North Pacific Fishery Management Council

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Certified:_____
Date:_____

MINUTES
SCIENTIFIC STATISTICAL COMMITTEE
September 30-October 2, 2002

The Scientific Statistical Committee met September 30-October 2, 2002 in Seattle, WA. All members were present except George Hunt:

Rich Marasco, Chair,	Jack Tagart, Vice Chair	Steve Berkeley
Keith Criddle	Doug Eggers	Steve Hare
Jeff Hartman	Mark Herrmann	Sue Hills
Dan Kimura	Seth Macinko	Ken Pitcher
Terry Quinn		

C-1 (b-d) CRAB MANAGEMENT Trailing Amendments for Crab Rationalization Committee Reports and Initial Review

Council staff, Mark Fina and Darrell Brannan presented the Initial Review for BSAI crab rationalization trailing amendments for binding arbitration, alternative protections for communities, captain's quota share, and data collection. The SSC wishes to recognize the staff for their excellent work in preparing the trailing amendments given the enormous amount of work that they were tasked with over a very short amount of time. Industry committee members also presented committee reports for the captain quota share committee, binding arbitration and data collection.

The SSC encountered three significant impediments to our task of reviewing the trailing amendments. The impediments are (1) a departure from a typical council review process and fast pace of Council decision making on these topics, (2) Lack of industry market data and data that could be used for determining distributional effects, including effects on regions and localities, and (3) lack of sufficient time at this meeting to fully examine the trailing amendments.

While this agenda item is identified as an "initial review", staff noted that the trailing amendments are on a parallel track with the preferred alternative selection chosen by the Council at the June 2002 NPFMC meeting. Unlike a typical initial review, the trailing amendments do not, as yet, have the EA/RIR/IRFA supporting documentation required at this review stage. The SSC has consistently expressed concern over the precipitous pace of decision-making related to management of the crab fisheries and at the separate development of NEPA and RFA analyses. The actions proposed in the sideboard and trailing amendments to the rationalization program adopted by the Council could have potentially large impacts on the profitability of fishery sectors and economic viability of communities. The decision-making process has outstripped the collection of data and development of analyses needed to fully assess the likely consequences of proposed actions. Understanding these consequences is important for informed decision-making on the specific issues addressed in the sideboard and trailing amendments and important for future decisions regarding

rationalization in other fisheries. In the absence of the full EA/RIR/IRFA our review of these sections has been highly abbreviated, and we only have been able to prepare substantive comments on the trailing amendment for data collection and binding arbitration

A more thorough treatment of the crab rationalization data collection is dealt with in our review of that specific trailing amendment, however, lack of industry data and data for characterization of community impacts of the proposed amendments constrained our efforts to critique the various options and sub options in all of the trailing amendments.

The SSC notes that the data limitations regarding ex ante and ex post conditions of the halibut/sablefish and AFA pollock fisheries have severely limited the post hoc analysis of the economic consequences of IFQs and Co-Ops. In those cases, reporting of economic data was not mandated in the enabling regulation. While it is preferable for decision-makers to be provided with well-founded information about the likely consequence of management actions before decisions are made, at a minimum, it is important to gather information that will allow an assessment of those consequences after the fact as a means of informing future decisions.

Trailing amendment for Captains' Quota Shares

Tom Suryan outlined the primary findings of the Captain's share committee report. The committee was charged with developing specific options for allocation, trading and various constraints on the use of the shares. The options also include a discussion of whether shares should be allocated from the total quota to a pool, or to each captain from the history available to an individual vessel. Finally, there are several options and suboptions for initial qualifying criteria, transfer of quota, regionalization of shares and delivery requirements, leasing, on-board requirements and loan provisions. The SSC did not provide substantive comments on this alternative.

Trailing Amendment for Alternative Regionalization/Community Protection Option

Council staff provided a summary of the analysis for the alternative regionalization/ community protection options. This suite of options is intended to create opportunities for BSAI and GOA communities to purchase quota or receive negotiated compensation for exit of processing firms from a locality. We note that the community right of refusal option, which is essentially a purchase option, by itself, is equivalent in complexity to the community purchase of halibut quota.

