

Setting allowable biological catch for stocks with reliable catch data only

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For many stocks, reliable catch data are the only data available for assessing population status. For the purpose of this document, only reliable catch stocks will be referred to as ORCS. Without additional data, traditional stock assessment techniques cannot be applied. There have been a number of alternative methods proposed for and applied to develop total allowable catch, and now acceptable biological catch (ABC), for ORCS. Participants at the Second National Meeting of regional Fishery Management Councils' Scientific and Statistical Committees (SSCs), held in November of 2009 on St. Thomas, USVI, discussed the pressing need to evaluate existing and potential methods for setting ABCs for these stocks. A working group was established to identify, share, and evaluate alternative approaches (regional, national, and international) for setting ABCs for ORCS. Members of the working group represent seven of the eight SSCs, as well as academic institutions, an NGO, a regional Fishery Management Council, a state agency, and five of the six NMFS Science Centers. This talk will present the results of the working group. This information can contribute to a common framework, established among regional SSCs, for setting ABCs for these ORCS. Such a framework would need to incorporate flexibility to allow for regional differences in risk tolerance and preference of methods, but would provide a common foundation for all Fishery Management Councils.

Management uncertainty in the context of annual catch limits

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NMFS provides in the National Standard 1 (NS1) guidelines that accounting for both scientific and management uncertainty is necessary when setting annual catch limits that prevent/end overfishing. Management uncertainty is the difference between what you plan to catch and what you actually catch for a stock in a fishing year. Catch includes fish that are retained for any purpose, as well as mortality of fish that are discarded. Chief sources of management uncertainty include: 1) inadequate (not timely, or incomplete) catch data; 2) conservation and management measures that do not take advantage of available data; and 3) methods or models and/or quality of stock and fishery data used to estimate future catches that result in poor estimates of actual catch. Consequences of management uncertainty could include: 1) exceeding the annual catch limit (ACL) or even the overfishing limit (OFL) more often; and 2) more difficulty in achieving optimum yield. NMFS recommends the use of an annual catch target (ACT) to address management uncertainty. When following the NS1 guidelines, $OFL > ABC$, and $ABC \geq ACL$. An $ACT < ACL$ would provide separate transparent accounting of management uncertainty with scientific uncertainty accounted for in the difference of $OFL > ABC$. Use of an ACT is appropriate when: 1) past performance shows that a stock's actual catch has often exceeded its catch quota or limit; or 2) fisheries are being managed with annual catch targets and catch limits for the first time when ACLs are first implemented. A Fishery Management Council can ask its Scientific and Statistical Committee (SSC) for advice on how to calculate management uncertainty based on past fishery performance; still SSCs are not required to recommend ACLs and ACTs. Assigning ACLs to data-poor stocks will be very challenging. Data-poor stocks that have catch data have some basis for setting ACLs, even if catch per unit effort data and discard mortality is poorly understood. Data-poor stocks without catch data should be considered for assigning to a stock complex/species group if appropriate; otherwise the basis for allowing harvest of the stock needs to be carefully evaluated and an ACL is still needed. Improving data should be a high priority. Councils are currently considering frameworks for ACLs that include $OFL > ABC$, $ABC = ACL$ and $ACL > ACT$, or $OFL > ABC$, $ABC > ACL$

PROCEEDINGS

11TH NATIONAL STOCK ASSESSMENT WORKSHOP

Characterization of Scientific Uncertainty in Assessments to Improve Determination of Acceptable Biological Catches (ABCs)

JOINT SESSION OF THE NATIONAL STOCK AND HABITAT ASSESSMENT WORKSHOPS

Incorporating Habitat Information in Stock Assessments

1ST NATIONAL HABITAT ASSESSMENT WORKSHOP

Moving Towards a National Habitat Science Program

Hosted by the Southeast Fisheries Science Center, Southeast Regional Office, and Office of Science and Technology
St. Petersburg, FL
May 17–20, 2010

Edited by Kristan Blackhart

November 2010

NOAA Technical Memorandum NMFS-F/SPO-112



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This publication may be cited as:

Blackhart, K. (ed.) 2010. Proceedings. 11th National Stock Assessment Workshop: Characterization of scientific uncertainty in assessments to improve determination of acceptable biological catches (ABCs); Joint Session of the National Stock and Habitat Assessment Workshops: Incorporating habitat information in stock assessments; and 1st National Habitat Assessment Workshop: Moving towards a national habitat science program. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-F/SPO-112, 153 p.