

## **SUMMARY MINUTES**

### **Scientific and Statistical Committee**

Pacific Fishery Management Council  
Red Lion Hotel Sacramento  
Klamath Room  
1401 Arden Way  
Sacramento, CA 95815  
(916) 922-8041  
March 6-7, 2000

#### **Call to Order**

The meeting was called to order at 1 P.M. by Chairman, Dr. Peter Lawson. The Council's new Executive Director, Dr. Donald O. McIsaac introduced himself to the Scientific and Statistical Committee (SSC) and reported the most important agenda items for SSC to comment to the Council would be: hook-and-release mortality estimates (B.2.) and research and data needs (H.4.).

The agenda was approved.

#### **Members in Attendance**

Mr. Alan Byrne, Idaho Department of Fish and Game, Nampa, ID  
Mr. Robert Conrad, Northwest Indian Fisheries Commission, Olympia, WA  
Dr. Ramon Conser, National Marine Fisheries Service, La Jolla, CA  
Dr. Robert Francis, University of Washington, Seattle, WA  
Dr. Susan Hanna, Oregon State University, Corvallis, OR  
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, Tiburon, CA  
Dr. Gary Stauffer, National Marine Fisheries Service, Seattle, WA  
Ms. Cynthia Thomson, National Marine Fisheries Service, Santa Cruz, CA  
Dr. Shijie Zhou, Oregon Department of Fish and Wildlife, Portland, OR

#### **Members Absent**

Dr. Gilbert Sylvia, Hatfield Marine Science Center, Newport, OR  
Dr. Richard Young, Crescent City, CA

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

The following text contains SSC comments to the Council. (Related SSC discussion not included in written comment to the Council is provided in italicized text).

#### **Open Discussion**

*Ms. Cyreis Schmitt (National Marine Fisheries Service) reviewed for the SSC the Stock Assessment Review (STAR) and stock rebuilding process meetings that occurred February 28 – March 2, 2000. Ms. Schmitt noted concern about the "parameters" the SSC requested for stock assessment documents; e.g., recruitment projections based on recruitment estimate from recent years. It was noted that this information is unavailable for several rockfish species (e.g., Pacific ocean perch). The SSC responded that the parameters were intended to be guidelines, not rigid requirements. Moreover, the SSC stated that the recommendation for using recruitment information from recent years was targeted at assessments that relied on old data. In addition, the SSC noted that when several assessment models are used, it can be difficult to determine if differences among the models are due to the assessment methods or natural characteristics of the species. To help discern the most accurate assessment models,*

*the SSC recommended that specific parameters be included to increase consistency among the various methods and show how assessment results were derived.*

*The SSC also discussed their involvement in developing and reviewing rebuilding plans during 2000. It was noted that the SSC was heavily involved in the rebuilding process in 1999. The SSC cautioned that, emphasizing STAR panel review of canary rockfish and cowcod rebuilding plans and lessening the SSC's involvement would provide the SSC no opportunity to make substantive comments. The SSC will review the draft rebuilding plans for canary rockfish and cowcod at its June 2000 meeting. Draft documents should be completed in time for inclusion in the June Council Briefing Book. Stock assessment authors are encouraged to present their draft documents to the SSC in June 2000, if possible.*

*Dr. Steve Ralston provided an update on the Harvest Rate Policy Workshop scheduled for March 20 - 24, 2000 in Seattle, Washington. Nine authors have expressed interested in making presentations. A goal of the workshop is to determine the best methods for estimating  $F_{MSY}$  or its proxy. Dr. Ralston noted that outside interest in the workshop has been strong. The papers presented at the workshop will be published as a "module" of the North American Journal of Fisheries Management. A report on the workshop will be provided to the Council in April.*

## **Salmon Management**

### **Review of 1999 Fisheries and Summary of 2000 Stock Abundance Estimates**

Mr. Doug Milward of the Salmon Technical Team (STT) reviewed the 1999 ocean salmon fisheries and 2000 stock abundance estimates for the SSC. He stated the 2000 preseason abundance forecast for most chinook and coho stocks were similar to last years' preseason estimates. The Klamath River chinook forecast is larger than last years' estimates; however, the Council has the option of managing for the escapement floor of 35,000 natural spawners. The escapement was below the floor in 1999. Two more years of subfloor escapements would result in an overfishing determination. A precautionary approach should be used when managing this stock. Basing management decisions to meet minimum escapement levels leaves little or no room for error if the escapement floor is to be met or exceeded.

