eggers  
Larry Hreha  
Dan Huppert  
Gordon Kruse

Richard Marasco  
Marc Miller  
Don Rosenberg  
Jack Tagart

### PAAG and RAAG Members

Terry Quinn and Don Rosenberg will continue as the SSC members on the Halibut Regulatory Amendment Advisory Group. Rich Marasco and Gordon Kruse will serve on the Plan Amendment Advisory Group.

### C-1 Sablefish Management

The SSC reviewed the revised draft supplement to the Supplemental Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (SEIS/RIR/IRFA) for longline and pot gear sablefish management in the Gulf of Alaska and Bering Sea/Aleutian Islands dated May 13, 1991. Staff also summarized information contained in the document for the SSC.

The SSC endorses the critical points summarized on page v of the SEIS/RIR/IRFA. The SSC would also like to highlight the following issues:

1. The continuation of open-access for halibut PSC and for species with small TACs that are taken as bycatch in the sablefish fishery could continue the race for fish and therefore reduce the benefits of an IFQ system.
2. The conduct of a pot fishery for Pacific cod would require the NMFS Regional Director to set aside part of the sablefish fixed gear TAC as retainable catch in the pot fishery, or to treat the sablefish incidental catch as a prohibited species, or to require that pot fishermen have IFQ for their sablefish bycatch.

3. A further bycatch issue is the incidental take of sablefish in the longline Pacific cod fishery. If a decision is made to allocate quota shares by vessel size, the amount of Pacific cod that could be taken by some vessel classes may be limited. To fully harvest the Pacific cod quota, either sablefish would have to be discarded or a system established that would allow fishermen to purchase quota shares from other vessel classes.
4. NMFS Regional Office staff's report to the Council that discusses implementation of an individual fishing quota system was discussed. This report highlights the need for further development of the enforcement part of the implementation program.
5. Highgrading has been claimed to be a serious problem in IFQ programs. In the absence of data, the SSC is unable to comment on the validity of these concerns.

## **C-2 Inshore/Offshore Amendment**

### **Summary statement**

The SSC reviewed the revised Draft SEIS/RIR/RFA including two new Addenda and public comments. New material prepared by Council staff addresses most of the concerns described in the SSC's April minutes.

The SSC supports the SEIS/RIR/RFA conclusion that the alternatives under consideration do not address the underlying conditions that caused the "pre-emption" problem. Open access competition for fish will, even with allocation between inshore and offshore segments of the fishery, lead to additional increases in catching and processing capacity.

The original research plan included a simulation model of the harvesting/processing operation, a cost-benefit analysis, the input/output model, and the social impact assessment. Due to time and resource limitations, the simulation model could not be used, so it was not possible to forecast the effect of the alternatives on shore-based and offshore operations, costs, and returns. An industry survey was intended to provide essential data for modeling efforts, but low return rates in some categories and high variability made impact assessment difficult. Despite the shortcomings in the draft document, the SSC does not believe that further data collection and analysis could be done within a reasonable period to aid in the decision-making process.

A comprehensive examination of benefits and costs of the alternatives under consideration is still lacking. In the absence of a cost-benefit analysis, the SSC is unable to indicate to the Council which of the alternatives results in the highest net regional or national benefit.

### **Overview of the analysis**

Input/output (I/O) analysis is not a surrogate for benefit/cost (B/C) analysis. I/O analysis is used to determine how regulations would change regional income and other economic "activities," particularly expenditures and employment. B/C analysis is used to determine whether fishery regulation would increase or decrease efficiency. Although B/C analysis is not necessarily limited to the entire nation, this scope is appropriate when fishery management decisions affect use of natural resources that are, in fact, owned by all citizens. I/O and B/C analyses should not be viewed as substitutes. Rather, they are complementary.

The complementary relationship between I/O and B/C analyses was recognized in the structuring of the research plan to analyze the proposed alternatives. The research plan contained four parts: a simulation model, an I/O analysis, a B/C analysis, and social impact assessment.

The objective of constructing the simulation model was to examine how segments of the fishery might adjust their operations under the various options. It was intended that the output from the analysis would serve as inputs for the B/C and I/O analyses. Results from this part of the research were not available because of technical problems encountered in developing the model and time limitations.

