

SUMMARY MINUTES
Scientific and Statistical Committee

Pacific Fishery Management Council
Crowne Plaza Hotel
Drake 1 Room
1221 Chess Drive
Foster City, CA 94404
650-570-5700

June 11-12, 2010

Call to Order and Scientific and Statistical Committee (SSC) Administrative Matters

The meeting was called to order at 8 a.m. on Friday, June 11, 2010. Dr. Don McIsaac briefed the SSC on priority agenda.

Members in Attendance

Dr. Louis Botsford, University of California, Davis, CA
Mr. Robert Conrad, Northwest Indian Fisheries Commission, Olympia, WA
Dr. Ramon Conser, National Marine Fisheries Service, La Jolla, CA
Dr. Martin Dorn, SSC Chair, National Marine Fisheries Service, Seattle, WA
Dr. Carlos Garza, National Marine Fisheries Service, Santa Cruz, CA
Dr. Vladlena Gertseva, National Marine Fisheries Service, Newport, OR
Dr. Owen Hamel, SSC-Vice Chair, National Marine Fisheries Service, Seattle, WA
Mr. Tom Jagielo, Oregon Department of Fish and Wildlife (Saturday Only)
Ms. Meisha Key, California Department of Fish and Game, Santa Cruz, CA
Dr. Peter Lawson, National Marine Fisheries Service, Newport, OR
Dr. Todd Lee, National Marine Fisheries Service, Seattle, WA
Dr. Charles Petrosky, Idaho Department of Fish and Game, Boise, ID
Ms. Cindy Thomson, National Marine Fisheries Service, Santa Cruz, CA
Dr. Theresa Tsou, Washington Department of Fish and Wildlife, Olympia, WA
Dr. Vidar Wespestad, Research Analysts International, Seattle, WA

Members Absent

Dr. Selina Heppell, Oregon State University, Corvallis, OR
Dr. André Punt, University of Washington, Seattle, WA

SSC Recusals for the June 2010 Meeting.		
SSC Member	Issue	Reason
None		

Scientific and Statistical Committee Comments to the Council

The following is a compilation of June 2010 SSC reports to the Pacific Fishery Management Council (Council). (Related SSC discussion not included in written comment to the Council is provided in *italicized text*).

Salmon Management

C.1. Fishery Management Plan (FMP) Amendment 16 – Annual Catch Limits

Mr. Chuck Tracy and Dr. Peter Dygert presented the *Progress Report on Alternatives for Pacific Coast Salmon Plan Amendment 16* (Agenda Item C.1.b, SAC Report) for the Scientific and Statistical Committee (SSC). The salmon amendment committee (SAC) has made considerable progress and seeks guidance from the Council to help direct development of options. The SSC discussion was structured around the topics highlighted by the SAC (Agenda Item C.1, Situation Summary).

The SAC proposes the following stock classifications for the 69 salmon stocks currently in the Fishery Management Plan (FMP):

- Endangered Species Act (ESA)-listed stocks: These are subject to stock-specific consultation standards;
- Ecosystem Components: Far North Migrating (FNM) stocks and Puget Sound and Fraser River pink salmon are encountered at low rates in Council fisheries. A vulnerability analysis supports this classification;
- International exemptions: This applies to stocks managed under the Pacific Salmon Treaty that do not fall under one of the first two categories. The Council will need status determination criteria (SDC) for these (excepting Canadian stocks);
- Natural stocks that do not fall into any of the above categories: Only two stocks are in this category and will require annual catch limits (ACLs): Klamath River fall Chinook (KRFC), and Sacramento River fall Chinook (SRFC). Southern Oregon Coast Chinook may enter this category in the near future.

The SSC considers this to be a valid and defensible stock classification. KRFC will serve as an indicator stock for a stock complex including Klamath River spring Chinook, Smith River Chinook, and Southern Oregon Chinook. SRFC will serve as an indicator stock for a stock complex including fall and late fall stocks from the Sacramento and San Joaquin basins. Further evaluation of how well these indicator stocks represent each stock complex will be needed as more information becomes available.

