

**SUMMARY MINUTES**  
**Scientific and Statistical Committee**

Pacific Fishery Management Council  
Crowne Plaza Hotel  
Syracuse Room  
1221 Chess Drive  
Foster City, CA 94404  
(650) 570-5700  
June 16 - 17, 2003

**Call to Order**

The meeting was called to order at 8 a.m. Dr. Donald McIsaac briefed the Scientific and Statistical Committee (SSC) on priority agenda items.

**Members in Attendance**

Mr. Alan Byrne, Idaho Department of Fish and Game, Nampa, ID  
Dr. Ramon Conser, National Marine Fisheries Service, La Jolla, CA  
Dr. Michael Dalton, California State University, Monterey Bay, CA  
Dr. Martin Dorn, National Marine Fisheries Service, Seattle, WA  
Dr. Robert Francis, University of Washington, Seattle, WA  
Dr. Kevin Hill, California Department of Fish and Game, La Jolla, CA  
Mr. Tom Jagielo, Washington Department of Fish and Wildlife, Olympia, WA  
Dr. Peter Lawson, National Marine Fisheries Service, Newport, OR  
Dr. Stephen Ralston, National Marine Fisheries Service, Santa Cruz, CA  
Dr. André Punt, University of Washington, Seattle, WA  
Ms. Cynthia Thomson, National Marine Fisheries Service, Santa Cruz, CA

**Members Absent**

Mr. Robert Conrad, Northwest Indian Fisheries Commission, Olympia, WA  
Dr. Shijie Zhou, Oregon Department of Fish and Wildlife, Portland, OR

**Scientific and Statistical Committee Comments to the Council**

The following is a compilation of SSC reports to the Council.

***B. Groundfish Management***

B.2SSC Report on Observer Data Implementation Status

The SSC received a presentation on this agenda item by Drs. Elizabeth Clarke and James Hastie. A number of changes have been made to the bycatch modeling effort since the April 2003 Council meeting:

- 2002 fishticket data have been added.
- 2000-2002 logbook data have replaced the 1999 data to estimate fishing depth.
- A new approach has been applied to model the effects of differential harvest limits on trawl vessels using small footropes.

There have been no changes in area stratification or bycatch rate values since the April meeting.

The SSC notes two issues that need to be resolved:

- As the SSC Groundfish and Economics Subcommittees reported (see Bycatch Model Review Workshop Report, April 2003), the three states use different procedures for adjusting haul weights from the trawl logbooks. These discrepancies should be evaluated for compatibility and potentially differential effects on bycatch estimation. Also, consider unifying the algorithm across states.
- The current draft of the bycatch model is the documentation supplied to the Bycatch Workshop. This document should be appended to the Bycatch Workshop Panel report and included in the Groundfish Stock Assessment and Fishery Evaluation (SAFE) document. As the bycatch model is updated, documentation should highlight and summarize the latest model and input data changes from the previous documentation. This information should be included in future SAFE documents.

### B.3. SSC Report on Stock Assessments and Rebuilding Analyses for 2004 Groundfish Management

The SSC led a joint meeting with the Groundfish Management Team (GMT) and the Groundfish Advisory Subpanel (GAP) to facilitate a review of stock assessments, stock assessment review (STAR) reports, and rebuilding updates (where appropriate) for –

Widow rockfish  
Bocaccio  
Pacific ocean perch (POP)  
Black rockfish  
Darkblotched rockfish  
Yellowtail rockfish  
Cowcod

The SSC considers these stock assessments to be the best available science and endorses their use by the Council. The updated rebuilding analyses for widow, POP, and darkblotched rockfish are based on assessments reviewed through the STAR process, and the SSC endorses their use by the Council.

The SSC has the following comments on each of the assessments and supporting materials:

Widow Rockfish (Exhibit B.3, Attachments 4, 5, and 6, June 2003)

The 2003 estimate of stock size is 24.6% of  $B_0$ , which is similar to the last assessment in 2000. However, stock productivity is estimated to be lower than it was in 2000, which translates into longer rebuilding times than suggested by previous analyses.

Three areas of uncertainty emerged as most important to the 2003 rebuilding analysis:

Whether recruits should be prespecified for 2003-2005 based on the NMFS Santa Cruz laboratory midwater trawl survey.

Whether projections should be based on sampling recruits per spawner or an estimated stock-recruitment relationship.

