



September 9, 2008

Donald K. Hansen, Chair
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220-1384

Re: Stock Assessment Terms of Reference

Dear Chair Hansen and Members of the Council:

We have reviewed the draft stock assessment terms of reference and respectfully submit the following comments.

First, we are concerned that the current structure and interrelationships between the various bodies involved in the stock assessment and review process do not really facilitate an independent peer review.

For example, the STAR panel whose "primary duty is to conduct a peer review of an assessment" is chaired by an SSC member and is advised by major fisheries interests through the GMT and GAP. In addition, there seem to be constraints on the panel's activities which could inhibit the researchers from thoroughly exploring the implications of the model assumptions, structure, and treatment of the data and uncertainty (e.g., "Star panel meetings are not workshops;" "the STAR Panel is not authorized to conduct an alternative assessment representing its own views that are distinct from those of the STAT Team").

Ultimately, the process of this 'peer review' resembles more a negotiation between the various fishery management bodies (e.g., SSC, STAT, GMT, and GAP), not all of which are science experts, than a truly external expert critique of the model. A truly independent scientific review, resembling the anonymous peer review of a scientific journal, should be undertaken independent of the negotiation described in the terms of reference.

Second, although the STAR panel Terms of Reference offer an improvement in the treatment and communication of uncertainty, the recommended framework is likely to result in the underestimation of scientific uncertainty.

The Terms of Reference reads:

“Under ideal circumstances, the STAT Team and STAR Panel should strive to reach a mutual consensus on a single base model, but it is essential that uncertainty in the analysis be captured and transmitted communicated to managers. A useful way of accomplishing this objective is to bracket the base model along what is deemed to be the dominant dimension of uncertainty (e.g., spawner-recruit steepness or R_0 , natural mortality rate, survey catchability, recent year-class strength, weights on conflicting CPUE series, etc.). Alternative models should show contrast in their management implications, which in practical terms means that that they should result in different estimates of current stock size, stock depletion, and ABC. Once a base model has been bracketed on either side by alternative model scenarios, which capture the overall degree of uncertainty in the assessment, a 2-way decision table analysis (states-of-nature versus management action) is the preferred way to present the repercussions of uncertainty to management.”

We are concerned that the emphasis placed solely on parameter uncertainty will ignore the important source of *model* uncertainty (the framework should, at the very least, allow for the inclusion of alternative stock-recruit models). Furthermore, the decision to focus on a single dimension of parameter uncertainty will also underestimate scientific uncertainty. In some cases the uncertainty in recruitment completely dominates the model uncertainty, but there are likely other cases where several sources of uncertainty are of comparable magnitudes and interact in ways that are difficult to predict. The presentation of uncertainty should not be restricted to a single dimension without prior exploration of other sources and justification.

Our third concern is the one we consider of greatest importance: these Terms of Reference do not incorporate some of the analyses needed to conform to the draft National Standard 1 guidelines on derivation of annual catch limits (ACLs) and targets (ACTs). Given that the STAT team and STAR panel are tasked with quantification of scientific uncertainty, they should conduct the necessary analyses to translate that uncertainty into an adequate size buffer to derive the annual catch limit as recommended in the National Standard Guidelines 1. The draft guidelines makes it clear that a ‘one-size-fits-all’ control rule is not appropriate and that stocks with larger uncertainties should integrate larger buffers between the overfishing level (OFL) and ACL. In addition, one of these bodies should be tasked with the evaluation of management error so that the derivation of an appropriately buffer between ACL and ACT is possible. Although the National Standard Guidelines are not finalized, these Terms of Reference should be forward-thinking and incorporate the necessary calculations to implement the recommended framework to derive ACLs and ACTs.

We appreciate the opportunity to comment.

Sincerely,


Karen Garrison

Lisa Suatoni