It is clear that there will need to be a different management framework for salmon than has been developed for groundfish. Salmon management differs from other species management because the adults return to freshwater where spawning stock size can be determined. This allows status to be addressed directly and provides opportunities for finer scale management. For example, the SAC

proposes to estimate ACLs pre-season, based on F_{msy} and the stock size projection, then reevaluate them post-season based on actual run sizes. This is responsive to highly variable recruitments and imprecise stock size predictors and represents an additional avenue of accounting for both scientific and management uncertainty. The SAC will bring a specific proposal to the September Council meeting. This proposal should include a process for the SSC to provide preseason overfishing limits (OFLs) and acceptable biological catches (ABCs) to the Council.

The SAC proposes scientific uncertainty buffers of 5 percent for stocks with direct estimates of Maximum Sustainable Yield (MSY) (KRFC) and 10 percent for stocks with proxy estimates of MSY (SRFC). Estimating a true MSY for natural stocks that are influenced by hatchery stocks is a difficult task. The SSC is concerned that the Council adopt appropriate levels of MSY and would like to see documentation for MSY proxy values used for Chinook and coho. The SSC would also like to see a discussion of the rationale behind the choice of 5 percent and 10 percent for buffers.

No additional buffers to account for management uncertainty are proposed at this time. The SAC proposes to use an adaptive management approach: if ACLs are consistently exceeded, the use of buffers would be considered and implemented as needed. The SAC reported that quotas have rarely been exceeded in recent quota-managed fisheries. The SSC would like to see a historical comparison of preseason quotas and postseason catches to support this.

SDC are needed for the following stocks: SRFC, KRFC, Southern Oregon Coast Chinook, Columbia River Summer Chinook, Washington Coast Coho, and Puget Sound Coho. SDC are proposed to be based on estimates of MSY levels of fishing mortality (F_{msy}) and spawner escapement (S_{msy}). Options presented include single-year and three-year SDC. Current overfishing criteria are based on three-year stock performance. The overfished threshold is proposed to be one half of S_{msy} . This is consistent with the National Standard 1 Guidelines, but the SSC would like to see analysis supporting use of this criterion for salmon and analysis of the merits of one and three year time frames for determining overfishing.

Highly Migratory Species Management

E.2. FMP Amendment 2 – Annual Catch Limits

The Scientific and Statistical Committee (SSC) reviewed the final revisions to the Highly Migratory Species (HMS) Fishery Management Plan (FMP) Amendment 2 and options proposed to bring the plan into conformity with National Standard 1 (NS1) guidelines. Drs. Stephen Stohs and Suzanne Kohin of the Highly Migratory Species Management Team (HMSMT) presented a review of the steps taken to bring the plan into compliance and how they incorporated prior SSC advice into Amendment 2.

The HMSMT presented four alternatives for the management unit species (MUS) to be included in the FMP. The SSC finds that all three of the proposed alternatives for MUS are preferable to the status quo alternative. All of the potential species in the FMP qualify for international exemption for annual catch limits (ACLs) because they are managed by Regional Fishery Management Organizations (RFMOs), such as the Inter-American Tropical Tuna Commission and Western and Central Pacific Fisheries Commission. Many of these species (but not all) are also regularly assessed by RFMOs, and have acceptable estimates of the required status determination criteria (SDC).

The SSC notes that alternatives 3 and 4 include proposals for active Council management of

shark species that will require computation of acceptable biological catch (ABCs) and ACLs. The two shark species under consideration are shortfin mako and common thresher sharks. The HMSMT presented catch and catch-per-unit-effort (CPUE) data and discussed approaches to calculate overfishing limits (OFLs) and ACLs catch limits for these species. The SSC concurs with the HMSMT that common thresher and shortfin mako may need additional attention because of local importance and low assessment priority by RFMOs.

Common thresher has a coastal distribution (U.S. and Mexico) and a time series of catch and effort data that may make it possible to estimate ABCs and OFLs. Shortfin mako does not have as extensive data and is more widely distributed, especially offshore, which may make it difficult to derive catch limit estimates for this species. The SSC was informed that catch and CPUE trends for common thresher shark may not reflect abundance due to bias induced by management changes over time. The SSC agreed with the HMSMT that if this species is considered for active management, CPUE data would need to be standardized to correct for potential biases. Further, model-based approaches for estimating OFLs and ABCs may be feasible for these species, and would be preferred over average catch methods.