Public Testimony provided by Bob Juettner and Sam Cotton conveyed concerns over the lack of community impact assessment associated with the community protection option. Mr. Juettner indicated that additional data on crab revenue and the distribution of revenues to communities could have been accessed by the analysts. The SSC notes that it is incumbent on the analysts to seek out relevant data sets. Further, interest groups that are impacted by rulemaking, including those representing localities are equally encouraged to provide relevant data to the Council. The testimony also offered the view that the tools economists use for analysis of distributional effects, particularly regional economic impacts models, have no value for analysis of community protection alternatives. The SSC disagrees with this perception.

Public testimony was also offered by Pat Carlson of the City Borough of Kodiak. He indicated Borough's support for a community level designation of processing quota. In a response to SSC questioning regarding an option for purchase of processing quota by communities Mr. Carlson indicated that while purchase options that included the Borough of Kodiak would be helpful. However, a direct allocation and authority to grant permission to exit would be preferable.

Trailing Amendment on Data Collection

The SSC received a briefing on the Crab Rationalization Data Collection Committee Report (John Garner and Gary Painter) in regard to their efforts to comply with the Council's request for mandatory data collection as part of crab rationalization. They reported progress on a variety of issues in regard to data collection. They noted concern in the area of employment data, fixed cost data, variable costs, enforcement and confidentiality. It was indicated that some harvesters did not believe that they should have to supply any data and that the gains from rationalization may be offset by the additional costs of data collection. The SSC noted concern over the tone of the presentation and that the processors and harvesters are about to receive a valuable right to a public good and that their reluctance to supply economic information needed to evaluate crab rationalization was not acceptable. Data that industry has indicated a willingness to provided will not allow an adequate evaluation of the economic and social impacts of crab rationalization as stated in the June 2002 Council motion.

Council Staff (Darrell Brannan) with assistance from NMFS staff (Ron Felthoven and Joe Terry) presented the analysis of the trailing amendment on the data collection program. The analysis indicated that using the proposed survey put forth by the processors and the harvesters would leave the economic analysis of the crab rationalization program deficient in several areas. Specifically, it would not be possible for processing and harvesting sector profits and quasi rents for the crab industry to be calculated, regional impacts could not be addressed, and harvesting and processing productivity and efficiency calculations would be incomplete. In sum, the SSC believes that this would make it impossible to address the economic effects of fishery rationalization.

Staff indicated that after selecting performance indicators, a survey was developed that would allow for the measures to be quantified. After receiving industry input, a revised survey was developed that would make it possible to collect the minimum amount of data needed for the analysis of the effects of the program on quasi-rent and distributional impacts. Additional data would still be needed to analyze crab rationalization effects on industry profitability and any changes in the distribution of profits. The revised survey was also unacceptable to industry. The SSC believes, at the very minimum, that the revised survey designed by staff should be required and prefers that choice of the more comprehensive survey.

John Garner provided testimony on the processor's position on the cost collection survey. John stated that there is a misunderstanding over the survey that the processors submitted to staff. This survey was intended to be a list of variable costs that the processor's felt was relevant to crab production. John stated that the processors are in agreement over most of the revised survey's questions with the main disagreement being over section 6.2 regarding how to prorate fixed costs over multiple products. John also indicated that industry and the staff are not that far off on a mutually acceptable design for the survey.

Trailing Amendment on Binding Arbitration.

The SSC received a briefing on the draft report from the Working group on Binding Arbitration (John Garner and Jay Jacobson). The report includes a problem statement and five binding arbitration alternatives which covered a variety of arbitration structures. The working group stressed that the industry hopes that the presence of binding arbitration would lead to the industry settling on a pricing structure before arbitration would take place. The SSC suggested that the form of the binding arbitration can favor one sector over another and that a contract for fishery simulations using different arbitration structures could be contracted ut to researchers that have expertise in this area. Identified candidate researchers include:

(1) Vernon Smith (George Mason University) vsmith2@gma.edu
(2) Charles Holt cahzk@virgina.edu
(3) Economic Science Laboratory www.econlab.arizona.edu

The Council staff briefing on binding arbitration was provided by Mark Fina. The SSC raised the issue of whether the structure of binding arbitration would differ by fishery and discussed that differences in season length or temporal distributions in harvesting could lead to different preferred alternatives by fishery. Council staff indicated that it might be desirable to have one structure covering all fisheries. The SSC also noted that the report focused on the larger issues concerning arbitration and glossed over many technical aspects of how the arbitration would be implemented.

Additional Public Testimony

Dave Fraser and Gordon Blue offered separate testimony on the A/B split in crab harvesting shares under crab rationalization. Both testimonies, summed below, were received without SSC comment.

