SUMMARY MINUTES

Scientific and Statistical Committee

Pacific Fishery Management Council
Sheraton Portland Airport Hotel
Cascade B Room
8235 NE Airport Way
Portland, OR 97220-1398
(503) 281-2500
June 21-22, 1999

Call to Order

The meeting was called to order at 8:30 a.m. by Chairman, Dr. Peter Lawson. Executive Director, Mr. Lawrence D. Six reported the most important agenda item for SSC comments to the Council would be Groundfish rebuilding plans (G.9.). The agenda was approved with the following changes: the lead on G.4. was changed to Ray Conser and some times were shifted around.

There were no minutes from the April meeting.

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, Newport, OR
Dr. Robert Francis, University of Washington, Seattle, WA
Dr. Kevin Hill, California Department of Fish and Game, La Jolla, CA
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
Dr. Gilbert Sylvia, Hatfield Marine Science Center, Newport, OR
Ms. Cynthia Thomson, National Marine Fisheries Service, Santa Cruz, CA
Dr. Richard Young, Crescent City, CA
Dr. Shijie Zhou, Oregon Department of Fish and Wildlife, Portland, OR

Members Absent
Dr. Susan Hanna, Oregon State University, Corvallis, OR
Mr. Tom Jagielo, Washington Department of Fish and Wildlife, Olympia, WA

Scientific and Statistical Committee Comments to the Council

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

Open Discussion

During open discussion, members of the GMT attended to discuss the issue of how and when to review the new information on groundfish harvest rates. The SSC developed the following statement to the Council for its agenda item G.2.h:

The Groundfish Management Team (GMT) has taken the lead in the past couple of years to reassess the default F_{MSY} proxy for groundfish, particularly for the rockfish stocks. This is a separate issue from the 40-10 harvest policy in the groundfish plan. The GMT goals were to have completed this evaluation in time for this year's groundfish assessment cycle. A number of assessment scientists are in the process of developing position papers on the subject. Two workshops have been held to review work in progress. The modeling to date has generated considerable debate and diverging views. We anticipate that research will not be completed until later this summer or early fall. Given the diverging views, it is unlikely a clear consensus on the appropriate harvest rate policy will be forthcoming. As a result, we expect that once all

papers are completed, there will need to be a peer review similar to the Stock Assessment Review (STAR) Panel process from which to develop a unifying harvest rate policy. Given the workload issues associated with the 1999 assessment cycle and rebuilding plans for the overfished stocks, the earliest time to have such a review would likely be in the first quarter of next year. A revised harvest rate policy then will not be fully reviewed and adopted at the November Council meeting. If the preliminary findings indicate that there is an urgency to reduce harvest rates for 2000 below $F_{35\%}$ or $F_{40\%}$, the Council will have the option to reduce optimum yield at the November meeting.

The SSC recommends that the Council and NMFS work with the SSC Groundfish Subcommittee to organize this peer review. The Council also needs to give direction to the GMT, SSC, and Council staff on the process for implementing recommended future harvest rate changes.

At the end of the meeting, the SSC returned to open discussion and Dr. Robert Francis presented a summary of the findings of the Ecosystem Principles Advisory Committee.

The SSC took two hours on Monday, June 21, to hear presentations from Dr. Dave Van Voorhees and Mr. Dave Colpo on the Recreational Fishery Information Network (RecFIN) and the Economic Fishery Information Network (eFIN).

Coastal Pelagic Species Management

Anchovy Biomass Estimate

With the adoption of the Coastal Pelagic Species (CPS) plan by the National Marine Fisheries Service (NMFS), the northern anchovy stock becomes a monitored species. As noted in Exhibit B.2., the default maximum sustainable yield control rule (MSY) for anchovies is 25% of the MSY, or 25,000 mt for a U.S. harvest quota. NMFS last assessed the anchovy resource in 1995 and has not reported any trends in populations since 1997. Given these conditions, the default harvest quota appears to be more than sufficient given current levels of exploitation by both Mexican and U.S. fisheries.