The use of a power coefficient to represent compensation (juvenile mortality) in translating the midwater trawl survey results into subsequent recruitment.

The SSC discussed, in detail, the procedure of prespecifying recruits versus other approaches. The procedure of prespecifying recruits uses results from the midwater trawl survey to project recruitment for 2003-2005 in the rebuilding program (recruitment after 2005 is based on sampling estimates of recruits in each year prior to 2001). The SSC prefers the approach of sampling recruits per spawner, which is the status quo from earlier analyses. The SSC concluded there is enough confidence in the midwater trawl survey to prespecify recruits, which narrowed discussion to models 7, 8, and 9 in Table 3 and Table 4 (page 5) of Attachment 5.

The SSC also discussed different values for the power coefficients. According to Table 18 (page 57) of the stock assessment document, different values of the power coefficients are equally likely, and there is no statistical basis for choosing among them. After further discussion, the SSC concluded there is a biological basis for determining a range of plausible values, which corresponds to the values used in models 7, 8, and 9. The SSC recommends these models be used as a central case (model 8), with high (model 9) and low (model 7) variants.

Since the nature of the relationship between larvae taken in the survey and subsequent recruitment to the fishery (3 years) is a major source of uncertainty in the widow assessment, the SSC recommends that this issue be thoroughly examined in the next assessment.

Pacific Ocean Perch (Exhibit B.3, Attachments 1, 2 and 3, June 2003)

The 2003 estimate of stock size is 25.3% of  $B_0$ . The assessment for POP is complex, utilizing a Bayesian approach (also used in the 2000 POP assessment). While the SSC considers this type of analysis to be state-of-the-art, it raises a key issue about which estimates are best for use in rebuilding analyses. After a discussion about which summary statistics are most appropriate, and

which to use as a default, the SSC reached consensus that results of the rebuilding analysis should follow the Bayesian approach as it captures more of the uncertainty.

Discussion by the SSC also considered alternative approaches for projecting future recruitment of POP. Figure 1 of Attachment 2 shows that time series from the 2000 assessment for the ratio of recruits per spawner has an upward trend. This approach was rejected in earlier rebuilding analyses in favor of using time series of recruits as a basis for the rebuilding projections. On the other hand, the 2003 assessment does not show a trend in either series. Since a major component of the POP stock exists in Canadian waters, the rationale for using recruits per spawner as a basis for rebuilding projections is questionable, because it implicitly assumes that future recruitment depends only on spawners in U.S. waters. Consequently, the use of recruits as a basis for rebuilding projections is reasonable.

Thus, the SSC recommends case C in Tables 1-3 (pp 4, 6-7) in Attachment 2 be used by the Council.

Bocaccio (Exhibit B.3, Attachments 7, 8, and 9, June 2003)

The 2003 stock assessment for bocaccio is different than the assessment last year, which indicated the 1999 year class was weaker than previously believed. This result was driven by the 2001 Triennial Survey, which showed very low abundance of bocaccio and no sign of the 1999 year class (Figure 26, page 36 of Attachment 7). For the 2003 assessment, additional information in the form of larval abundance data from CalCOFI, and both length and catch per unit effort (CPUE) data from the recreational fisheries were used. The new data indicate a sharp increase in abundance and a much stronger 1999 year class. In fact, Figure 26 indicates that recent CPUE estimates for Northern California are record highs in a time series dating back to 1980. To bracket uncertainty from the apparently conflicting signals in the different data sources, the STAR Panel recommended two models, STAR B1 and STAR B2, which use the survey and recreational CPUE data, respectively. Each of these models de-emphasizes the other data source. The Stock Assessment Team (STAT) considered a third model that included both data sources to be important, but time to complete work on all three models was not possible at the STAR meeting. Subsequent work by the STAT Team produced an intermediate model, STAT C, which includes both survey and CPUE data.

After an in-depth discussion that considered trade offs among alternative approaches and other factors, the SSC concluded that an intermediate alternative is warranted and that model STAT C is a reasonable way to integrate the survey and CPUE data. The SSC recommends a decision table, with models STAR B1, STAR B2, and STAT C, similar to Table 3 (page 6) of Attachment 8, be used by the Council.

The SSC notes the assumed rate of natural mortality was changed from 0.2 in the 2002 assessment to a value of 0.15 in the 2003 assessment. This change is likely to have an influence on OY, but results using data from the 2003 assessment and the 2002 value for natural mortality were not available for review at this meeting.

