

**Joint Plan Team minutes
November 17-18, 2003**

The Joint Meeting of the Bering Sea/Aleutian Islands and Gulf of Alaska Plan Teams convened on November 17-18, 2003. Members in attendance were Loh-Lee Low (BSAI chair), Jane DiCosimo, Jim Ianelli(GOA co-chair), Diana Stram(GOA co-chair), Jeff Fujioka, Jon Heifetz, Robert Foy, Bill Bechtol, Tory O'Connell, Tom Pearson, Beth Sinclair, Farron Wallace, Sarah Gaichas, Lowell Fritz, Brenda Norcross, Mike Sigler, Andy Smoker, Grant Thompson, Ivan Vining and Kathy Kuletz. Mike Ruccio and Bill Clark were not present. Several AFSC scientists and approximately twenty members of the public also attended.

Terms of Reference:

The Teams reviewed their current terms of reference to evaluate whether or not changes were necessary to reflect the current scope of work by the Plan Teams. While only minor editorial changes were eventually made (see attached revised terms of reference), discussion ensued of membership, scope of work and the opportunity for public comments. Discussion of membership focused upon the necessity for increased economic involvement in the Plan Teams. Membership by an economist is lacking on both Plan Teams and the Teams could benefit from the participation of an economist which would raise the importance/discussion of economic aspects of fisheries during the Plan Team deliberations.

The Teams discussed the use of work groups (as referenced in the terms of reference). While work groups have not been formed and utilized by the plan teams historically, the teams decided to retain the language to allow for flexibility in future plan team work.

The teams discussed formalizing the plan team recommendations in the stock assessment process. The teams recommended that Plan Team commentary be formally incorporated into assessments similar to how the SSC comments are incorporated. Plan Team minutes could thus be used to formally comment on an assessment and a section could be added to stock assessments regarding the response to Plan Team review.

Public comment has been an important part of Plan Team meetings and no suggestion was made to decrease the amount or timing for public comments, merely to potentially formalize their timing as necessary. Members of the public expressed their appreciation at the informal nature and the receptiveness for their comments during team discussions. It was decided to request comments after the stock assessment presentation and prior to Plan Team deliberations, but to also allow for additional comments during deliberations (and prior to formal recommendations) at the discretion of the Plan Team chairs.

The Teams determined that having one clear chair during Joint Plan Team meetings would also be useful. It was decided that the determination of chair during Joint Plan Team meetings would be decided on an assessment by assessment basis (typically for sablefish).

Council updates:

Council staff updated the Plan Teams on the on-going Council projects of the TAC-Setting EA, Programmatic groundfish SEIS, EFH EIS, HAPC proposal process, GOA Groundfish Rationalization EIS and the Non-target species working group. The Plan Teams will be involved in reviewing upcoming HAPC proposals and would convene a special teleconferenced meeting of the Joint Teams to review and make recommendations on these proposals in Spring 2004. The Plan Teams discussed the possibility of creating a smaller workgroup of Plan Team members for specifically reviewing HAPC proposals.

The Teams were updated on the progress by the Council appointed non target species working group which met at the October Council meeting. There was a brief discussion of the possible long term timing of the amendment package(s) which would be presented to change the current species groupings. It is possible that 1-3 plan amendments would be put forward for both GOA and BSAI species groupings. While it may be

possible to do in one extensive amendment package, it may be more advisable to do in sequential amendments. The Council will decide how to proceed with action items as necessary.

Ecosystem Considerations Chapter:

Jennifer Boldt presented an overview of the updated changes to the Ecosystems Considerations Chapter. The chapter was presented at the September Plan Team meeting, thus the Teams were informed of any updated information included in the revised chapter.

The teams discussed the general direction of the Ecosystem Considerations document. Discussion focused on the need for the inclusion of time series of multiple indicators so as to allow for range of relevant indicators for use by individual stock assessment authors. In general, the chapter continues to look at a wide variety of indicators with an aim towards identifying the most important indicators and thus track those specifically. Currently the ecosystem group is attempting to evaluate as many indicators as possible due to lack of knowledge of which will prove to be the most important. The Plan Teams also recommended placing confidence intervals on Bering Sea HAPC biomass productivity graphs to establish if trends are discernable or not.