In the absence of results from the simulation model, attempts to perform a B/C analysis were aborted. Simplifying assumptions were required to conduct the I/O analysis. The I/O analysis depends upon numerous parameter estimates, many which cannot be or are not validated by standard statistical procedures. While the sensitivity of the impact assessment to changes in surimi price has been displayed on page 3-53, it is clear that many sources of potential error and bias in the numerical model detract from the confidence that can be placed in the magnitudes of estimated community economic impacts. The net national economic impact estimated by the I/O is small relative to the sources of variability. The SSC agrees with the analysts that this estimate is unreliable. The Council should disregard the estimated net national impact in choosing among alternatives.

Despite technical misgivings about the economic impact model, the main economic effects of alternative 3 are those suggested by common sense -- income and employment will increase where shoreside plants operate, will decrease where offshore fishing occurs and will shift among various sectors where both inshore and offshore companies do business.

The sociological analyses in the document are dominantly of the descriptive kind. The community profiles are valuable as baseline information. However, comments in the document about social stability are speculative and do not provide a basis for choosing among the alternatives.

#### Detailed technical comments concerning economic impact analysis

(1) The distribution of shoreside landings anticipated in the Impact Analysis was based upon rules of thumb that may prove incorrect. Once the allocation is made, the inshore landings may move away from the ports that were near historical harvest areas. If this occurs, the impacts of onshore allocation will differ substantially from those predicted.

(2) The inshore sector defined for Alternative 3 includes onshore processors, floating processors, motherships, and factory trawlers operating within 3 miles of shore. Because at-sea, but "inshore", processors may take some of the inshore allocation, the predicted increase in onshore income and employment may be overstated by the economic impact analysis. The overstatement could be substantial, if several large motherships elect to operate "inshore".

(3) In theory, producer benefits are driven to zero by vigorous competition in an open access fishery. However, in practice, profits may be sustained in open access fisheries for a variety of reasons. For example, the industry may not expand to the point of zero profits due to a limit on numbers (license and gear restrictions can cause this). Second, other critical resources (such as skilled skippers, or shoreside plant sites) may be in short supply. In this case these other scarce resources will be earning excess returns (economic surplus or profits). Finally, if a few large firms dominate the fishery, they will not necessarily act competitively. This also can lead to sustained profitability. For all these reasons, it is impossible to make any definitive statement about producer surplus under any of the alternatives. The analysis, however, concludes that "...producer surplus, based on incremental change from the baseline case, would increase with an allocation to shoreside processors" (p. 3-63). This statement might be interpreted as indicating that allocations under consideration by the Council would increase producer surplus and thus benefit the nation. Such a conclusion is unwarranted. The procedure used in the document to estimate producer surplus is incorrect. The proper method requires that in addition to cost items identified in the document, the opportunity cost of capital and management be subtracted from gross revenues. Further, using the narrowly constructed assessment

of a small change in the distribution of fish to infer results of the large changes contemplated under the various alternatives contemplated is inappropriate.

#### Comments on the biological impact assessment

The Council problem statement clearly reflects concern that current and projected levels of harvesting and processing capacity and the differing capabilities of the inshore and offshore components may generate a different set of ecological problems including but not limited to localized depletion of stocks or other behavioral impacts to stocks. Considerations of the total ecosystem must include those of the risks of localized depletions of fish stocks on the ecosystem as a whole, particularly in regard to marine mammal and bird populations.

The current information about pollock and cod suggest that these species are not characterized by a large number of reproductively isolated and identifiable sub-populations. Thus any management regime that assures that fishing mortality does not exceed ABC's, as developed under the current understanding of Fishery Management Plans, is probably equally defensible, vis-a-vis the fish stocks in question.

The possible impacts of the different alternatives on the total ecosystem, however, are not adequately defined. For example, a shore-side preference must consider the additional time and fuel costs expended in transporting the catch from the fishing grounds to the shore-side processing operation. These additional costs may encourage fishermen to operate in more restricted areas, exacerbating local reductions of fish, to minimize costs. While these harvests would likely not threaten the fish stocks, if within the ABCs, they could generate localized nearshore reductions that disadvantage marine bird and mammal populations. The SEIS does not provide a basis for comparing consequences of the alternatives, apart from generalized statements on marine mammals and birds, which are not directly applicable to analysis of the alternatives, although they do reflect on the importance of nearshore environments to both groups of animals.