The SSC also recommends that additional data, based on information in the California commercial passenger fishing vessel (CPFV) logbooks be evaluated for use in future bocaccio assessments.

### Black rockfish (Exhibit B.3, Attachments 10 and 11, June 2003)

The SSC noted that without any clear trend in the four recreational CPUE statistics used by the model, the upturn in biomass and spawning output in the latter part of the 1990s is difficult to interpret. The reason for the increase is apparently due to the strong recruitment of age-two fish in 1996 and 1997, but those recruitments are unlikely to be well-estimated. In addition, the retrospective analysis (Figure 37) is poorly behaved, because the model seems to persistently overestimate biomass. Nonetheless, the SSC supports the conclusions of the STAR Panel that the assessment represents the best available science and is ready for use by the Council.

### Cowcod (Exhibit B.3, Attachments 12 and 13, June 2003)

The update indicates that current management action has been effective in keeping cowcod removals within the established OY (Table 2). However, due to the effects of management on the CPFV recreational CPUE statistic (Figure A1), it will be difficult to monitor rebuilding in the future. As the STAR Panel report notes, in situ and ichthyoplankton surveys may provide useful fishery-independent information on the status of the stock.

### Yellowtail rockfish (Exhibit B.3, Attachments 13 and 14, June 2003)

Results presented in Figure 11 of the assessment document may give the false sense that female spawner biomass is stable. However, due to the decline in recruitment that occurred in the mid-1990s and the relatively late maturity of this species, the model predicts a 25% decline in spawning biomass over the next 10 years, if the stock is harvested at the default harvest rate (Table 26). Even so, the yellowtail rockfish stock is unlikely to be fully harvested due to the constraints imposed by other overfished stocks (e.g., canary and widow rockfish).

### Darkblotched rockfish (Exhibit B.3, Attachments 13, 15, and 16, June 2003)

Following the conclusion of the STAR review the assessment author successfully corrected the error in rebuilding projections for scenario (b), i.e.,  $B_0$  based on 1963-2000 recruitments and rebuilding recruitments re-sampled from 1983-2000. That scenario now produces results intermediate between scenario (a) and scenario (c), as expected (Table 16). However, results in the table are based on the probability of rebuilding by  $T_{MAX} = 0.7$ , although the interim rebuilding analysis adopted by the Council was for  $P = 0.8$ . A new table will be developed that will include 10-year projections at the higher probability level.

The STAR Panel recommended scenario (b) as the base case, bracketed by scenarios (a) and (c). The panel selected the intermediate result in an attempt to balance the conflicting effects of using the most recent information (i.e., the 2001 recruitment estimate) and the poor statistical precision associated with partial recruitment of the most recent year-classes.

## B.4. SSC Report on Preliminary Range of Harvest Levels for 2004

The SSC reviewed all the materials associated with agenda item B.3 and notes that new results are available for: Pacific ocean perch, widow rockfish, bocaccio, black rockfish, cowcod, yellowtail rockfish, and darkblotched rockfish. Moreover, although the 2004 acceptable

biological catches (ABCs) and optimum yields (OYS) of sablefish, shortspine thornyhead, canary rockfish, yelloweye rockfish, and lingcod have also been updated in Table 2.1-1 (see Exhibit B.4, Attachment 1, June 2003), the SSC considers those changes to be routine, because they are based on assessments and rebuilding analyses that have been previously reviewed.

For the seven stocks with new information available, the SSC recommends the Council consider the following ranges for harvest levels in 2004. For the overfished stocks other than cowcod, a range of alternatives is presented that represents the probability of rebuilding the stock by  $T_{MAX}$  (i.e.,  $P = 0.5, 0.6, 0.7,$  or  $0.8$ ), which the SSC views as a policy decision. Where alternative model formulations were developed by the assessment authors and/or the Stock Assessment Review (STAR) Panels, the SSC has narrowed the range to include those models listed here (see SSC statement on agenda item B.3 – Stock Assessments and Rebuilding Analyses for 2004 Groundfish Management).