Dave Fraser presented an analysis that questioned whether a non-PQ endowed processor could exist under the current A/B split in crab harvesting shares. Gordon Blue presented an analysis that questioned the notion of using "average values" to calculate harvesters percent of first wholesale price and using revenues instead of quasi-rents to base the split on.

CPT and PNCIAC.

The SSC was briefed on the Crab Plan Team meeting (Wayne Donaldson and Bob Otto) and the Pacific Northwest Crab Industry Advisory Committee meeting (Gary Painter). The Crab Plan Team notes that several crab stocks are stressed and there was discussion on the appropriate time frame to use for MSST. The team also discussed the work of on biological reference point estimates for seven BSAI crab stocks. Initial results of this study suggest that the current maximum harvest rates for snow and Tanner crab may be too high. The team believes that the results of this study will be useful to the examination of crab overfishing definitions. PNCIAC noted that its recommendation to consider an intermediate step between the 10% and 15% exploitation rate for mature red king crab was supported by the Crab Plan Team. The committee also noted that because of declining crab stocks that the crab industry is going through difficult economic times.

Sideboards. The SSC received a briefing on the trailing amendment on sideboards from Darrell Brannan. The briefing was received without SSC comment.

SEIS. The SSC received an update on the status of the SEIS by Council staff.

C-2 STELLER SEA LION - MISCELLANEOUS

The SSC received a report from John Sease with the National Marine Mammal Lab (AFSC) on Stellar sea lion population counts. Counts of non-pups in both the eastern and western stocks generally showed an increase in the 2002 surveys. Counts of pups, while still in decline, appear to be declining at a much slower rate than in previous periods. These trends are very encouraging, although the SSC cautions that it is too soon to conclude that the western population is recovering.

C-2(c) CAPE SARICHEF CLOSURE

Presenters: M. Elizabeth Conners (AFSC), Ben Muse (NMFS)
Public Testimony: Dave Fraser, Brent Paine
Issues: 1. Experimental Design (Appendix A of EA), 2. EA Review

NMFS is proposing a study of local depletion of Pacific cod in the Bering Sea near Cape Sarichef, in the so-called Cod Alley. The changes in abundance in closed and open waters in the study area will be measured with crab pots before and after the main fishery in January to March. Other biological data will be collected.

The SSC believes that the overall experimental design is sound and welcomes experimental studies of this sort. Some additional attention to elements of the experimental design should be considered, as itemized below. The EA/RIR/IRFA has made a good attempt to quantify the impacts of the closure; an unresolved issue of catch amounts in statistical area 655430 needs to be resolved: amounts in this document do not agree with those in Amendment 73.

Experimental Design issues:

1. From public testimony, it seems likely that depth changes would be expected during the season as Pacific cod move to different depths. The design should attempt to measure cod abundance at similar depths in the closed and open areas.
2. Statistical power should be reported in the experimental design. The power was reported in the presentation, but was based on a significance level α of 0.10. Either justification for this value should be given, or else the typical α of 0.05 should be used.
3. It would be useful to get a handle on total trawl catch in the open part of the study area. This may not be possible because a significant portion of the fleet has only 30% coverage and is not mandatory for estimating the design parameters, but might help to explain aspects of the results.
4. Other gears (longlines, pots) operate in both the open and closed areas. Some attempt should be made to determine if catches by these gears would confound the results of the study. It should be a design consideration of whether it is important to close the study area to all fishing, not an option in the EA/RIR/IRFA.
5. Industry desires an opportunity to comment on the design and impact of this study: NMFS and industry should meet to resolve issues.
6. It is unclear whether the closure should be for 1 year or for all 4 years proposed. Funding is not available yet for the remaining time period, and it is not clear whether the results will sufficiently interesting to continue the study after the first year.
7. Hypothesis tests should be expanded to include testing whether the change in abundance between open and closed areas is greater than the change expected due to the average level of fishing for the Bering Sea as a whole. In the SSCs opinion, "depletion" would occur if the abundance change is greater in the open area than in the closed area. "Local depletion" would occur if the difference in the abundance change between the open and closed areas exceeds the average exploitation rate for the Bering Sea as a whole during this period.
8. According to public testimony, the closure of the entire Cod Alley to trawling would be a large burden to harvesters. Is it possible that viable results could be obtained by reducing the size of the closed area to, say, half of Cod Alley?