Ecosystem Assessment:

Kerim Aydin presented an overview of the BSAI and GOA ecosystem models. The goal is to evaluate the model for single species complex. The teams recommended providing food webs centered on individual stock assessment authors' target species to increase the utility and predator/prey relationship information for use in individual stock assessments. Bycatch rates by species and by fishery were individually useful for all target species (as provided prior to the assessments by Jim Ianelli and Sarah Gaichas). The Teams recommended tabulating information in a similar manner for use in individual assessments. Questions were posed regarding confidence in the relationship between arrowtooth flounder and pollock. Food habits data lags stock assessment data therefore the relationship is still being based upon stomach analysis data from the late 1990s.

The ecosystem assessment framework uses the TAC EA alternatives as a structure for predictive scenarios. Predictive approaches utilized include: the multi species bycatch model (where bycatch here is defined as incidental catch not necessarily discarded catch defined in the MSA); multi-species virtual population analysis and forecast models for EBS (future changes in dominant target species including predator/prey dynamics); and mass balance/biomass dynamics (Ecopath/Ecosim). These approaches are intended to provide a whole ecosystem view.

Results were in the form of long-term predictions (e.g., to 2023) on predator/prey interactions; forage availability summarized by area; removal of top predators by area; energy flow and removal; and diversity. The next steps for modeling work include: continuing with multi-species and ecosystem model validation; improving model forecasting with specific fishing strategies and bycatch constraints; developing a suite of regime shift scenarios; developing strategies to summarize ecosystem considerations section indicators with respect to historical trends and present status (e.g., possible traffic light approach to highlighting increasing, decreasing or stable trends); and improving ecosystem advice in target species assessment sections (e.g., to standardize evaluations providing target species food web information including target species predation index).

Economic SAFE Report:

Joe Terry presented an update on new information included in the Economic SAFE Report. This new information includes a summary of fishing capacity and an overview of updated information in the report. Specific changes include a minor correction factor applied to the prohibited species catch data for the CDQ fisheries as it was determined that the PSC for CDQs has not previously been included in the blend data.

Overall current capacity exceeds actual catch by nearly 50% and has increased relative to 2001. Recommendations were made to include a breakdown by area in the summary section of the report. Future changes to this report will include community profile information summaries and social indicator summaries for the report in 2005. Extensive tables will be made available via the web and thus not included in the actual report.

Halibut Discard Mortality Rates:

Gregg Williams from the IPHC presented an update on Pacific halibut discard mortality rates in the 1990-2002 groundfish fisheries with recommendations for monitoring in 2004. A proposal was put forward to the Plan Teams and the Council three years ago in order to stabilize the process by which annual discard mortality rates had been calculated. Rates were based upon a 3-year average after which rates were analyzed and proposed revisions then summarized on a triennial basis. Changes were initially seen in three BS trawl fisheries: rockfish, pelagic pollock and yellowfin sole. Discussion focused upon the reasons behind these changes and the relative confidence levels within these data. DMRs as currently calculated are updated every three years unless there is no significant difference between the previous calculation and the recent calculation (based upon the past three years).

Plan Team members raised concerns regarding the statistical methodology employed in determining significant changes in DMRs. Suggestions to the Commission from the Plan Team included comparison against a moving 10 year average (rather than a fixed average from 1990-1999); the use of additional statistical means for identifying statistically significant differences; the use of the entire time series for estimating the DMRs if no significant difference was shown for the previous 3 years; and the use of a power test to estimate if the 1990-1999 data set is representative of the whole time series for comparative purposes. Concerns were expressed regarding the exclusion of sablefish from this analysis and the possible need for inclusion by some means. Commission staff agreed to attempt to follow some of these recommendations in order to improve upon the statistical methodology used. Updated DMRs (using a different methodology) are presented in the SAFE report. Comments from the public also mentioned the need to address the inherent subjectivity of the observer data on the mortality of halibut.

Sablefish:

Mike Sigler presented the stock assessment report for sablefish. The spawning abundance increased since last year but is expected to decrease slightly (<1%) from 2003 to 2004. Sablefish abundance has continued to decline dramatically in the eastern gulf (except for 2002 due to the above average 1995 and 1997 year classes) and the survey index has decreased again in 2003 causing concern regarding the impact on the spawning population given that the central and eastern gulf make up the main spawning area for sablefish.

Questions were raised regarding the longline survey and the comparison between logbook, observer and survey data, particularly in West Yakutat. Public comments reflected that abundance estimates in West Yakutat are particularly sensitive to bad survey days given the low number of stations sampled in this region. However, the author noted that despite the admittedly low number of survey stations there has been a consistent observed decline in this region. It was noted that the timing of the survey versus the fishery allows for seasonal differences in catch rates.