Coastal Pelagic Species Fishery Management Plan

The SSC was not scheduled to comment on this agenda item, but discussions led to this statement:

The SSC reminds the Council that since the coastal pelagic species (CPS) plan has been adopted, the annual Stock Assessment and Fishery Evaluation (SAFE) reports will need to be prepared and reviewed within the Council process. As the Council moves toward ecosystem management, accurate assessments of the CPS resources and fisheries will become very important. A recent California Department of Fish and Game (CDFG) mackerel assessment report has been reviewed internally by CDFG. The 1998 sardine assessment has been informally reviewed internally and distributed to scientists outside of CDFG and NMFS Southwest Fisheries Science Center. The Council will need to work with the agencies to set up an annual procedure for reviewing CPS SAFE reports possibly by implementing, for example, a STAR panel. Given limited funding for the CPS fisheries, it is critical that the responsibilities for such a review process be established sooner rather than later.

Salmon Management

Nonretention Mortality in Ocean Salmon Fisheries

Dr. Robert Kope of the Salmon Technical Team (STT) briefed the SSC on the status of the review of nonretention mortality in ocean salmon fisheries. Several studies of hooking mortality have been released since the STT's last review; however, none have been peer reviewed. He stated there are sufficient data available to estimate short and long-term mortality in the commercial troll fishery. In the recreational fishery there are probably adequate data to estimate short-term mortality from hook wound location. The problem of estimating long-term mortality rates in these fisheries has not been solved. Hook wound location varies with gear type and fishing methods. The states of California, Oregon, and Washington will monitor the1999 recreational ocean fisheries and collect data on gear, fishing methods, and encounter rates. This information will be used to develop more accurate fishery-specific estimates of hooking mortality rates in

monitored recreational fisheries. The states of California, Oregon, and Washington should coordinate and standardize their data collection methods.

In its April 1999 statement to the Council (Supplemental SSC Report F.2.) the SSC recommended the comprehensive review of historical and new studies of hooking mortality be completed. The SSC reminds the Council that, if modified hooking mortality rates are to be adopted for use in the year 2000, all materials must be submitted to the SSC for review prior to the September 1999 meeting.

Groundfish Management

Strategic Planning

Mr. Larry Six reported to the SSC on the status of strategic planning. The SSC is pleased this process is going forward.

It will be desirable to maintain an interaction between Council members and the participating advisory committees (GMT, Groundfish Advisory Subpanel, and SSC) throughout the strategic planning process. The SSC suggests that a member of each advisory committee be present at each meeting of the Council and contractor. Advisory committee members could help the Council frame the strategic plan in terms that allow the advisory bodies be most effective

Research and data needs have been excluded from the discussion in order to maintain a manageable scope for the planning exercise. The SSC recognizes the need to limit the scope, but reminds the Council that, due to a lack of clarity in the Council's long-term direction, the SSC had difficulty in prioritizing the *1999 Research and Data Needs*. Some management scenarios are likely to depend on detailed and precise stock assessments, while others could be based on more general monitoring of catch trends. The Council may wish to consider the general research needs of various alternative long-term visions for the fisheries as part of the strategic plan.

The SSC is also concerned that there is no process to oversee plan implementation. The SSC recommends that a committee be established to present an annual report on progress in achieving the plan. After five years a detailed assessment should be conducted quantitatively evaluating success of the plan in achieving biological, social, and economic goals and objectives.

Stock Assessment Priorities for 2000

An ambitious plan for conducting and reviewing Council groundfish stock assessments in the year 2000 was presented to the SSC by Ms. Cyreis Schmitt. The tentative plan included assessments of coastwide lingcod, yellowtail rockfish, widow rockfish, bank rockfish, darkblotched rockfish, splitnose rockfish, English sole, Dover sole, and the California nearshore rockfish complex. It was proposed that the assessments be critically examined and evaluated by either solicited external review or by STAR Panel. In addition to these nine stock assessments, the SSC recommends that, because of its over-arching importance, the groundfish harvest rate policy issue should be subjected to STAR Panel review no later than the first quarter of next year.