C-5 ESSENTIAL FISH HABITAT

Cathy Coon of the Council Staff and Craig Rose of the AFSC provided an EFH update.

Craig Rose gave a report applying the EFH model from the draft discussion paper "Models for evaluating fisheries effect in habitat," written by Jeff Fujioka and Craig Rose. Donna Parker (Arctic Storm), Ben Entiknap (AMCC), Geoff Shester (OCEANA), John Gauvin (Groundfish Forum), and Heather McCarty (Central Bering Sea CDQ) provided public testimony. The EFH model was introduced to the SSC at the June Council meeting. Since then, the authors have estimated parameters of the model using actual data and informed assumptions where necessary. Graphical representations of predicted impacts of fisheries on EFH were presented. The authors should be congratulated for their rapid implementation.

The authors made it clear that there was a scarcity of the types of data required by the model and that model development was at its early stages. Percent bottom type, impact rate for various habitats, and recovery rate are all poorly known and must be assumed for many of the bottom types. Specific habitat types such as corals, and gears such as scallop dredges have yet to be addressed in the model. Despite these limitations, the model behaved intuitively, providing rankings of impacts for various fisheries that may be useful.

However, it is important to realize that these rankings are based on uncertain data, and a model output that cannot be compared simply with observed data. Also estimated model impacts should be put in the context of other things that affect FMP species. The rankings do not provide information on absolute impacts or absolute difference among impacts.

Nevertheless, the model represents a promising avenue for analyzing EFH. The model clearly delineates areas where data is sparse or non-existent, and therefore highlights areas that require additional research. The SSC recommends further development of the model and its inputs, and encourages research to fill the obvious data gaps.

Since model development is in its early stages, it is recommended that a process be developed that allows for the review of model assumptions and results. The SSC encourages utilization of all data sources in the process of the designing of alternatives and mitigation measures.

C-10(a) HALIBUT MANAGEMENT

Rob Bentz and Allen Bingham (ADF&G) reported on a comparison of halibut harvests reported in the logbook entries with on-site survey reports. Jane DiCosimo (NPFMC) and Glen Merrill (NMFS-AK Region) provided staff response to questions related to the timing and actions required from the SSC in support of Council decision-making.

There appear to be two issues related to use of halibut charter logbook data and implementation of a Charter Halibut IFQ Program. The first is the appropriateness of using these data to establish whether or not a vessel was active in the fishery during the qualifying years (1998-1999). The second is whether logbook data are representative of the distribution of catch among participating charter vessels in those years, and suitable as documentation for a catch-history based initial allocation of quota shares. Finally, the suitability of the logbook data as a basis for GHL management is also in question.

The analysis reported by ADF&G was not specifically designed to directly address these questions. Nevertheless, the analysis includes interesting observations on the frequency of inconsistent reporting of halibut landings and lack of compliance with the logbook requirement. Although the frequency of inconsistencies between logbook entries and on-site survey reports is troubling, that concern is offset in part

by the lack of a systematic pattern of positive or negative deviation and the statistical insignificance of most of the deviations. The SSC notes that the veracity of the logbook recorded catch records and the on-site survey reports was not independently verified and thus it would be inappropriate to judge the logbook records as more or less accurate than the on-site survey reports. As such, use of the terms "over reporting" and "under reporting" should be avoided. All that is known is that logbook data match or do not match on-site survey reports. More over, as noted by the authors, the logbook and on-site data are not independent and should not be compared using standard statistical methods that assume independence.

The SSC did not have access to the September 2001 ADF&G comparison of harvest estimates derived from the logbook records and harvest estimates derived from the ADF&G statewide angler survey. As a result the SSC cannot comment on the question of the relative accuracy of the logbook data versus the statewide harvest estimates. It should be noted however that both rely on self-reported catches and neither are what would be generally considered to be independent sources of catch estimation. If the logbook data are indeed skewed, their utility in administering a GHL may be compromised. Similarly, skewed logbook data might undermine their utility as a basis for initial IFQ allocations unless all logbook entries are equally skewed. Regardless of the accuracy of logbooks as a measure of individual catch records, IFQ allocations could still be awarded. As noted in our October 2000 minutes, catch history need not be the primary basis for the initial allocation of quota shares:

> The selection of any particular set of potential IFQ recipients (stakeholders) should be an explicit decision of the Council and should not be driven by data availability. Once the Council has decided which classes of stakeholders to recognize, criteria can be defined to identify members of those stakeholder classes. For example, while MSFCMA requires that limited entry allocations be based, at least in part, on previous participation in the fishery, the criteria for determining the magnitude of that allocation and the extent of past participation are not specified in law. Consequently, it would be consistent with MSFCMA to acknowledge a very broad set of stakeholders (e.g. skippers, owners, anglers) under mechanisms as varied as equal shares, random shares assigned by lottery, or shares proportional to historic days fished, catches, or landings.