The alternatives should be reviewed, particularly in relationship to the sea lion recovery team report, to assure that a selected alternative is, or can be, made compatible with recommendations of the recovery team.

#### Consideration of alternatives

In addition to our critique of the specific analysis, the SSC reviewed the individual alternatives as to the level of analysis undertaken and how each addresses the issue of one sector of the industry preempting another sector. Only alternatives 3 and 6 deal directly with the perceived pre-emption problem through direct allocations to onshore and offshore sectors. As noted in the document, none of the alternatives addresses the overcapitalization problem. Further, the document does not provide an adequate basis to determine if any of the alternatives best serves the interests of the nation's consumers in providing the highest quality product at the lowest cost.

Alternatives 1 and 5. - With the adoption of amendment 19/14, alternative 5 became the status quo. Amendment 19/14 was developed and adopted to address a local preemption problem.

Alternative 2. - This alternative would consider the use of traditional measures to address preemption issues. No analysis of the impact of this measure was undertaken and therefore no conclusions can be made on the effectiveness of this alternative.

Alternative 3. - This alternative with its suboptions was analyzed in detail. If adopted it would address a preemption issue between "Inshore" and "Offshore" sectors by establishing a fixed allocation.

Alternative 4. - This alternative was analyzed in detail. If adopted it would address a preemption issue between "large" and "small" harvesting vessels by establishing a fixed allocation.

Alternative 6. - This alternative is a modification of Alternative 3 suboption 2 except that a percentage would be set aside for delivery by fisherman to either the "Inshore" or "Offshore" sectors.  
Alternative 7. - This alternative is an addition to either Alternative 3 or 6 (it requires an "Inshore" allocation). "Shorebased plant" should be defined if it is meant to mean something other than "Inshore."

### **C-3 North Pacific Fisheries Research Plan**

A summary report was received that summarized user fee alternatives as recommended by the Data Committee during their June 5-6 meeting. The SSC continues to support Alternative 2 to establish a system of user fees to pay for the costs of implementing the North Pacific Fisheries Research Plan, as stated by the SSC at the April Council meeting.

The SSC offers the following comments on the recommendations of the Data Committee.

(1) Recreational fisheries are potentially included in the plan. Aside from obvious difficulties in fee collection, the SSC points out that recreational fisheries were not included in the original analysis. Inclusion of recreational fisheries in a subsequent, revised EA/RIR/IRFA analysis would lead to delay in implementation of the plan.

(2) The SSC reemphasizes the urgency for action to be taken on this plan to ensure the uninterrupted collection of fishery data in 1992.

(3) There is a need for accurate estimates of the weight of all fishery removals. The AP proposal suggested that at-sea processors weigh or volumetrically measure all catches to determine the true weight of fish retained for processing, and discards; and to require catcher vessels to weigh or volumetrically measure discards. However, the SSC is not in a position to comment on the costs or practical limitations of such a requirement. NMFS regional staff reported that the agency is investigating improved methods of estimating catch weights, and the Committee requested the opportunity to review any proposed new system. The SSC plans to review the present NMFS schedule of product recovery rates at the September Council meeting.

### **C-5 Marine Mammals**

#### **C-5(a) Proposed MMPA Amendments**

NMFS has published proposed amendments to the Marine Mammal Protection Act governing the incidental take of marine mammals. The SSC did not review the package at this meeting because major parts of the draft EIS are not yet available. The proposed actions could have major effects on fisheries by setting extremely low limits on the allowed total take of some mammal species and by requiring that the allowances be allocated among all users including fisheries and subsistence demands. The amendment calls for a regional board to make these allocations. The comment period is scheduled to end September 23. The SSC recommends that the Council request an extension and review the package fully at the September meeting.

#### **C-5(b) Draft Recovery Plan for Steller Sea Lions**

Lloyd Lowry, Chair of the Steller Sea Lion Recovery Team, presented an overview of the recovery

plan to the SSC. It was pointed out that comments from the Council must be received prior to July 15, 1991.

Primary points of the presentation were: the cause or causes of the range wide decline are not known; the classification as a depleted species requires development of a recovery plan; the recovery plan focuses on minimizing the impacts of human activities that do or may adversely affect sea lions (malicious or incidental take or disturbance); and commercial fishing is viewed as a potential factor in the decline and therefore evaluation of the effects of fisheries on sea lions will be undertaken.