<b>Model</b>	<b>P=0.5</b>	<b>P=0.6</b>	<b>P=0.7</b>	<b>P=0.8</b>	<b>Comment</b>
Pacific Ocean Perch (Exhibit B.3, Attachment 2, June 2003; p. 7, T-3)					
Model C	664 mt	555 mt	444 mt	318 mt	full posterior, project with recruits
Widow Rockfish (Exhibit B.3, Attachment 5, June 2003; page 7, Table 4b)					
Model 7	248 mt	181 mt	111 mt	30 mt	rec. override, R/S, power = 2
Model 8	354 mt	284 mt	212 mt	123 mt	rec. override, R/S, power = 3 (base)
Model 9	582 mt	501 mt	419 mt	323 mt	rec. override, R/S, power = 4
Bocaccio (Exhibit B.3, Attachment 8, June 2003; page 5, Tables 1 & 2)					
STARb2	333 mt	295 mt	250 mt	199 mt	remove sport CPUE
STATc	439 mt	376 mt	306 mt	236 mt	blended model
STARb1	784 mt	710 mt	625 mt	525 mt	remove triennial survey
Darkblotched Rockfish (Exh. B.3, Supp. Att 15 & 16 Combined, June 2003; p. 32, T-15)					
6-1999	222 mt	205 mt	192 mt	172 mt	resample 1983-1999
6-2000	345 mt	321 mt	299 mt	272 mt	resample 1983-2000 (STAR base)
6-2001	439 mt	417 mt	391 mt	364 mt	resample 1983-2001

Black Rockfish (Exhibit B.3, Attachment 10, June 2003; page 31, Table 14)

<b>Model</b>	<b>2004 OY</b>
Low Catch	729 mt
STAR Base	775 mt
High Catch	861 mt

Yellowtail Rockfish (Exhibit B.3, Attachment 14, June 2003; page 53, Table 26)

Model – Base; 2004 OY – 4,320 mt – model updated from prior assessment (see Tagart et al. 2000)

Cowcod (Exhibit B.3, Attachment 12, June 2003)

The cowcod rebuilding review did not involve any modeling per se, but reviewed landings statistics in recent years and recalculated trend indices. Consequently, the ABC and OY for the southern and northern areas are simply carried forward from 2003.

#### B.10. SSC Report on Groundfish Stock Assessment Review Process for 2005 Through 2006

Dr. Elizabeth Clarke (National Marine Fisheries Service) presented an overview of issues related to the stock assessment review process for 2005 and 2006. After discussion of the key issues, it was agreed that:

1. Dr. Clarke will prepare a draft list of stocks to be assessed in the next stock assessment cycle prior to the September 2003 SSC meeting. For each stock, candidate assessment authors will be identified, and a determination will be made whether a full assessment or expedited assessment is appropriate.
2. The SSC will update its "Terms of Reference for Groundfish Rebuilding Analysis" to include all output needed by the GMT as well as to reflect variables of interest from the rebuilding analysis software.
3. The SSC will continue to review rebuilding analyses. In a normal three-Council-meeting process, these reviews should be completed earlier than that experienced in this year's two-meeting process.
4. The Northwest Fisheries Science Center (NWFSC) will prepare an outline for an electronic assessment archive, including elements for all input data, output data, intermediate results, diagnostics, and full document in PDF format.
5. The SSC will schedule a methods workshop in 2004 and other "off" years (with logistical support from NWFSC) to address methodology issues common to multiple stock assessments, e.g., methods to derive indices of abundance from recreational catch-effort data; spatially explicit models for stock assessment; dealing with conflicting indices of abundance; etc.
6. The SSC will provide modifications to the stock assessment review (STAR) Terms of Reference needed to incorporate all of the points outlined in the following sections of this statement.

#### General SSC Comments on the STAR Process

SSC members participated in all of the Council's STAR Panels this year. Namely, the traditional STAR Panels for Pacific ocean perch (POP) and widow rockfish (STAR 1) and for bocaccio and black rockfish (STAR 2); and the new expedited review process for cowcod, darkblotched, and yellowtail rockfish (STAR-lite). Based on this experience, as well as feedback from other reviewers and Stock Assessment Team (STAT) members, the SSC compiled two lists of comments and recommendations for the STAR process in future years – one list for the traditional STAR process, and a separate list for the newly created STAR-lite process.

## Traditional STAR Process

Although the Council's STAR process has been in place for more than five years, it has been an evolving process with year-to-year modifications based on the experience and "lessons learned" from earlier years. While the process is generally working well and has reached a mature level, continued fine tuning will be necessary to meet the challenge of providing thorough review of increasingly complex stock assessments.