D-1 GROUNDFISH ISSUES

D-1(a) F40 REVIEW

The Council requested outside review of its harvest policy, so a team of independent reviewers conducted the review this summer. The team chair, Prof. Dan Goodman (Montana State University), briefed the SSC on its findings. The Team's charge was to explain the NPFMC policy within the framework of harvest policy theory and practice around the world, to evaluate the conservatism of the NPFMC policy, and to determine if the policy is considerate of ecosystem needs. The SSC looks forward to reading the Team's report, which will be available soon.

D-1(b) TAC-SETTING (AMENDMENTS 48/48)

Melanie Brown and Sue Salveson (NMFS Regional Office) presented the next iteration of this long-standing issue. The preparers of the new EA/RIR have attempted to be responsive to SSC and Council concerns by developing a new problem statement, bringing in information about requirements of the Administrative Procedures Act (APA), revising the expected benefits of alternatives, and adding an option for leaving sablefish on a calendar year schedule. They were not able to develop an alternative requested by the SSC that is more similar to the current process. The analysis and presentation in the document are particularly well done and informative to the actions being contemplated. In particular, the analysis shows (1) that increased variability in management results from the Alternatives to the Status Quo, and (2) that the effect of this

increased uncertainty may result in lower harvests and higher biomasses (which would not have otherwise been expected *a priori*).

Two major events have occurred since this issue was last considered. First, the Plan Teams have implemented a new forecasting procedure for updating ABCs in September based on stock assessment and catch projections, rather than just rolling over last year's results. The SSC endorses this new process [see our comments in section D-1(d-e) below] and believes it addresses many problems identified in the document. Since the Plan Teams did not develop this procedure until their recent September meeting, the document understandably does not mention this development. The document would be agreeably improved by explanation of how the Plan Team's new procedure addresses issues of interest to NMFS.

Second, the Marine Conservation Alliance (MCA) has proposed two new options that are more responsive to the SSC's suggestion of an alternative more like the Status Quo. The first involves including more information in the Interim Rule document along with web-based access to new information. The second option is a 15-18 month specification process based on projections. The SSC believes that both of these options are noteworthy and deserve further evaluation and analysis.

Thus, the SSC agrees with NMFS that further consideration of TAC-setting should be postponed until the February 2003 meeting to allow time for these issues to be investigated. The additional time may also be beneficial, in that litigation in other arenas pertaining to this issue may have been settled by then.

As noted in our February 2002 minutes, the annual harvest specification process is the realization of an analysis of the stock dynamics and the implementation of the Council's harvest strategy. The SSC believes that the proper focus for evaluation of this process is on the properties of the process that generate the recommendations of ABC, OFL, and TAC, and not the specific values themselves. The whole idea of having a framework procedure is to avoid extensive new rule-making by codifying and standardizing procedures. The NPFMC has made great strides over the years in doing so, and some administrative relief from overly-long review processes is warranted.

The SSC requests some additional information in the analysis if it can be determined. Namely, the issue of how much is the determination of ABC due to data in the most recent year, as opposed to data from the past? The new Plan Team forecasting procedure essentially uses stock assessment data up to but not including the current year in its harvest specification recommendations in October at this meeting. The new SAFEs will essentially update the exact same procedures with data from the current year. A comparison of the forecast errors from the old rollover procedure and the new forecasting method would be revelatory in assuring the public that there is some predictability in future population status.

