

**PACIFIC FISHERY MANAGEMENT COUNCIL**


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**MEMORANDUM**

DATE: June 9, 2000  
TO: Cindy Thompson, Chair  
SSC Members  
FROM: Don McIsaac   
SUBJECT: F<sub>MSY</sub> Harvest Rate Considerations

At the last Council Meeting, we committed to reviewing the dialogue by Council Members on the subject of further work by the SSC regarding considerations in finalizing the F<sub>MSY</sub> harvest rate. Our goal was so as to develop specific questions consistent with the purpose and intent of the discussion at the Council table. Jim Glock, Dan Waldeck and I have prepared the attached assignment to the SSC, with some valued help from others. Please review this material in advance of the June Council meeting; the agenda Dan has prepared allows for about two hours of concentrated SSC time on this matter.

Please note that this assignment, and Council action, focuses on the F<sub>MSY</sub> harvest rate issue. Considerations on risk neutrality and precautionary elements in the management process beyond the F<sub>MSY</sub> harvest rate stage, such as ABC calculations, Harvest Guideline settings, *et cetera* will be examined at future Council meetings.

Should you have further questions on the attached assignment, please contact Jim Glock or Dan Waldeck.

Cc: Jim Lone  
Council Members  
Jim Glock  
Dan Waldeck  
John Coon  
Jim Seger  
Jim Hastie  
Steve Ralston  
Mark Powell  
Jennifer Bloeser



## Council Questions to the SSC Regarding Finalizing the $F_{MSY}$ Harvest Rate Report

In April, the SSC provided the Council a preliminary review of recommendations from the Harvest Rate Policy Workshop. At that time, the SSC committed to providing a final review of the  $F_{MSY}$  harvest rate recommendations at the June 2000 Council meeting (see attached – Supplemental SSC Report B.3., April 2000). The Council posed several questions to the SSC directed at clarifying scientific elements of policy considerations that can be categorized into three general areas: implementation of the workshop recommendations; characterizing accuracy, precision, risk and uncertainty; and incorporating precautionary adjustments into Council decision-making about the new harvest rates. In addition, as a fourth area, there was a request to define some key terms. To facilitate SSC review towards issues of greatest importance to the Council, Council staff committed to developing specific language for the general set of questions. These questions follow. Please consider these four general question areas and develop responses for bulleted questions within each for the June Council meeting.

### 1. Does the SSC agree with the findings/recommendations of the Panel?

- Does the SSC agree with the point estimates of  $F_{MSY}$ ?
- Are these estimated values risk-neutral (e.g., is there an equal probability that the true value is either above or below the point estimate)?
- Can one quantitatively describe the variability and uncertainty distribution around the point estimates? If so, please describe.

### 2. How should the recommendations be implemented?

- Please consider the following alternatives for Council action. From a quantitative, scientific perspective what are the pros and cons of each and is there one the committee can recommend? If so, why?
  - Implement Now.** Incorporate the new rates, across the board, into the 2001 specifications process. A rationale for this strategy would be that concern about stock status is high enough to warrant immediate reductions in harvest (biological concerns outweigh socio-economic considerations). If biological concerns warrant immediate implementation, how would one determine the appropriate quantitative adjustments, given the lack of assessments for many stocks? How would you recommend rudimentary, interim assessments be prepared?
  - Implement in Stages** (i.e., some now, others later). Implement new  $F_{MSY}$  harvest rates immediately where new assessments are available, and examine recent assessments to see if necessary components are available for incorporating the new rates. For stocks without assessments or where recent assessments lack the necessary information, new rates would be incorporated when the next assessment is done. A rationale for this strategy would be to seek balance between practical Considerations, socio-economic considerations and biological concerns. Please identify which recent stock assessments contain the information necessary to calculate the new ABC values in time for 2001.
  - Implement as per GAP Proposal** (i.e., phased in as new assessments are conducted, see attached – Supplemental GAP Report B.3., April 2000). Assessment authors could calculate  $F_{MSY}$  rates based on the Panel's recommendations when completing new stock assessments or updates. These rates would then be applied to the species/ complexes in question. A rationale for this strategy would be to prevent sudden, additional adverse social and economic effects, because of the biological uncertainty involved. Since stock assessments are conducted on a rotating basis, this would allow the new harvest rates to come into effect with the adoption of the new assessments.

3. What precautionary adjustments have already been taken and what are additional quantitative-based options?

- What precautionary adjustments are already taken in the management process?
- In the third paragraph of the attached April SSC statement, the committee recommends a precautionary adjustment be developed at the stage of developing the  $F_{MSY}$  value. Can the SSC specifically identify any precautionary or risk-adverse adjustment options, and if so, what are the quantitative benefits of each?
- In the third paragraph of the attached April SSC statement, two reasons are cited to warrant precaution in applying target  $F$  values for the fishery. For number 1, is there information on the range of average productivity for species within any complex managed by the Council? For number 2, can the chance referred to be quantitatively or qualitatively assessed (exceeding, and conversely not reaching, the true  $F_{MSY}$ )? If so, please describe.

4. Definitions of key words related to default harvest rates.

Jim Glock and Dan Waldeck: Need a short list here for Burnie.

- Finally, please develop working definitions for the following terms, from the perspective of Council action considerations.
- Risk neutral
- Risk prone
- $F_{SPR}$

PFMC  
06/07/00