Recent stock assessment research has focused on more fully incorporating uncertainty into management-related model outputs. This is important work that has been encouraged by the SSC. The resulting methodology (e.g., as used in the POP assessment) is considerably more complex than methods generally used presently. The large number of parameters estimated coupled with a variety of priors, penalty functions, and constraints tax the ability of reviewers to fully understand the nuances of model behavior using only the traditional tables and figures provided in stock assessment documents. Further, the use of numerically intensive Monte Carlo Markov Chain (MCMC) analysis for estimation of posterior distributions (used for quantifying uncertainty and central tendency) further exacerbates the problem. While the SSC encourages this type of "cutting edge" modeling, there is concomitant responsibility for assessment authors to provide a broader suite of intermediate results and model diagnostics in addition to those provided when less complex models are used for assessment. Because the volume of these data can be quite large, providing them in electronic form is more practical than via traditional hard copy, e.g., creating a data CD to accompany and to be referenced from the assessment document. Appendix A of the POP STAR Panel Report provides a partial list of intermediate results and diagnostics that should be provided. Assessment authors with experience using these more complex models are encouraged to augment this list.

The lack of consistency among stock assessments – reviewed by different STAR Panels – is becoming an issue. Several examples are:

1. Discards estimates based on the new observer program data were used in the bocaccio assessment, but not for any of the other assessments conducted this year.
2. The NWFSC trawl survey has been used in the assessments for POP, sablefish, thornyheads, and Dover sole, but not for other species assessed recently.
3. Catchability for logbook and whiting bycatch indices of abundance has been assumed constant over time in most assessments; but in the yellowtail assessment, catchability was allowed to vary annually.
4. Selectivity is handled in a myriad of ways in the various stock assessments, e.g., constant over time, estimated as annual vectors, varying annually with random walk, etc.

While some variation is to be expected, standardization guidelines are needed to prevent further drift from consistent application of data and concepts.

For the Council to optimize the benefits derived from the appreciable resources dedicated to the STAR process, it is critically important for assessment authors to carefully review STAR Panel

reports associated with previous assessments. The recommendations from these STAR reports should be foremost in planning for new stock assessments.

The process of selecting the reviewers who will sit on a STAR Panel should strive to balance the tension between providing institutional memory regarding the species being assessed and providing new views and insights. The former is generally accomplished by selecting reviewers from within the Council family, while the latter is handled via outside reviewers, such as those provided by the Center for Independent Experts (CIE). With the increased complexity of groundfish assessments (discussed above), another important consideration to ensure each panel has one or more members well versed in the use of these "cutting edge" models. The STAR Panel member selection process would benefit from SSC review of the composition of each panel before the (bi)annual assessment cycle begins.

Reports of the CIE reviewers regarding the pros and cons of the STAR process should be provided, at least to the SSC. These outside views of our process are critical in the Council's annual review of its STAR process.

#### STAR-lite Process

The STAR-lite process differs from the traditional STAR process in two fundamental ways, (1) the review is much abbreviated, providing less than one day per stock (compared to 2.5 days per stock in the traditional process); and (2) the review is conducted by the SSC Groundfish Subcommittee rather than by an ad-hoc panel composed of Council-family scientists and at least one "outside reviewer." The recent STAR-lite (May 2003) worked well generally, but several steps will be needed to ensure that future STAR-lite processes are equally successful. Namely,

1. As a rule of thumb, the meeting length should be one day per stock.
2. Face-to-face meetings – not conference calls – are required to communicate stock assessment results and panel feedback within the abbreviated time period.
3. Local area network (LAN) support – including file sharing and printer access – is critical for the expedited process.
4. Documents that are distributed electronically should be in PDF format to maintain consistent pagination. Additionally, page numbers should appear on each page.

These items should be added to the Terms of Reference for the STAR-lite process. Items 3 and 4, above, should also be added to the Terms of Reference for the full STAR process.

Probably due to the newness of the STAR-lite process, STAT members are sometimes puzzled about aspects of the previous stock assessment that can be modified while staying within the guidelines of an "updated assessment." For example, should the catch time series be updated to reflect only newly available years since the last assessment or alternatively, should the entire catch time series be updated to reflect all database revisions since the last assessment? The SSC strongly prefers the latter, and in general, the principle that updated assessments should use best available data from all sources. Additionally, all model parameters should be re-estimated in the update. However, other issues (e.g., modifying objective function weights within the same stock assessment model) fall more into a gray area. The SSC recommends that this type of change should not be routine, but should be allowable in some cases, if strong justification is provided by the STAT.