D-1 (c) OTHER SPECIES

Jane DiCosimo (NPFMC) and Sara Gaichas (NMFS) gave presentations on the issue of standardizing guidelines and procedures for aggregating or disaggregating species into management units. By splitting out minor species that are not vulnerable or truly at risk from fishing, there could be unnecessary "overfishing" problems created by having very small harvest limits that could easily be exceeded, triggering the shutdown of major fisheries. The principal concern is to provide adequate protection to species that are vulnerable to overfishing but that are currently lumped into "other species" categories that contain a variety of disparate species that have no other home in the FMP. Their life histories are different, as are their susceptibilities to harvest and economic desirabilities. A subcommittee of SSC and Plan Team members met in August to provide a better categorization of species in the FMP. This is a long-term process, which will first develop of a set of categories, then list species in the categories, and finally propose monitoring, conservation, and harvest strategies. The subcommittee advanced a plan to list species on the basis of their vulnerability and

the degree to which they are monitored (or should be monitored). The SSC endorses this approach. The SSC wishes to be involved (perhaps by Email) in the development of categories and the placement of species into the categories. A further presentation to the SSC is expected in December.

D-1(d-e) BSAI AND GOA SAFE METHODOLOGY

Forecasting Procedure for Interim Specifications

The SSC believes that the Plan Teams have made a major advance in their develop of a forecasting (or projection) procedure for updating the September ABCs and OFLs from the most-recent SAFEs. The previous approach was a simple rollover of the previous year's numbers, which was done simply to provide some number until the new SAFEs were developed. The new approach uses stock assessment models for species in Tiers 1 to 3 to forecast future abundance, which is done routinely in the stock assessments. A welcome feature of the new method (suggested by industry) is to update the models by using the projected total catch in the current year. The SSC notes that the projected total catch proceeds from the year-to-date catch at the current time and that much of the total catch in a year has already been taken. Nevertheless, the SSC requests that documentation of the projected total catch be made, so that the algorithms used can be examined and approved. Otherwise, the SSC commends the Teams on a major improvement regarding interim specifications and endorses the forecasting procedure for future use. As noted elsewhere, the new procedure solves many problems with the current TAC-setting process, and the SSC recommends that an analysis examine the forecast accuracy of this procedure in terms of the December ABCs and OFLs.

The SSC suggests that the Plan Teams discuss what to do when some preliminary data suggest that the population trajectory is opposite to the projection (as did occur with GOA pollock this year; see below). One possibility might be to choose the smaller of the projection and the rollover.

National Standard Guidelines

Grant Thompson reported that NMFS headquarters is conducting its annual report of stock status for all marine fish stocks in the nation. For NPFMC, several stocks are being reclassified from "not overfished" to "unknown", because NMFS has decided to use only FMP language and not the entire harvest specification process. The implication for NPFMC is that NMFS is ignoring SAFE evaluations of whether stocks are below or above MSST and thus providing misleading information to the public.

The Plan Teams are requesting that NMFS consider redefining "overfishing" and overfished" so that the SAFE evaluations can be used. The SSC thoroughly supports the Teams' efforts in this regard and requests AP and Council support as well. The SSC notes that efforts to resolve the disagreement between NPFMC and NMFS in relation to MSST have stalled in the last two years. There are two reasons for this: (1) regional NMFS analysts have been fully occupied with Steller Sea Lion and PSEIS issues, and (2) NMFS Headquarters has not responded to a letter sent by the Council in the year 2000, requesting clarification of the criteria to be followed and the amount of permissible latitude that the Council be allowed.

Ecosystem Considerations

Pat Livingston (NMFS) reported on efforts to continue to improve this section of the SAFE. Dorothy Childers (AMCC) reported that she felt that the information presented on coral abundance from trawl surveys was uninformative and possibly misleading (showing large changes in abundance over time) and would perhaps be better used for spatial analysis. The SSC is pleased with the evolution of this chapter and finds that the work to develop ecosystem indicators is welcome. The SSC endorses further efforts to synthesize and visualize results in a multi-species setting, and to bring ecosystem issues into each stock-specific SAFE chapter.

BSAI Arrowtooth Flounder
The SSC endorses the conversion from stock synthesis to AD Model Builder.

AI Atka Mackerel
The SSC endorses the conversion from stock synthesis to AD Model Builder, using the new NMFS Stock Assessment Toolbox (SAT) interface.