The Plan Team discussed the recruitment estimates used to project future abundance trends and the computation of risk analysis results presented in the assessment. It was clarified that recruitment estimates of the 1977-1999 year classes are used to estimate biological reference points such as $B_{40\%}$, while projections of future abundance were computed and presented using both the 1977-1999 dataset or a subset of year classes from 1982-1999. The authors considered the more recent data subset a more appropriate and conservative assumption for short term future recruitment. Due to the current estimated age structure of the population, projections indicated a decline in sablefish abundance in the next several years for both optimistic (1977-1999 long term) and pessimistic (1982-1999 short term) recruitment scenarios. It was pointed out that

projections over the next 2 to 3 years are unaffected by recruitment scenario choice. There were also concerns raised regarding the uncertainty in the estimate of 5 year olds (1998 year class) in the population. The estimates of young sablefish in the current population have a significant effect on short term abundance projections. The 1998 year class was expected to be above average based on the 2002 age composition sample, but is estimated as below average by the model. It has been suggested that the bottom trawl surveys in the GOA and BS shelf may provide an improvement in the estimate of young sablefish abundance and should be included in addition to (and not to replace) the sablefish longline survey. There is a lack of size data from the trawl fishery which limits the model's ability to estimate younger year classes. Concerns were raised that the use of age and length data for same year allows for incorporation of the same data twice, therefore it would be preferable to not include both in the same year (i.e., when both are available, use the most appropriate type of data).

The Teams noted that actual catch levels have been consistently less (averaging 88% of TAC) than the overall ABC, but with the majority of the unused TAC concentrated in the BSAI area while the GOA fishery takes close to their entire allocated TAC. The Teams noted that this was due to the lack of longline effort in the Bering Sea and Aleutian Islands. Percent harvest in the BS may increase due to the increased use of pots in the fixed gear allocation resulting in a higher percentage of the TAC being taken in these areas in the future. Recent increases in pot fishing will likely result in a greater proportion of the ABC being taken though it is unlikely to reach 100% in 2004.

While it was agreed the control rule which combines a biomass target strategy and a fishing rate strategy was worthwhile, there is uncertainty about the appropriate targets and rates, as well as the ability to estimate them. Concern was expressed on how much to rely on the estimated control rule and how much consideration should be given to observed catch levels and population abundance trends. Although increasing harvest levels and harvest rates while the population is decreasing below the target level is not consistent with recent ABC recommendations, the Team agreed that moving closer to the control rule could be safely implemented for one year (the 2004 ABC) given that the stock status is evaluated each year.

The authors' recommendations for the 2004 ABC included two cases less than the maximum permissible ABC:

- 1- 20,700 mt (0.8 of max permissible)
- 2- 23,000 mt (0.9 of max permissible)

The maximum permissible ABC is 25,400 mt.

Chris Lunsford presented a discussion of the background for the observed low catch rates associated with the relatively high quotas in the BS and AI regions. Sablefish habitat is large in the BS and AI and the stock is Alaska-wide; 43% of total sablefish habitat is in the BSAI. Killer whale predation has continuously affected regions of the fishery and the survey alike. Public comment indicated that the areas of highest killer whale predation are coincident with the best sablefish habitat. Seasonality of the fishery is not always coincident with the survey dates. Recommendations by the Plan Teams for next year's assessment include examining more specifically the details of fishery logbook data, e.g., the catch analysis of observed changes in effort in space and time from logbook data/fishery data; additional detail on small boat versus large boat catch and area, and the possible variances in catch rates due to individual vessels. Area specific size differences could affect management of the stock in different regions. It was suggested that the use of exploitable biomass rather than relative population weight (RPW) was an appropriate consideration that would probably reduce somewhat the relative apportionment to the BS and AI as the average size of sablefish tend to be smaller in those areas. The average size of sablefish in the Western GOA also tends to be smaller than in the Central or Eastern GOA. The Plan Teams recommend focusing attention on the logbook data and how spatial changes are reflected in the fishery. Discussion also focused on the relative observed increase in pot fishing in the BS. Pot fishing increased in 2003 compared to 2002. Fixed gear is specifically allocated in the IFQ, but has traditionally been under harvested despite this fixed allocation. The assessment could focus attention

on the increased catch by fixed gear, which may be a possible response to predation by killer whales in this region.