Considerable effort is required by STAT members to prepare and document the assessment updates reviewed by a STAR-lite panel. In addition, the cumulative time and effort of the reviewers (SSC Groundfish Subcommittee plus GMT and GAP representatives) is substantial. In some cases – such as this year’s yellowtail assessment – a large proportion of the resources that would be required to conduct a full assessment was dedicated to carrying out and reviewing the assessment update. Further, assessment updates typically will have a shorter "shelf life" than full assessments. Consequently in such cases, it may be more efficient to allow STAT members in consultation with the SSC to move these assessment updates to the full assessment status.

Finally, while the STAR-lite process worked well this year, it should be fully recognized that many issues which would have been explored in a full assessment were not possible to explore within the STAR-lite. These issues were tabled for the next full assessment.

#### B.11. SSC Report on Status of the Groundfish Essential Fish Habitat Environmental Impact Statement

The SSC heard a presentation from Mr. Steve Copps, Dr. Graeme Parkes, and Ms. Allison Bailey who gave an overview of methodologies being developed to analyze West Coast groundfish essential fish habitat (EFH).

The SSC was impressed by the scope of the work in progress; however, due to time limitations at this meeting, the SSC was not able to delve into the details of the analyses to be performed. In order to provide useful advice, the SSC would like to schedule a longer, more in-depth discussion with the analytical team members to gain a better understanding of the methodologies to be employed.

During the short time available for discussion, the SSC raised the following points.

1. When using the NMFS triennial trawl survey data, the analysis should incorporate the latest updates, which reflect adjustments for "water hauls."
2. In the construction of fishing sensitivity indices, factors such as fishing strategies and gear type interactions should be considered.
3. When employing expert opinions to evaluate fishing effort, the analysis should strive to ensure consistency and should be representative on a coastwide basis.

#### B.13. SSC Report on Final Adoption of FMP Amendment 16-1 and Amendment 16-2

The SSC reviewed Amendment 16 including Chapter 5, the cumulative impact analysis required for the Environmental Impact Statement (EIS). The SSC has seen most sections of this document previously, and our review and comments at this time are not comprehensive.

The SSC notes that rebuilding analyses for overfished stocks assessed this year are based on a range of alternatives for  $P_{MAX}$ , with one option consisting of the  $P_{MAX}$  specified in the interim rebuilding analysis. Options considered in Amendment 16-1 are primarily based on specification of  $T_{Target}$ .

The SSC considers the range of alternatives evaluated in the EIS appropriate. Alternatives that result in increased harvest of overfished stocks would also have the effect of freeing up available optimum yield for non-overfished stocks. The economic benefits of this potential additional harvest were not quantified in the cumulative impacts chapter. If resources are available for additional modeling, it would be worthwhile to quantify these impacts.

### ***E. Coastal Pelagic Species Management***

#### **E.2. SSC Report on Pacific Mackerel Harvest Guideline for 2003 Through 2004**

Dr. Kevin Hill discussed the 2003-2004 Pacific mackerel harvest guideline (HG) with the SSC. The recommended HG is 10,652 mt based on the maximum sustainable yield control rule in Amendment 8 to the Coastal Pelagic Species (CPS) fishery management plan. The SSC notes that the HG is based on the same stock assessment methodology and harvest control rule used in 2002, with the addition of one additional year of catch data and new data for four of the six indices of abundance. Compared with the 2002 assessment, the biomass time series for the 2003 assessment is 10% lower over the last decade. The estimate of the July 1, 2002 biomass from the assessment is 30% lower than the projection of this biomass from last year's assessment.

The methodology on which this assessment is based is not fully documented in the Stock Assessment and Fishery Evaluation (SAFE) report precluding a detailed review by the SSC at this time. However, this assessment will be reviewed along with the sardine assessment during a STAR Panel meeting in May 2004. Dr. Hill outlined some planned changes to the assessment methodology and the data used when fitting the model. The SSC suggested that the possibility of using data on bycatch in the whiting fishery be explored to develop an abundance index for the component of the population off Oregon and Washington.