The SSC requested the STT add the postseason estimates for all stocks listed in Table I-1 and I-2 in the *Preseason Report 1 (Stock Abundance Analysis for 2000 Ocean Salmon Fisheries)*. The SSC is concerned methods used to predict stock abundances are changing without review.

### **Estimation Procedures and Methodologies**

#### Modifications to the Coho and Chinook Fishery Regulation Assessment Models

The SSC was informed of a slight change in the coho fishery regulation assessment model (FRAM) that accounts for the Thompson River coho stock. These changes affect only the Fraser component of the model and do not affect any other stocks in the model.

At the November 1999 Council meeting, a presentation was given to the SSC on changes proposed for the chinook FRAM model for the 2000 management season. Mr. Larrie LaVoy presented an update on the status of these changes to FRAM. Proposed changes to chinook FRAM to allow it to evaluate mark-selective fishery proposals were not completed. Since there will be no mark-selective fisheries proposed for chinook for the 2000 management season, this will not present any problems. The only other changes to chinook FRAM were the addition of new tag code information for two stocks (White River spring chinook and Fraser late). These additions have virtually no impacts on the estimates of stock composition of Council fisheries.

#### Recreational Nonretention Hooking Mortality Rates

Dr. Robert Kope of the STT discussed the STT report on recommendations for hooking mortality rates in 2000 recreational ocean salmon fisheries (STT Report B.2.). The SSC had endorsed the methodology used in the report at the November 1999 meeting. The only changes from November were that some previously published estimates of hooking mortality rates were found to be incorrect on examination of the

original data. These estimates were corrected for the STT analysis. In addition, estimates from three studies conducted in Canadian marine waters during 1999 were added to the analysis.

The SSC concurs with the recommendations of the STT based on a review of their report:

Adopt a single hook-and-release mortality rate of 14% for chinook and coho salmon of all sizes released from recreational ocean fisheries using trolling, mooching, and motor mooching methods, except for California-style mooching.

Continue to apply a weighted average of recreational troll and California-style mooching rates to California recreational ocean salmon fisheries.

Continue to apply an additional dropoff mortality rate of 5% to all fish caught by ocean salmon hook-and-line fisheries to account for dropoff mortality, predation loss, noncompliance, etc.

Support further research to estimate hook-and-release mortality rates, encounter rates, and develop fleet profiles of fishing gear/methods and hook wound locations.

In addition, the SSC recommends additional research on methods for expanding estimates of immediate hook-and-release mortality to long-term mortality estimates be conducted.

### **Oregon Coastal Natural Coho Management Review – Progress Report**

At its November 1999 meeting, the Council approved an Oregon Department of Fish and Wildlife (ODFW) proposal to form an ad-hoc work group to ensure the harvest management portion of the rebuilding plan for Oregon coastal natural (OCN) coho is based on the best available science. Mr. Sam Sharr of ODFW informed the SSC of the work group's progress to date.

The SSC considers the group's work plan to be systematic and well-considered. In addition to the list of questions the work group proposes to address, the SSC would also like the group to evaluate whether improvements could be made to the current method of estimating marine survival, which is a critical parameter for setting allowable OCN exploitation rates. The SSC is particularly interested in how the previous year's smolt-to-jack ratio is used to infer smolt-to-adult survival in the current year, and also, how survival data for hatchery fish is extrapolated to natural coho stocks. In terms of the composition of the work group, the SSC strongly encourages regular participation by the Independent Multidisciplinary Science Team.

### **Coastal Pelagic Species Management**

#### **Pacific Sardine – Biomass Estimate and Harvest Guideline**

Dr. Doyle Hanan briefed the SSC on results from the recent Pacific sardine assessment and the harvest guideline recommended by the Coastal Pelagic Species Management Team (CPSMT) for the 2000 season. Dr. Kevin Hill, lead assessment author, was available to answer questions on the assessment.