The HMSMT is currently revising portions of the FMP and the SSC notes that there are instances of inconsistent language, particularly the heavy reliance on the annual optimum yield (OY) concept remaining from prior versions of the FMP. Revisions are needed to conform to terms used in NS1 guidelines, and annual catch limits should be recast in terms of OFLs, ABCs and ACLs.

Groundfish Management

B.2. FMP Amendment 23 – Annual Catch Limits

The Scientific and Statistical Committee (SSC) reviewed the proposed amendment, the Preliminary Draft Environmental Assessment (Agenda Item B.2.a, Attachment 1), a letter from National Resources Defense Council (NRDC), Ocean Conservancy and Oceana (Agenda Item B.2.c, Public Comment), and a letter from Mr. Frank Lockhart, Assistant Regional Administrator, National Marine Fisheries Service (NMFS), Northwest Regional Office (Agenda Item B.2.b, Supplemental NMFS Report).

The SSC recommends that Amendment 23 be finalized at this Council meeting. We have several suggestions that need attention in the current version and other comments for the future.

Current Amendment

The SSC understands that the procedure for setting acceptable biological catch (ABC) will involve the sequence of the SSC determining the value of σ and the Council setting the value of P^* , then the SSC verifying the consequent value of the ABC. The SSC will provide a final endorsement of all ABCs.

Where optimum yield (OY) occurs in the Fishery Management Plan (FMP), for example in Section 5.4, it is meant in the sense that it is described in National Standard 1, (e) (3) (ii) and (iii), i.e., as a long-term average characteristic, not a value set annually. The SSC recommends Council staff revise wording accordingly. Also, the definition of overfishing on p. 10 of the

proposed amendment to the FMP is in error. It should say, “Overfishing occurs when catch exceeds the OFL.”

There is an error in Table 4-1 of the Draft Environmental Assessment; specifically the row describing the 2011 annual catch limits (ACLs) for sablefish under the option 2 40-10 adjustment is incorrect. The corrected table will appear in the GMT report.

Future Amendments

The SSC emphasizes that there remains more to do regarding the new approach to deal with uncertainty, beyond the current version of this framework. Several sources of uncertainty have been identified that deserve further consideration, and the estimate of overall uncertainty may increase.

The SSC notes the need to examine and possibly restructure the various complexes identified in the FMP.

Groundfish Management, continued

B.3. Harvest Specifications and Rebuilding Plans for 2011-12

The Scientific and Statistical Committee (SSC) reviewed proposed management for 2011-2012 groundfish fisheries. Mr. John DeVore of the Council staff presented the harvest specification alternatives.

The SSC endorses the acceptable biological catch (ABCs) in the proposed specifications with the following caveats: overfishing limits (OFLs) and ABCs should be set for the minor rockfish sub-complexes. These sub-complexes are functionally equivalent to complexes. According to National Standard 1 (NS1) Guidelines, OFLs and ABCs must be set for actively managed complexes. The SSC notes that once a group of species is identified which requires an aggregate annual catch limit (ACL), then an OFL and ABC should also be set for that group, since the grouping represents an independent unit for management and is actively managed.

The SSC recommends that OFLs and ABCs be set at the smallest groupings practicable. OFLs cannot reasonably be set at the species level within the sub-complexes as these species lack status determination criteria (SDC), are infrequently caught, and currently are not monitored adequately to identify catch to species. In each of the two geographic areas, the species within each sub-complex are caught together at similar depths (near-shore, shelf or slope), largely to the exclusion of species in the other sub-complexes. Therefore, managing at the larger minor rockfish complex level is not recommended. The SSC notes that the question of which species should be grouped together in complexes ought to be revisited before the next management cycle within a workshop or Stock Assessment Review-panel-like review that would also address vulnerability analyses and methods for identifying OFLs for tier 2 and 3 stocks.

Ideally, ABCs for complexes should be set by using the σ from the assigned category for each species along with a single P^* for the entire complex. However, the current preferred alternative for setting ABCs, i.e. assuming that all species in a complex are in category 3, is acceptable. NS1 guidelines suggest that complexes be managed to the most vulnerable species within the complex. The SSC recommends that this should be achieved by adjusting P^* to achieve the

appropriate level of risk. Additionally, uncertainty in the actual distribution of species within the catch can be addressed by adjusting ACLs.