Industry concern regarding the amount of ABC apportioned in the Bering Sea and Aleutian Island region given the low catch rates in these areas was discussed. It was explained that although catch rates and estimated density are low, the large amount of adult sablefish habitat in these regions results in the ABC apportionments that are consistent with harvesting each region at about the same rate.

Dan Falvey with Alaska Longline Fishermens Association (ALFA) presented a discussion on the decision analysis utilized in the assessment and related concerns with this analysis. The value used for recent year classes has a large effect on the projected abundance and associated probability estimates. Therefore uncertainty in the value of these recruitments dramatically impacts results (example of changing the 1998 value for year class and the related impact). ALFA recommended an ABC of 23,000 mt (for ABC =TAC), and recommended not using a decision analysis approach without further refinement for the ABC recommendation. A recommendation was also made to address the concept of seasonal bias, as summer surveys see larger fish thus smaller fish are not being evaluated in the survey, and the timing of the survey should be changed to evaluate for these smaller fish if the model is going to depend so tightly on the values for these year classes.

Nick Delaney, representing 10 Kodiak sablefish longliners, recommends entering every fish ticket into a database (~2000 landings in the commercial fishery). This would allow for the creation of an annual historic data information base including 6 size grades/market categories. This could allow for detailed commercial history information at a relatively low cost as it requires only entering the data into a database given that the data already exist. It might be possible to go back in records for 3-4 years. A consideration was mentioned that not all fish tickets are broken out by size categories, however size grades are more prevalent on recent fish tickets. Concerns were raised by Plan Team members regarding the potential inconsistencies between individual processors on size classes. However, if it were possible to begin now with current fish tickets, a system could be put in place and designed (in conjunction with AKFIN) to coordinate data entry and quality. It would also be possible to then break down the data on effort and size groupings by vessels to further investigate seasonal differences.

Cora Crome, Petersburg Vessel Owners Association (PVOA), recommends the choice of the 23,000 mt for TAC/ABC. The PVOA would not like the ABC to be lower than that amount (i.e., 0.8), as they believe that sufficient levels of conservation are already built into assessment. The PVOA do not believe that 0.9 allows for a dangerous level of exploitation. They would prefer to go with the stair-step approach to the quota as represented by the compromise of 0.9. PVOA does not recommend utilizing the maximum ABC of 25,400 mt but believes that 0.9 of the max ABC is a reasonable compromise and is a still a risk averse recommendation. Additional public commentary suggested looking at seasonal differences in survey data versus commercial catch, and the possible use of individual observer data via in plant observers.

The Plan Team discussed the authors' recommendation of two different values for the ABC, 0.8 and 0.9 of the maximum ABC. The Plan Team accepts the authors' recommended values below the maximum ABC given concerns regarding the substantial increase (22% over the 2003 ABC) which would occur if the ABC were set at the maximum permissible while projections indicate that the stock will decrease in the following year. Discussions focused on the projected stock decrease and concerns regarding the need for more precaution (e.g., 0.8 max ABC) given that all scenarios project a decrease in biomass in the next several years. The ABC of 23,000 mt seems to confer sufficient conservatism for the following reasons: this recommendation includes the pessimistic recruitment scenario, yet still allows for a relatively high goal of rebuilding despite this pessimistic recruitment; the strength of the 1998 year class is likely to be higher than that used in the model; the recommendation is more conservative than the maximum ABC; and the stock condition will be reevaluated again next year with additional annual survey data. Therefore this 0.9 maximum ABC represents a sufficiently risk-averse value and will be reevaluated again next year. The ABC of 23,000 mt represents a moderate increase (10%) compared to the 2003 ABC of 20,900 mt.

The Plan Team agreed unanimously to recommend the 0.9 maximum ABC value of 23,000 mt.

The Plan Team expressed concerns regarding the continued decline of the spawning stock in the eastern GOA and will continue to examine this in forthcoming assessments.

The Plan Teams also moved to take 5% of the SEO TAC in the GOA and moved it to WYAK to accommodate the trawl closure, as has been implemented since 1998. The Plan Teams recommend including this designated calculation in the assessment in following years in order to better clarify to the public that this is done consistently on an annual basis.