The full sardine assessment report is currently being drafted and will be incorporated into the annual Coastal Pelagic Species Stock Assessment and Fishery Evaluation document to be prepared for the June 2000 Council meeting. Future sardine assessments will be completed for review by the CPSMT and SSC in mid-October for discussion at the November Council meeting.

The SSC discussed procedural aspects of stock assessment reviews for Pacific sardine and Pacific mackerel. At this stage, it is uncertain how the annual stock assessments should be reviewed, whether by the SSC or by some independent process. The CPSMT should establish a standard process for future years.

The biomass estimate from the CANSAR-TAM stock assessment model uses the best available data from the California fishery and annual NMFS and California Cooperative Fisheries Investigations (CalCOFI) surveys. The surveys are from a limited area, while biomass needs to be established on coastwide basis. A significant sardine fishery is based in Ensenada, Baja California which rivals the annual California landings. Efforts should be made to exchange data and coordinate management among Mexico, the U.S., and Canada to avoid future overharvest of this transboundary stock.

### **Status of Plan Amendment (Squid Maximum Sustainable Yield and Bycatch)**

The SSC reviewed Attachment D.3.b. "Recommendations of the CPSMT on market squid maximum sustainable yield (MSY), market squid acceptable biological catches (ABC), and bycatch provisions for the coastal pelagic species (CPS) fishery management plan (FMP)." This document was prepared in response to NMFS' disapproval of two provisions of Amendment 8 to the Northern Anchovy Fishery Management Plan pertaining to optimum yield (OY) specification for squid and bycatch evaluation for all species in the plan.

The document outlines options to address three distinct areas:

1. Squid MSY.
2. Squid ABC.
3. Bycatch in CPS fisheries.

#### Determination and Designation of Market Squid MSY

The CPSMT report indicates the data are inadequate to estimate MSY, requiring the specification of a proxy for MSY based on landings data. Five options are given.

The SSC observes that setting a MSY for market squid is impractical for a number of reasons. Fishery and biological data are scarce. International markets are important and variable influences on fishing effort, meaning that landings data are not a reliable indicator of stock abundance. The short life of the species combined with its vulnerability to oceanographic variation limits the usefulness of a sustainable yield concept.

However, the Sustainable Fisheries Act requires that OY be set on the basis of a MSY or MSY proxy. The guidance provided by Restrepo et al. in cases of data-poor situations is to calculate a MSY proxy on the basis of average landings during a period in which there is no evidence of declining abundance. This would suggest the adoption of Option 4, which specifies an MSY proxy of 75, 570 mt. The MSY proxy could be larger if there are unfished spawning areas that serve as refugia. The SSC recommends the relative magnitude of these areas be identified, and the MSY figure be expanded accordingly. However, the recommendation to expand MSY is contingent on the identified refugia remaining unfished. It is also important to recognize MSY will need to vary with environmental conditions, and more data will be needed to refine and update the estimate.

#### ABC Definition for Market Squid

As a temporary measure until more squid research is conducted, the SSC supports the CPSMT's recommendation to set ABC equal to MSY. The basis for this recommendation is the presumption that refugia spawning areas exist, and the recognition that further protection is provided by management controls in the fishery.

#### Bycatch Provisions for all CPS

The Sustainable Fisheries Act requires that bycatch be documented and minimized to the extent practicable. The SSC notes the need to document the extent of bycatch in CPS fisheries. For the six options identified by the CPSMT, the SSC supports both Options 3 and 6.

With regard to Option 3, the SSC notes that, because of the way the fishery operates, there is little or no

opportunity to sort and discard catch at sea. Therefore, bycatch in the CPS fishery can be documented and monitored through enhancement of existing port sampling programs. Port sampling procedures should also be documented.

With regard to Option 6, the SSC concludes that requiring logbooks and observer coverage is a particularly good idea, given the potential for salmon interception in CPS fisheries that may develop north of 39° N latitude.