The primary purpose of the recovery plan is to propose actions to minimize detrimental human activities that adversely affect sea lions. Other goals are to identify factors that limit the population, and undertake actions to stop and reverse the decline. Components of the recovery plan include site specific management actions, development and application of criteria for evaluating population status, and an outline of research and management actions and costs.

The SSC commends the recovery team for their efforts in developing the detailed and helpful draft plan. The SSC does have several recommendations for modification. The SSC believes that it is very important that the Council develop and forward its comments on the draft plan.

Our recommendations are:

1. A component focusing on morbidity and mortality, including diseases and parasites.
2. A reevaluation of the inclusion of Steller sea lion rookeries in California and Oregon, as one of the index sites for comparing status and trend. The SSC believes that inclusion of those rookeries confounds comparative analysis because they occur at the southern edge of the species' range where major ecological changes are occurring, notably the great increase of other marine mammal species that interact with Steller sea lions.
3. A major component focusing on the integration and synthesis of available information about the physical environment should be included.
4. The plan should encourage a detailed review of the historical record of sea lion harvest and catch records by Russians in the Gulf of Alaska and Aleutian Islands. This would have to be done by a historian competent in Russian.

Other concerns of the SSC include:

1. The potential cost of a gear modification project even though incidental catch of sea lions is now small (low priority in view of other needs).
2. Food habit studies that may be biased by inclusion of samples from animals taken in the trawl fishery.
3. The criteria for listing or delisting should consider the statistical variability in the adult/pup count index. Otherwise, a low or high count in a given year could lead to precipitous action. A statistically significant difference should be detected before listing or delisting occurs.

### **C-7 Halibut Management**

The SSC reviewed the draft Environmental Impact Statement, Regulatory Impact Review/Initial Regulatory Flexibility Review for the proposed Individual Fishing Quota Management Alternatives for the Halibut Fisheries in the Gulf of Alaska and Bering Sea. Additional materials are being

prepared which will be included in the document prior to its release for public review, including a major chapter on social impacts. The SSC recommends that the existing material be released for public review after the issues identified below are addressed. The SSC cannot comment on the additional material. However, the document should contain information on how social impacts should be considered in the decision-making process, in light of the Magnuson Act specifications.

Specific comments on the Draft EIS/RIR/IRFA:

1. At the bottom of page 4-2 there is a description of estimates obtained from the cost model. These estimates are summarized in Table 4.1. The description of how estimates reported in Table 4.1 were obtained and what they represent must be explained to provide the reader with a better understanding of its contents.
2. Section 4.1.3, page 4-5 discusses the effects of an IFQ program on consumers. This section should be expanded to describe in greater detail how consumers could be affected by an IFQ system.
3. In the second paragraph of section 4.1.10, the following statement is made:  
"The model estimates the effects of IFQs for both 25% and 50% reductions in catch per fishing day."

The document should discuss why a reduction is expected to occur.

4. Numbers reported on page 4-8 should be checked for consistency with Table 4.1.
5. On page 4-12 in section 4.1.21, it is indicated that the 1990 exvessel price was used to calculate the benefits that would accrue from a reduction in halibut discard mortality. This price should have been adjusted to take into account any price increases that would result from an increase in product quality.

#### **D-1(b) Amendment 17/22**

The SSC reviewed the draft EA/RIR/IRFA of Amendment 17/22 and the public comments received and took public testimony on certain items.

#### **2.0 Experimental Fishing Permits**

The SSC recommends adoption of Alternative 2, Option 1, which would allow experimental fishing permits to be issued by the Regional Director, in consultation with the Alaska Fishery Science Center (AFSC).

Concern was raised in the public comment regarding insuring that full scientific and public review of each proposal was made. The SSC believes that the Center can perform full scientific review of each proposal and that the Regional Director is required to publish in the Federal Register any proposal that is being considered, thereby allowing for public review. Concern was also raised regarding the renewal process. Because the renewal process requires an applicant to follow the regular application requirements, the SSC does not have concerns.

The SSC does agree with the comment regarding expanding the grounds for denial to include a concern for detrimental effects on species other than "species of fish". The SSC recommends that under the section entitled Grounds for Denial, items be modified to include detrimental effects on marine mammals, birds and habitat.



