

***Generic Assessment Terms of Reference for SAW/SARCs***  
(file: 5/18/09)

**A. (Stock name)**

1. Characterize the commercial catch including landings, effort and discards. Characterize recreational landings.
2. Estimate fishing mortality and total stock biomass for the current year, and for previous years if possible, and characterize the uncertainty of those estimates.
3. Update or redefine biological reference points (BRPs; estimates or proxies for  $B_{MSY}$ ,  $B_{THRESHOLD}$ , and  $F_{MSY}$ ). Comment on the scientific adequacy of existing and redefined BRPs.
4. Evaluate stock status with respect to the existing BRPs, as well as with respect to updated or redefined BRPs (from TOR 3).
5. Develop and apply analytical approaches and data that can be used for conducting single and multi-year stock projections and for computing candidate ABCs (Acceptable Biological Catch; see Appendix to the TORs).
  - a. Provide numerical short-term projections ( $x-y$  years). Each projection should estimate and report annual probabilities of exceeding threshold BRPs for  $F$ , and probabilities of falling below threshold BRPs for biomass. In carrying out projections, consider a range of assumptions about the most important uncertainties in the assessment (alternate states of nature).
  - b. If possible, comment on the relative probability of the alternate states of nature and on which projections seem most realistic.
  - c. (*For stocks that have rebuilding plans:*) For a range of candidate ABCs, compute the probabilities of rebuilding the stock by (*rebuilding date*).
  - d. Describe this stock's vulnerability to becoming overfished, and how this could affect the choice of ABC.
6. (*An Ecosystem-related TOR [this could involve interspecific biological interactions such as with predators, competitors or prey, or it could involve physical factors such as water temperature and circulation].*)
7. Review, evaluate and report on the status of the SARC and Working Group research recommendations listed in recent SARC reviewed assessments and review panel reports. Identify new research recommendations.

**Appendix to the Generic TORs:**

**Clarification of Terms  
used in the SAW/SARC Terms of Reference**

(The text below is from DOC National Standard Guidelines, Federal Register, vol. 74, no. 11, January 16, 2009)

**On “Acceptable Biological Catch”:**

*Acceptable biological catch (ABC) is a level of a stock or stock complex’s annual catch that accounts for the scientific uncertainty in the estimate of [overfishing limit] OFL and any other scientific uncertainty...” (p. 3208) [In other words,  $OFL \geq ABC$ .]*

*ABC for overfished stocks.* For overfished stocks and stock complexes, a rebuilding ABC must be set to reflect the annual catch that is consistent with the schedule of fishing mortality rates in the rebuilding plan. (p. 3209)

NMFS expects that in most cases ABC will be reduced from OFL to reduce the probability that overfishing might occur in a year. (p. 3180)

ABC refers to a level of “catch” that is “acceptable” given the “biological” characteristics of the stock or stock complex. As such, [optimal yield] OY does not equate with ABC. The specification of OY is required to consider a variety of factors, including social and economic factors, and the protection of marine ecosystems, which are not part of the ABC concept. (p. 3189)

**On “Vulnerability”:**

*“Vulnerability.* A stock’s vulnerability is a combination of its productivity, which depends upon its life history characteristics, and its susceptibility to the fishery. Productivity refers to the capacity of the stock to produce MSY and to recover if the population is depleted, and susceptibility is the potential for the stock to be impacted by the fishery, which includes direct captures, as well as indirect impacts to the fishery (e.g., loss of habitat quality).” (p. 3205)