

National Annual Catch Limit (ACL) Science Workshop

Proposal for a Workshop on Science Supporting the Determination of Annual Catch Limits (ACLs) under the Magnuson Stevens Fishery Conservation and Management Act

NOAA proposes to facilitate a national science workshop jointly with the regional Fishery Management Councils and involving nationally recognized experts. The workshop to be held in February 2011 will focus on gathering information about the current state of scientific information needed to support implementation of the Magnuson-Stevens Reauthorization Act of 2006 (MSRA), particularly the determination and implementation of Annual Catch Limits (ACL).

Why?

The MSRA and the subsequent update of National Standard Guidelines substantially changed the nature of the scientific advice needed to sustainably manage fisheries, and changed the manner in which this advice is communicated through the Scientific and Statistical Committees (SSCs) to the Councils. The requirement that ACLs be implemented in 2010 for all fisheries that are experiencing overfishing, and for all other fisheries by 2011, is upon us. Further, these ACLs cannot exceed the level of catch, termed Acceptable Biological Catch (ABC), determined by the Council's SSC to prevent overfishing. These requirements expand NOAA's role for its scientific enterprise that supports the achievement of sustainable fisheries. There is an important need to assure that decision makers have consistent advice on a number of issues related to the establishment of ACLs, including:

- **FORECASTS:** Stock assessments no longer solely look back at the last fishing year to determine "Did overfishing occur?" Now they must also look forward to the upcoming fishing year(s) and determine the level of catch that would prevent overfishing. What are the data and modeling needs to accomplish these forecasts? In some cases this includes projecting stock rebuilding trends for overfished stocks.
- **UNCERTAINTY:** With how much confidence must recommended ABCs prevent overfishing? The more uncertain (data-poor) the assessment, the greater the chance that the recommended ABC actually exceeds the true overfishing OFL by a wide margin. Conversely, poor quality data may result in underfishing some stocks. More complete calculation and clearer articulation of uncertainty in the estimate of overfishing limits (OFLs) has become necessary.
- **DATA-POOR STOCKS:** The requirement that ACLs be established for all fisheries exposes the large number of stocks for which no assessment has ever been conducted and their status with regard to overfishing is thus labeled simply as "unknown". Development of protocols for establishing ACLs for these stocks is frustrated by the lack of quantitative information, and compounded by the expectation that greater degrees of uncertainty be met by appropriate increases in the buffer to prevent overfishing. What are the priorities for collection of data for "data-poor" stocks? How should risk be determined in these situations? How should scientists use analogous stocks in data poor situations?
- **PEER REVIEWS and SSCs:** The MSRA formally establishes the opportunity for the Councils and the Secretary to establish a peer review system, and it establishes the

requirement that the SSC be the body that provides “fishing level recommendations”, including ABCs, to the Council. Revision to the National Standard 2 (“best scientific information available”) Guidelines is underway to provide protocols for these peer review systems and their role with respect to the SSC’s determination of fishing level recommendations.

- **OPTIMUM YIELD:** The question “How confidently must we prevent overfishing?” is fundamentally linked to the question. “What does this fishery management plan seek to achieve?” The socioeconomic benefits derived from fully developed fisheries should be evaluated against the increased risk of overfishing and the costs associated with acquiring enough socio-economic and stock assessment information to quantify these benefits and risks. How should Councils approach the establishment of rebuilding targets for chronically overfished stocks when the Bmsy may be poorly established?
- **ECOSYSTEM:** Among the uncertainties associated with fisheries are large-scale questions such as “What is the cumulative impact of all fisheries on the regional ecosystem, including its protected resources and essential habitats?” and “What is the impact of all changes in the regional ecosystem (habitat, climate, invasive species, species interactions, coastal development, fishing, etc.) on the potential yield and biomass of each fishery stock in that ecosystem?” What is current status of NOAA’s efforts to develop Integrated Ecosystem Assessments, how are we implementing Ecosystem-Based Management, and how could it be used in improving determination of each fish stock’s ABC?
- **COOPERATIVE RESEARCH:** NOAA alone cannot be expected to provide highly precise and timely assessments for every stock in every fishery. Cooperative research can play a role in providing additional data needed to attain the greater precision and timeliness needed to reduce the risk of overfishing and attain high confidence in assessment results. Such high confidence is expected especially in those fisheries for which catch shares programs are being implemented.
- **CATCH MONITORING:** Implementation of accountability measures to assure that ACLs are not exceeded requires improved timeliness and precision in the monitoring of commercial and recreational catch and bycatch.

Many of the above topics have been discussed at the large-scale “Managing Our Nation’s Fisheries” workshops held prior to the MSRA or the much smaller annual national SSC workshops initiated after the MSRA. NOAA is intent on continuing both of these efforts and will soon initiate scoping for a post-MSRA “Managing Our Nation’s Fisheries” workshop. More immediately, NOAA sees a need for a national dialogue on the status of the scientific enterprise that supports the MSRA implementation topics identified above.

What?

The proposed workshop would provide a forum for a national discussion on the status of the science needs for MSRA implementation. The scope of this discussion is potentially quite broad, as evidenced by the topics identified above. Comprehensive coverage of all these topics is not feasible, nor are definitive, one-size-fits-all answers likely to emerge. Nevertheless, NOAA strongly believes it is time to create a status report on these topics so that the most effective follow-up efforts can be undertaken. The topics we propose to cover could include:

- What are the data needs (and costs) of conducting assessments? What are priorities for potential new funding?
- How can we calculate, communicate and respond to uncertainty in assessment results in formulating ACLs?
- How can we formulate advice taking into account socio-economic and ecosystem considerations, consistent with the Act's definition of OY as *MSY as reduced by* relevant economic and ecological factors
- What is a cost-effective approach to managing fisheries for the minor, data-poor stocks while conforming to the requirements of MSRA? What proxy approaches can prevent overfishing without overly constraining their fisheries?
- How can we best use cooperative research programs to augment the data needed to conduct precise and timely assessments for more stocks?
- What are the relative roles of Science Centers, SSCs, and peer review systems in providing and assuring the best scientific information available? What is the tempo of stock assessments – frequency, timeliness, and peer review? What is the best mix of benchmark assessments to improve our science and update assessments to provide timely updates for more stocks?
- How can we improve our commercial and recreational fishery monitoring programs to assure that stock assessments, ACL monitoring, and catch share programs have the data they need?

For each of the above topics, NOAA will invite an internal and an external speaker to kick-off a moderated discussion on the topic. Opportunity for public input will be provided.

When and Where?

We propose to hold this workshop in the DC Metro area during Feb 15-17, 2011. These dates were selected to be as early in 2011 as feasible and to avoid overlap with existing Council meetings.

Who?

In order to facilitate good discussion on these topics, NOAA intends to invite approximately 45 scientists who represent a balance of expertise and perspective on these issues. We envision a mix that has 15 NMFS scientists, 15 from the Councils and their SSCs, and 15 external participants selected from candidates recommended by the Councils, Commissions and stakeholders. In addition to these 45 invited participants, additional observers can register to attend and will be given opportunity to comment on the topics, in an open public forum.

Outcome

A report will be prepared by NOAA and the Councils to document the discussions and to provide a set of findings to guide future program development.