### 3.0 Establish Walrus Islands Groundfish Fishing Closure

This proposal responds to a concern that recently developed fisheries for yellowfin sole operating in northern Bristol Bay have interfered with use of hauling grounds by walrus at the Walrus Islands and Cape Peirce. There is a long record of use by walrus of the sanctuary and of management response to changes in use patterns by walrus.

The Walrus Islands State Game Sanctuary which includes Round, High, and Crooked Islands and the Twins, was established in 1960 when the walrus population was thought to number 60,000 to 90,000 animals. The sanctuary was established with the primary goal of protecting walrus while they were on the only active haulout in the eastern Bering Sea. Purposes for establishing the sanctuary were (1) to protect walrus from disturbance and harassment while they are hauled out on land, (2) to protect the islands used by the walrus, and (3) to provide a location for the study and observation of walrus in an undisturbed setting.

Realization of the purposes of the sanctuary has required management actions in response to perceived threats to walrus. These have included altitude restrictions on aircraft, limits on the number and activities of scientists and other visitors, designated approach and landing areas for vessels, closure of state waters to fishing activities, and local public information and education efforts.

These management efforts were followed by an increase of the walrus numbers on Round Island by 1986. In the spring of 1987, an intensive trawl fishery for yellowfin sole occurred in northern Bristol Bay, particularly around the Walrus Islands. This fishery continued in 1988. Coincident with the development of this fishery in the area was an approximate 50% decline in the number of walrus onshore. The yellowfin sole fishery did not occur in northern Bristol Bay in either 1989 or 1990. In those years the number of walrus on Round Island increased substantially from the 1987 and 1988 levels. The 12 mile closures around the Walrus Islands and Cape Peirce became effective in 1990 and are due to expire at the end of 1991. The current proposal includes 3 alternatives: (1) to let the protective measures expire; (2) to establish (retain) 12-mile radius buffer zones with seasonal groundfish fishery closures around these walrus haulout sites; (3) to institute a seasonal groundfish fishing closure north of a line from Cape Constantine to the southernmost tangent of a 12-mile radius around Cape Peirce.

Walrus are highly social. They communicate acoustically by using a variety of different sounds, in air and underwater. Underwater sounds produced by vessels are in the same frequency range as sounds produced by submerged walrus. The animals must certainly perceive noise of the fishing fleet, over a large area, even in conditions that produce intensified ambient noise levels (e.g., waves breaking).

Observations from Round Island indicated that walrus were apparently more sensitive to diesel engines than outboards. As pointed out in the EA/RIR/IRFA the passage of a large diesel vessel at some distance (unspecified) from shore frightened walrus off the beach.

It is anticipated that yellowfin sole in northern Bristol Bay will again become a target fishery that will draw the fishing fleet into the area used intensively by walrus. Action which will eliminate or reduce the presence of large trawlers and the concomitant waterborne and airborne noises, are consistent with the long-term goals and objectives of the sanctuary. Maximum protection would most likely be accomplished by accepting Alternative 3. However, exclusion of the trawl fleet from such a large area raises other problems, including the likely increased incidental catches of non-target species.

The SSC recommends approval of Alternative 2, because limited data suggest benefits of the current protection area. There appears to be no compelling evidence that the larger area proposed in



Alternative 3 would result in significantly better protection for walrus. The SSC sees no major need to have a 5-year sunset provision. Should information become available that significant fishing opportunities are being forgone or that a different protection area is needed, a plan amendment can be proposed.

In public testimony, the SSC heard a proposal for inclusion of a transit corridor. The SSC supports a transit corridor in the vicinity of Right Hand Point with sufficient regulations to minimize walrus disturbance.

#### 4.0 Rescind Statistical Area 68

The SSC recommends incorporating the East Yakutat District into the Southeast Outside District, for the reasons stated in the analysis.

Public comment indicated dissatisfaction that ADF&G, which manages the demersal shelf rockfish fishery in the Southeast Outside District, was failing to reserve enough of the rockfish TAC to provide for the bycatch needs of the groundfish trawl fishery and the sablefish and halibut longline fisheries. NMFS regional staff advised the SSC that this problem was being addressed by the State. In any case, the SSC believes that if there is a problem with management of the rockfish fishery, it should be dealt with in its own right. It should not stand in the way of rationalizing statistical areas.