For rebuilding plans, there is no compelling constraint that requires a constant fishing mortality rate (F). However, a constant F policy is intended to allow for constant effort and therefore stability in the catch of species which co-occur with rebuilding species. The SSC also notes that economic analysis would be useful in the discussion of rebuilding plans in future annual specification documents. Such analysis would help clarify the short term costs and long term benefits of alternative rebuilding options.

Groundfish Management, continued

B.4. Stock Assessment Planning for 2013-14

The Scientific and Statistical Committee (SSC) reviewed the revised version of the Terms of Reference (TOR) for the groundfish stock assessment (Agenda Item B.4.a, Attachment 1) and discussed comments provided by Council staff regarding the TOR (Agenda Item B.4.a, Attachment 3).

In response to specific comments raised by the Council staff, the SSC agreed that separate Pacific whiting assessment TOR should be developed jointly with Canada. This recommendation should be added to the TOR Introduction (currently the Pacific whiting review process is discussed in a footnote to Appendix A table, page 23). The SSC also concluded that no additional requirements for evaluating the effect of historical catches on the estimate of B_0 is necessary since the current TOR version already includes the requirement to evaluate model sensitivity to data set choice and model structure (TOR, Appendix 2, Section D.7). The SSC also noted that current TOR already emphasizes that the Stock Assessment Review (STAR) panels are not workshops (page 12), and that STAR panels should be very cautious about recommending large changes in data. No additional changes to the TOR are needed. Finally, the SSC agreed that three weeks prior to STAR panel is a reasonable deadline for a stock assessment draft; the text should be modified to remove “no less than” prior to “three full weeks” (page 15). The “harvest projections and decision tables” should be re-added to the list of elements exempt from a pre-STAR assessment document (page 15), as it was in the 2009-2010 TOR version.

The SSC reviewed the revised version of the TOR for groundfish rebuilding analysis (Agenda Item B.4.a, Attachment 2) and agreed that no additional changes were needed. Additional rebuilding runs may be needed to comply with recent judicial opinions, but these can be accommodated in the existing modeling framework.

The SSC agreed that the schedule for 2011 STAR panels with sablefish in a single-species STAR panel is preferable, given the anticipated changes in the assessment model as well as industry interest in the species.

Finally, the SSC again emphasizes that the timing of the assessment process for whiting is problematic (see SSC March minutes for details). To ensure full evaluation of data and successful collaboration of U.S. and Canadian Stock Assessment Teams, the timing of the whiting assessment process should be reconsidered.

Coastal Pelagic Species Management

F.1. Pacific Mackerel Harvest Specifications and Management Measures for 2010-11

The Scientific and Statistical Committee (SSC) received an overview of the status of Pacific mackerel from Dr. Kevin Hill.

The most recent stock assessment was conducted in 2009 to inform management for the 2009-2010 fishing year. No update was conducted for 2010; however, a new, full assessment is scheduled for 2011. The 2009 assessment indicated that the population had begun to level off following an increase from very low abundance. Dr. Hill noted that the 2009-2010 fishery landings were relatively low, despite El Niño conditions, which usually tend to increase the availability of Pacific mackerel.

A chief source of uncertainty in the Pacific mackerel model is the treatment of the commercial passenger fishing vessel (CPFV) logbook index of relative abundance. One model (AA), with a single CPFV index time block, yielded an acceptable biological catch (ABC) of 55,408 mt, while a two period model (AB) resulted in an ABC of 7,729 mt. In June 2009, the SSC endorsed the use of model AA for setting the ABC, but recommended taking the results of model AB into account when setting the harvest guideline (HG). The Council subsequently approved an ABC of 55,408 mt and a HG of 10,000 mt with a 2000 mt set-aside for incidental harvest.

Lacking an assessment update, and given that recent catches have remained at low levels (approximately 3,000 mt), the SSC concluded that the ABC and HG recommendations for 2009-2010 would be appropriate for the 2010-2011 fishing year as well.