Given the current stock assessment workload before the Council and the limited resources available to accomplish this important task, the SSC discussed ways to reduce the number of assessments scheduled for completion next year to something more tractable. In particular, the assessments of English and Dover soles in the year 2000 were not viewed as critical, and these could reasonably wait one year. In addition, the SSC concluded the coastwide lingcod assessment should be conducted by a single consolidated stock assessment team (STAT), which would integrate the information available from both the northern and southern areas. Carrying this one step further, at some point in the future, a joint U.S.-Canada lingcod assessment would allow consideration of impacts to the lingcod stock over a broader portion of its range. Also, because work next year on the California nearshore rockfish complex will only explore methodological issues, a full STAR panel review of that topic isn't warranted. Instead, a meeting held in a workshop format may be less onerous and more productive. Lastly, with respect to the two forms of review procedures, soliciting external reviews of stock assessments in lieu of a STAR panel review (e.g., widow rockfish) is likely to result in a less comprehensive review without reducing the workload of STAT teams.

Based on these considerations the SSC suggests that for the year 2000 the Council review the results of six stock assessments (coastwide lingcod, yellowtail rockfish, widow rockfish, bank rockfish, darkblotched rockfish, and splitnose rockfish), as well as the default groundfish harvest rate policy through formal STAR panel proceedings. In addition, a workshop on the nearshore rockfish assemblage is recommended.

The SSC also noted that the terms of reference would need to be changed in 2000 to reflect the possibility of having up to three stock assessments reviewed in one STAR panel.

Consistency of California Rockfish Size Limits

The Keeley Bill, enacted by the California State Legislature in 1998, imposed minimum size limits on eight nearshore species included in the Council's groundfish fishery management plan (FMP). At its March meeting, the SSC raised two issues regarding the consistency of these regulations with the FMP, (1) whether the minimum size limits could be effectively enforced in the geographically dispersed live fish fishery, and (2) whether the size limits would be an effective management tool, given the potential mortality of released undersized fish.

Although a fiscal year 1999/2000 budget for California has not yet been finalized, Mr. Tom Barnes reported the current version submitted to the California State Legislature includes over $5 million for implementation of the Keeley Bill. Some of that increased funding is intended to hire 14 new marine wardens and purchase of a new patrol boat and aircraft. If approved by the Governor of California, this funding is expected to enhance monitoring and enforcement capabilities in the live fish fishery.

The CDFG also provided the SSC with information on several studies that provide information regarding the extent of shaker mortality for several nearshore fish stocks. The SSC does not consider these studies to be conclusive. However, the CDFG is also in the process of contracting with the Moss Landing Marine Laboratory to further evaluate the issue of shaker mortality. The results of the contract are intended to inform the development of California's nearshore fisheries FMP. The SSC looks forward to the opportunity to review that FMP.

Observer Program

The SSC reviewed the report of the Ad-Hoc Observer Program Implementation Committee (Attachment G.7.a.). The committee report outlines a first-year plan for observer coverage in the West Coast groundfish fishery. Fifteen to 20 observers would be deployed at an annual cost of approximately $2,000,000. The goals and objectives of the program are set forth in the report, and two alternative first-year implementations are suggested. The SSC offers the following comments and recommendations regarding a West Coast groundfish observer program:

1. Reliable total catch estimates are critical for both stock assessment and economic analyses. Sampling programs needed to derive these estimates should be an integral part of the routine fisheries data collection infrastructure, resulting in a consistent time series of total catch estimates. Thus, the duration of an observer program, if needed for total catch estimation, should be long-term. There is little advantage to a one-year program, for example, in that startup costs are likely to be greater than benefits derived.