#### 5.0 Establish a Bogoslof District

The SSC has consistently recommended since 1986 that pollock management in the Bering Sea needs to consider the stock structure of population components. Emerging evidence suggests that the eastern Bering Sea shelf, the Aleutian Basin, and the Aleutian Islands should be treated as separate management areas for pollock, but that stock components in these areas may be interrelated. Pollock in the Bogoslof area are most closely related to fish in the Donut Hole, and current knowledge suggests that a large proportion of the Donut Hole fish move to the Bogoslof area in the first part of the year to spawn. Some fish may also move to deep waters of the USSR. It is likely that fish in the Basin originate from both the US and the USSR shelves of the Bering Sea, because young fish are not found in the Basin. Basin fish are generally older and appear to exhibit slower growth than those from the shelves. The International Pollock Workshop held in Seattle in February affirmed these findings and set up a schedule of data interchange and future meetings to incorporate these findings into a Bering Sea assessment of pollock. The AFSC has primary responsibility for coordinating data exchange and analysis. A meeting of representatives from the SSC, Plan Team, agency scientists, and other experts was held in Seattle in May (Quinn, Eggers, Marasco, Aron, J. Balsiger, V. Wespestad, D. Bevan) to discuss these emerging findings in relation to assessment of pollock and this proposal to establish a Bogoslof district. The consensus of the meeting was that Bogoslof pollock should be considered as a part of the Basin rather than within the shelf.

At the present meeting, the SSC reviewed the document and also heard a proposal from the AP that would create a Basin area for management purposes. The SSC believes that for the 1992 assessment conducted later this year, the means should be provided to control catches throughout the shelf and basin. In light of the current biological understanding of pollock stock structure, the SSC believes that the AP proposal is the best way to proceed. Alternative 1 is unacceptable, because it provides no constraint on fishing in the Bogoslof area. Option 1 of Alternative 2, which creates a Bogoslof district separate from the shelf, is deficient in that only part of the Basin is included, which could lead to difficulties in assessment and in-season management. Option 2 of Alternative 2, which creates a Bogoslof district within the Bering Sea shelf, is deficient in that suggested differences in stock structure are not recognized. A further rationale for the AP proposal is that significant pollock fishing activity has occurred throughout the Basin; proper management of pollock fishing in the Basin

requires a Basin-wide management area.

The Council should be aware that any of these proposals may lead to the necessity of accounting for Donut Hole catches in setting TAC's. For example, one possible way to determine the basin ABC would be to treat the biomass from the Bogoslof hydroacoustic survey (about 500,000 mt in 1990) as a conservative estimate of pollock biomass in the basin and multiply that by the shelf pollock exploitation rate of 23%. TAC for the Basin could then be determined from ABC by considering removals from the Donut Hole and mortality from bycatch in other fisheries. It is conceivable that the recommended TAC for the Basin could be 0, given the potential level of removals from the Donut Hole. The substantial decline in biomass observed in both the Donut Hole and the Bogoslof area do not suggest much potential for future fishing until substantial recruitment occurs again.

### **ABC and Overfishing Definitions**

The SSC revisited some problems with overfishing definitions and their application. The primary problem is that present definitions of ABC and overfishing imply the same level of removals for some stocks. When TACs are set equal to ABCs for these species, overfishing may occur due to: (1) delays in reporting catches and unpredictable increases in catch just prior to closure; and (2) discards or bycatch. A secondary problem is that for stocks in which basic biological parameters or assessments are unavailable to specify sustainable yield using standard methods, overfishing is defined as harvest in excess of the long-term average catch. This particular definition has little biological basis.

Also, the SSC briefly reviewed the instances to date in 1991 in which catch is approaching or has exceeded ABC. These cases include eastern GOA pollock, central GOA POP, western GOA shortraker/rougheye rockfish and BS/AI Atka mackerel.

The SSC discussed two options at length. One option was to take no action. The logic behind this option was that the problems being encountered in 1991 were not unforeseen and were discussed in deliberations that led to Council decisions on overfishing last year. With this view, TACs should be set such that retained catch, discards, and bycatch in aggregate do not exceed catches specified by the overfishing definition. The other option was to develop a plan amendment to change overfishing to some level of harvest above ABC. With this option, overfishing would be redefined to provide some buffer above ABC to cushion against invoking fishery closures because of minor violations of the current overfishing definition. In view of the number of other important issues under consideration, the SSC decided to take no further action on this issue unless so directed by the Council.