### **Groundfish Management**

*In November 1999, the SSC encouraged its Economic Subcommittee (ES) to prepare a discussion paper documenting the overcapacity problem in the groundfish fishery and outlining potential ways the Council may want to proceed on this issue. At this meeting, Ms. Cynthia Thomson gave the SSC a progress report on this activity. The ES met in Portland 13-14 January and developed a substantial outline for the discussion paper (ANCILLARY C.[2.]). Subsequently they have almost completed a draft report. Included in the report are:*

*Documentation of the history of overcapacity in the Council groundfish fishery.*

*Possible management options to deal with the problem (e.g., status quo, buyback, permit stacking, IFQs, combinations).*

*A discussion of other approaches to dealing with the overcapacity problem worldwide.*

*The ES will submit a draft report to the SSC and Council prior to the April meeting and a final report prior to the June meeting. The SSC encouraged the ES to publish the report in a peer-reviewed journal and submit an executive summary to the Council Groundfish Strategic Planning Committee.*

### **Bycatch Mortality for Rockfish**

The SSC reviewed Groundfish Management Team (GMT) Report G.5.(1). on bycatch and incidental catch of rockfish. SSC discussion focused, in particular, on the GMT's difficulty in estimating rockfish discards for the year 2000. The SSC recognizes the difficulties in estimating discards generally and the additional complications arising from creation of the new minor rockfish management categories prior to the 2000 fishery.

The GMT Report G.5. suggests a number of ad-hoc approaches designed to provide rough estimates of discards for the 2000 fishery. The SSC encourages the GMT to further explore these approaches. Although all such approaches are less than ideal, they may result in discard estimates preferable to the default assumption that no discarding occurred. The SSC is willing to review these estimates if adequate documentation of the methods can be provided. The GMT's opinion of the strengths and weaknesses of the various approaches would also be helpful. However, the Council should recognize that such ad-hoc estimates cannot be supported over the long term. The SSC endorses the GMT statement that "... continued absence of a comprehensive, total catch monitoring program is a serious defect in the current management program."

### **Research and Data Needs and Economic Data Plan**

The SSC reviewed a variety of proposed changes to the Council's research and data needs process as outlined in revisions to Council Operating Procedure (COP) 12 (Attachment H.4.a.). Under the new procedures the lead role of the SSC is explicitly identified, and the process, as it has evolved over the last two cycles, is codified. In addition, updates to the economic data plan are now explicitly included as part of the research and data needs planning exercise. The SSC endorses all proposed changes to COP 12 and, in addition, recommends language be inserted to reflect that comments from advisory bodies should be submitted in writing to the SSC at the April meeting of even numbered years.

For the next cycle, the SSC notes that increased attention to the research and data needs of CPS and highly migratory species is warranted. With respect to groundfish, the goals and objectives in the

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Council's groundfish strategic plan will provide useful guidance to the SSC in determining priority areas.

### **Public Comment**

There was no public comment.

### **Adjournment**

The SSC adjourned at approximately 4:30 P.M., Tuesday, March 7, 2000.

### **Research and Data Needs (ongoing list)**

1. Systematic review of salmon run-size predictors; evaluation of forecasts through hindcasts. (Resulting from March 1997 discussion on stock abundance estimates and preseason forecasts.)
2. Localized depletion of groundfish stocks, especially Dover sole and shortspine and longspine thornyheads, may occur at low abundance levels. The SSC recommends the GMT consider using area-specific harvest guidelines for these species. (From November 1997 discussion on 1998 harvest levels.)
3. It may be possible to increase harvest levels while still meeting target mortality fishing rates such as  $F_{35\%}$  by deliberately managing the range of age and lengths targeted by the fishery. For example, avoiding capture of young Dover sole who have not yet realized their entire growth by shifting fishing effort in deep water might make larger catches possible. Effects on enforcement and other species would have to be considered. (November 1997.)
4. A recruitment survey for whiting would help reduce uncertainty in the stock assessment. (The SSC agreed that a more comprehensive discussion of research needs to support groundfish stock assessments was necessary, including how to integrate social and economic analyses into the assessment and how to analyze management histories from the assessments.) (November 1997.)

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