PLAN TEAMS FOR THE GROUND FISH FISHERIES
OF THE BERING SEA/ALEUTIAN ISLANDS AND GULF OF ALASKA

TERMS OF REFERENCE

Approved by the NPFMC (October 1994)
Modified by Plan Teams (November 1994)
Modified by Plan Teams (November 2003)

- 1- **Establishment.** The North Pacific Fishery Management Council (Council) shall establish Plan Teams for the groundfish fisheries of the Bering Sea/Aleutian Islands (BS/AI) and Gulf of Alaska (GOA). The Plan Teams will provide the Council with advice in the areas of regulatory management, natural and social science, mathematics, and statistics as they relate to the groundfish fisheries of the BS/AI and GOA.
- 2- **Membership.** Plan Team members will be appointed from government agencies and academic institutions having expertise relating to the groundfish fisheries of the BS/AI and GOA. Normally, each Plan Team will include at least one member from the Council staff, the regional office of the National Marine Fisheries Service (NMFS), NMFS' Alaska Fishery Science Center, the Alaska Department of Fish & Game, the Washington Department of Fisheries, the International Pacific Halibut Commission, the University of Alaska, the University of Washington, and other institutions and universities. With the consent of the sponsoring agency or institution, nominations may be made by the Council, the Scientific and Statistical Committee (SSC), the Advisory Panel (AP), or the Plan Teams themselves. All nominations will be subject to approval by the SSC, with the Council retaining final appointment authority. Appointments should reflect the Plan Teams' responsibility to provide advice in the areas of regulatory management, natural and social science, mathematics, and statistics.
- 3- **Organization.** Each Plan Team will be directed by a chairperson or co-chairs, and may divide some of its responsibilities among work groups organized according to subject matter. A work group may include members from more than one Plan Team. Each work group will be directed by a work group leader.
 - 1- **Rules of order.** In general, rules of order will be informal. Plan Team decisions will be reached by consensus, whenever possible. If a decision is required and consensus cannot be reached, the opinion of the majority will prevail. In representing either Plan Team publicly, the spokesperson will take care to relate Plan Team opinions accurately, noting points of concern where consensus cannot be reached.
 - 2- **Meetings.** Plan Team meetings will be held prior to Council's September and December meetings. The Plan Team chairpersons may call other meetings as necessary. The two Plan Teams may meet either separately or jointly. A draft agenda will be prepared in advance of each meeting by the Council staff in consultation with the respective chairperson or chairpersons, and may be revised by the Plan Team(s) during the meeting. Each agenda will include an opportunity for comments from the general public. Minutes of each meeting will be prepared by the Council staff, distributed to Plan Team members, and revised as necessary at or before the subsequent Plan Team meeting.
 - 3- **Selection of officers.** Officers (Plan Team chairpersons and work group leaders) will be selected at the meeting preceding the September Council meeting or as vacancies arise. The Plan Team chairpersons will be selected for two-year terms. Work group leaders will be selected for one-year terms. There will be no limit on the number of consecutive terms that officers may serve.
- 4- **Functions.** The Plan Teams' primary function is to provide the Council with the best available scientific information, including scientifically based recommendations regarding appropriate measures for the conservation and management of the BS/AI and GOA groundfish fisheries.

- 1- **SAFE report.** The Plan Teams compile SAFE reports for the BS/AI and GOA groundfish fisheries on an annual basis. The SAFE reports provide the Council with a summary of the most recent biological condition of the groundfish stocks and the social and economic condition of the fishing and processing industries. The SAFE reports summarize the best available scientific information concerning the past, present, and possible future condition of the groundfish stocks and fisheries, along with ecosystem considerations. This includes recommendation of acceptable biological catch and, where appropriate, total allowable catch levels. All recommendations must be designed to prevent overfishing while achieving optimum yield (National Standard 1). All recommendations must also be scientifically based (National Standard 2), drawing upon the Plan Teams' expertise in the areas of regulatory management, natural and social science, mathematics, and statistics. Finally, uncertainty must be taken in account wherever possible (National Standard 6).
- 2- **Plan amendments.** The Plan Teams may also play a role in the development and evaluation of amendments to the BS/AI and GOA groundfish fishery management plans.
 - 1- The Plan Teams may evaluate amendment proposals and forward their recommendations to the Plan Amendment Advisory Group, on which the Plan Team chairpersons serve.
 - 2- In addition, the Plan Teams may develop their own amendment proposals.
 - 3- Once an amendment proposal has been accepted for consideration by the Council, an analytical team may be assembled by the responsible agencies. Every analytical team should include at least one member from one or both Plan Teams, drawn from the appropriate working group(s), whenever possible.
 - 4- Once an amendment analysis has been completed, it may be reviewed by the Plan Teams. The Plan Teams' comments, if any, are then forwarded to the SSC, AP, and Council.