Rockfishes
Dorothy Childers (AMCC) gave public testimony calling for great protection of rockfish species. The SSC believes that rockfish assessment will become one of the critical stock assessment issues in the next few years. The combination of long-lived species, multiple species within an assessment group, issues of stock and species identification, insufficient information on abundance and life history, localized fishing pressure, limited movement and migration of adults, unknown larval dispersal patterns, habitat-specific associations, prior history of overexploitation (by Russian and Japanese trawlers in the 1960s), and limited ability to rebuild (only Gulf POP) creates fishery management difficulties unlike any other species group. One of the current issues is the development of separate ABCs for shortraker and rougheye rockfish, which NMFS feels is not currently possible due to inability to accurately identify these two species in the catch. NMFS has outlined an ambitious management program for these two species, which the SSC strongly supports. It will be necessary not only to attempt to develop separate ABCs for these two species but to develop a real solution based on developing foundations of knowledge about rockfish biology and ecology.

This situation is analogous to the "other species" problem, in that some rockfishes fall within the highly vulnerable, low data scenario. The recommendation that follows from consideration of that issue is that intensive data collection and alternate management measures are needed.

GOA Pollock
Martin Dorn (NMFS) briefed the SSC on the GOA pollock stock assessment, and Chris Wilson (NMFS) described recent and future hydroacoustic survey efforts. The recent hydroacoustic survey suggests that only about 16% of the adult pollock population returned to Shelikof Strait for spawning, which seems much lower than in other years. This finding was possible because of an expanded winter survey.

The preliminary information from this year gives mixed signals about the future, depending on which data are examined. A formal and complete stock assessment is not available at the present time for greater understanding of these data sources. This stock assessment is likely to be one of the most critical this year, because GOA pollock may be approaching the $B_{20\%}$ level at which the directed fishery will be terminated. Dorn presented a preliminary assessment that showed that the new hydroacoustic survey data point has a strong effect on the estimated biomass. Consequently, he plans to have alternative analyses with the data point included and then excluded.

The SSC also suggests that two additional alternatives be evaluated: (1) alter the assessment model in some way so that the complete hydroacoustic survey data from this year can be used (at present only the Shelikof Strait portion is used), and (2) drop the hydroacoustic survey entirely from the analysis. The first alternative is important, in that the current assessment model is based on the now-apparently untenable assumption that a constant proportion of fish return to Shelikof Strait each year. The second alternative may be the only current resolution to this problem if that assumption cannot be relaxed. Otherwise, the SSC is supportive of the GOA assessment model and analyses proposed.

Concerning the interim specification for GOA pollock, the SSC recommends the default procedure of rolling over the 2002 ABC (54500 mt) and OFL. The SSC could not go along with PT's ABC recommendation (43390 mt) because it is based on an adjustment from the preliminary assessment that has no written record

for justification. The SSC also could not support the ABC of 75995 mt from the new forecasting procedure While both the Plan Teams and SSC do recommend the forecasting procedure for all other species, the SSC believes that the uncertainties in the preliminary pollock data are so large that deviation from the current procedure and value would be unwise until a formal stock assessment can be completed.

D-1(d-e) SAFE—ECONOMICS SECTION

Although the SSC did not receive a presentation on the economics portion of the SAFE, we note that the Economics SAFE includes useful time series of landings and average exvessel prices by fishery sector and management region. The maintenance and reporting of these data series is an important function and should be continued. However, the SSC notes that the Economics SAFE has not undergone the same degree of maturation that characterizes other portions of the SAFE. The SSC encourages a revitalization of the Economics SAFE towards the development of empirically based conceptual and analytic models of the fishery that are suitable for addressing the economic consequences of alternative harvest strategies considered in the SAFE. These new economic models should be forward looking and suitable for exploring the potential consequences of evolving management regimes and varying environmental conditions. The maturation and proposed integration of the Ecosystem SAFE serve as a model for directed evolution of the Economics SAFE.

D-2 OTHER BUSINESS

D-2(b) PLAN TEAM APPOINTMENTS

The SSC recommends that the Council appoint Sara Gaiches to the GOA Plan Team and Gregg Rosenkranz to the Scallop Plan Team.

D-2(c) NPRB

Dr. Clarence Pautzke provided the SSC with an update on activities of the NPRB. He requested that members of the SSC review the Board's research priorities. He also expressed the desire to develop a process that would facilitate the integration of research needs identified by the SSC into the Board process. These issues will be addressed at a future SSC meeting.

MISCELLANEOUS - Preparation of SSC Minutes

SSC minutes contain advice to the Council, explanation of current issues, and a historical record of SSC deliberations and advice. It is important that the minutes be clear, accurate, and complete. To assist in these goals, Terry Quinn and Seth Macinko will draft a list of guidelines to be reviewed by SSC members at the December 2002 meeting.