2. Clear scientific objectives should be used to guide a statistically valid, cost-effective sampling program.

3. An observer program should be viewed as a statistically-based sampling program. Its statistical design should be well thought out in order to achieve clear scientific objectives in a cost-effective manner. Observer coverage and deployment decisions should naturally follow from the statistical design.

4. The data from the Oregon Department of Fish and Wildlife pilot observer program should be useful in designing a long-term observer program, e.g., for sampling stratification. Analysis of these data may also be beneficial in choosing between Alternative 1 (focused coverage of mainly the limited-entry trawl fishery) and Alternative 2 (broad, but limited coverage over all fishery sectors) for first-year implementation. Other logical alternatives, consistent with overall design goals, may also emerge

from such analysis.

5. Once established, an observer program should undergo periodic peer review (say every three to five years) to improve performance, to ensure that original objectives are being met, and to formalize any redesign that may be needed. The Council's STAR Panel framework may be an appropriate model for such periodic review.

6. Complementary logbooks (as suggested previously by the Ad-Hoc Total Catch Determination Committee) are supported by the SSC. However, logbook design and implementation should be an integral part of the overall observer program statistical design, including observer coverage, allocation, and deployment issues.

Control Date for Potential Limited Access in the Open Access Fishery

The SSC discussed the proposal to establish a control date for limiting access in the open access segment of the commercial groundfish fishery. The SSC supports establishment of a control date, because increasing capacity in the groundfish fishery will continue to undermine Council efforts to achieve management objectives. For the control date to be effective, it should be set as early as possible. Once a control date is set, developing a limited entry program for the open access fleet should become a high priority for the Council. A long time-lag between establishing a control date and finalizing a plan will decrease the benefits associated with establishing a date and increase the pressure to revoke the date to accommodate new entrants.

Rebuilding Plans

The SSC had a lengthy discussion of technical issues surrounding the development and implementation of stock rebuilding plans, with particular focus on those for lingcod, bocaccio, and Pacific ocean perch (POP).

The SSC was struck by differences among the three draft rebuilding assessments. For example, the lingcod assessment has no calculation of B_{MSY}. The bocaccio assessment uses deterministic stock production modeling to frame rebuilding. The POP assessment estimates B_{MSY} to be in the range of $0.25B_0$ (the default for an overfishing declaration) and current stock levels to be in excess of this value, thus implying the POP stock is not overfished. Our point is that there is little uniformity of approach among the three assessments.

The SSC has several recommendations for developing rebuilding plans.

A standard approach should be developed which would become the baseline case for all rebuilding plans (e.g., B_{MSY} determination, recruitment projections, rebuilding catch scenarios, etc.). This would at least allow initial comparisons between assessments.

Since rebuilding scenarios are sensitive to the ways in which recruitment is forecast, a precautionary approach should be taken in this regard. The SSC recommends an approach along the lines of that used in the current draft lingcod plan where recruitment is forecast using random samples from recent observed recruitment values. Then as stocks begin to rebuild, we would re-estimate current observed recruitment trends, thus incorporating any observed effects on recruitment of increased spawning biomass without having to employ more theoretical and speculative density-dependent spawner-recruit relationships.

In the short term, the SSC Groundfish Subcommittee should meet in July or early August with the three rebuilding stock assessment authors and attempt to develop comparable rebuilding plans. The focus of this meeting should be on technical/analytic issues.

Particular attention should be paid to the definition of such variables as B_{MSY} and B_0. These variables need to be as consistent as possible between the different assessments. For example, in the draft bocaccio plan, B_{MSY} is equal to 46% of unexploited biomass if spawning biomass is used and 67% of unexploited biomass if total (age 1+) biomass is used.

Some questions have been raised as to whether POP should be recategorized as not overfished, removing the need for a rebuilding plan. The SSC would like to emphasize that there is enough uncertainty in the estimates of B_{MSY} in the POP analysis that this stock should remain in the overfished category.

Public Comment

There was no public comment.

Adjournment

The SSC adjourned at approximately 5:30 p.m., Tuesday, June 22, 1999.

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.)

PFMC
07/02/99