### ***F. Highly Migratory Species Management***

#### **F.2.SSC Statement on Potential Modification of Fishery Management Plan Preferred Alternative for High Seas Longline Fishing in Response to Sea Turtle Impact Analysis**

The Highly Migratory Species (HMS) Subcommittee of the SSC met April 30, 2003 at Hubbs Sea World Research Institute, San Diego, California. Mr. Jim Carretta (NMFS-Southwest Fisheries Science Center) presented his statistical analysis of sea turtle take rates by the high seas longline fishery for swordfish. The Subcommittee's primary task was to assess the validity of the analysis of take rates west and east of 150° W longitude. The SSC considers Fisher's exact test to be an appropriate statistical method for analyzing data of this type. Leatherback and loggerhead turtle hooking rates were not significantly different east and west of 150° W longitude, however, an analysis of whether the data were sufficient to detect differences was not performed.

The appendix of the report provides hooking rates in easterly longitudes for each quarter, with nominal rates appearing lower east of 140° W longitude. This has opened the question of whether a longline fishery may be prosecuted farther east than the proposed line (e.g., east of 140° W longitude as proposed by the HMS Plan Development Team in Exhibit F.2.c) to reduce the risk to protected turtle species. The SSC notes that Fisher's exact tests were not performed

on the data, nor is it clear that the data would support such an analysis. With the possible exception of the 4<sup>th</sup> quarter, the number of sets observed is low.

The biological impacts of the hooking rates on the turtle populations were not assessed. Until an 'acceptable' level of annual take has been defined for either turtle species, a discussion of acceptable hooking rates may be premature. Another issue that was not considered in the analysis is the impact on the turtle populations of the domestic fishery compared with the international fishery that operates in the same waters.

## ***G. Marine Reserves***

### **G.1. SSC Report on Planning for Federal Waters Portion of the CINMS**

Mr. Chris Mobley and Mr. Sean Hastings briefed the SSC regarding initiation of the process to create reserves in federal waters of the Channel Islands National Marine Sanctuary (CINMS). There are no new technical issues to discuss at the present time; however, the Council has an opportunity to consider how it plans to participate in the process.

According to their time table CINMS intends to spend June through November 2003 preparing the draft environmental impact statement (DEIS). Public comment on scoping for the DEIS is open until July 23. The final product is currently scheduled for December, but this may not be a realistic deadline.

The CINMS is seeking Council assistance in streamlining the environmental review. The SSC reminded CINMS staff that we have serious concerns with the Net Assessment and have provided detailed comments to the Council and CINMS. Substantial work needs to be done to meet federal regulatory requirements.

Mr. Mobley suggested the Council could draft three or four alternative sets of regulations prior to completion of an acceptable DEIS. The SSC is concerned that this could put the Council in a vulnerable position vis a vis the regulatory requirements, particularly if the drafting of regulations is viewed as a recommendation made in the absence of an adequate DEIS. This highlights the need for defensible analyses from CINMS if the Council is to participate as a partner in the process.

Mr. Hastings requested guidance for bringing the existing documents and analysis up to standard. The SSC has already provided two review documents (November 2001, June 2002) pointing out specific deficiencies in the existing analysis and providing specific recommendations to address these shortcomings. With Council direction, and if requested by CINMS, the chair of the SSC Marine Reserves Subcommittee is willing to provide further clarification of the SSC review comments. As a review body, the SSC is not in a position to actively participate in revision of the analysis.

## ***Other Matters***

No additional matters were discussed.

## **Public Comment**

No public comments on topics not on the SSC agenda were provided.

### **Adjournment**

The SSC adjourned at approximately 6 P.M., Tuesday, June 17, 2003.

PFMC  
08/20/03

### SSC Subcommittee Assignments for 2003

<b>Salmon</b>	<b>Groundfish</b>	<b>CPS</b>	<b>HMS</b>	<b>Economic</b>	<b>Marine Reserves</b>
Alan Byrne	Ray Conser	Michael Dalton	Alan Byrne	<b>Michael Dalton</b>	Ray Conser
Robert Conrad	Michael Dalton	Alan Byrne	Robert Conrad	Martin Dorn	Michael Dalton
Kevin Hill	Martin Dorn	Ray Conser	Ray Conser	Han-Lin Lai	Martin Dorn
<b>Pete Lawson</b>	Robert Francis	<b>Robert Francis</b>	<b>Kevin Hill</b>	Cynthia Thomson	Tom Jagielo
Shijie Zhou	Tom Jagielo	Tom Jagielo	Andre' Punt		Pete Lawson
	Han-Lin Lai	Andre' Punt	Cynthia Thomson		Andre' Punt
	Andre' Punt	Shijie Zhou			Steve Ralston
	<b>Steve Ralston</b>				<b>Cynthia Thomson</b>

**Bold** denotes Subcommittee Chairperson