F.2. FMP Amendment 13 – Annual Catch Limits

Mr. Mike Burner presented an overview of the issues addressed in Draft Amendment 13 to the Coastal Pelagic Species (CPS) Fishery Management Plan (Agenda Item F.2.a, Attachment 1) with emphasis on items that the Council may want the Scientific and Statistical Committee (SSC) to address. Dr. Kevin Hill presented the CPS Management Team (CPSMT) analysis comparing the performance of current control rules for Pacific sardine and Pacific mackerel with the new National Standard 1 (NS1) benchmarks – overfishing limits (OFLs), acceptable biological catches (ABCs), annual catch limits (ACLs), and annual catch targets (ACTs) (Agenda Item F.2.a Attachment 1).

In drafting the Amendment, the CPSMT and Council Staff considered:

1. OFLs, ABCs, ACLs, and ACTs for the actively managed species (P. sardine and P. mackerel);
2. OFLs and ABCs for the monitored species;
3. possible additions to and removals from the monitored species and prohibited harvest species group; and
4. species to be categorized as Ecosystem Component Species (ECS).

With respect to (4), above, the CPSMT wrestled with the pros and cons of being all-inclusive in constructing the ECS list or limiting it to species taken in the various CPS fisheries. The CPSMT opted for the more parsimonious approach of adding species to the ECS list only if caught in substantial quantities with CPS gear. The SSC concurs with the CPSMT decision.

In March 2010, the SSC reviewed preliminary CPSMT work on OFLs and ABCs for Pacific sardine and made a number of suggestions for additional analysis that might clarify the performance of the current sardine harvest control rule (HCR) relative to the new NSI guidelines. These additional analyses were conducted by the CPSMT and presented to the SSC at this meeting. The new work made clear how the current HCR performs compared to the application of OFL buffers designed to reflect scientific uncertainty. Based on the results, the CPSMT suggested three alternatives for the actively managed CPS. The SSC recommends that Alternative 3 as the preferred alternative as it best captures the intent of the new NSI guidelines and is most consistent with other Council FMPs.

For the monitored species, either Alternative 1 or Alternative 2 can be used to achieve any desired ratio ABC/OFL, but Alternative 1 is conceptually simpler and more consistent with the ABC determination used in other Council FMPs. Alternative 1 should be regarded as $ABC = OFL * BUFFER$ with $BUFFER = 0.25$ serving as the best current value for BUFFER. This value may be updated as additional analyses become available.

The SSC does not have specific recommendations on the draft FMP language at this time, but will work with Council staff to capture the intent of Council final action.

Finally, the SSC discussed the concept of formally including biological, ecological, economic, and social factors into the CPS FMP that could be used as optimal yield considerations in determining the appropriate ACLs for CPS. The potential factors are numerous and their relative weighting might be difficult to establish, but there may be some benefit to presenting them for Council consideration. The SSC sees some merit in formally considering such factors but suggests that the Council's newly-formed Ecosystem Plan Development Team may be in a better position to evaluate the numerous ecological and socio-economic factors that may be best incorporated into the Council's ACL considerations.

Adjournment: The SSC adjourned at approximately 5:30 p.m., Saturday, June 12, 2010.

SSC Subcommittee Assignments, June 2010

Salmon	Groundfish	CPS	HMS	Economic	Ecosystem-Based Management
Robert Conrad	Vidar Wespestad	André Punt	Ray Conser	Cindy Thomson	Selina Heppell
Loo Botsford	Loo Botsford	Ray Conser	Robert Conrad	Vlada Gertseva	Ray Conser
Carlos Garza	Ray Conser	Carlos Garza	Selina Heppell	Todd Lee	Martin Dorn
Owen Hamel	Martin Dorn	Owen Hamel	Tom Jagielo	André Punt	Vlada Gertseva
Meisha Key	Vlada Gertseva	Selina Heppell	André Punt		Pete Lawson
Pete Lawson	Owen Hamel	Tom Jagielo	Vidar Wespestad		Todd Lee
Charlie Petrosky	Tom Jagielo	Meisha Key			André Punt
	André Punt				Cindy Thomson
	Theresa Tsou				Theresa Tsou

Bold denotes Subcommittee Chairperson

PFMC
08/19/10