

Mid-Atlantic Fishery Management Council
Scientific and Statistical Committee
July 16, 2009
Consensus Summary Points

Summer flounder

By consensus, SSC recommends to the Council that the summer flounder TAC (ABC) should be set for one year only (2010) and be based on 50% probability of achieving the fishing mortality rate target, $F_{40\%}$ (the associated TAC=25.48 million lbs and TAL=22.13 million pounds). Projections based on the accepted stock assessment indicate that this level of exploitation will still meet the rebuilding schedule; fishing mortality rate targets of $F_{35\%}$ or higher will not allow the stock to rebuild by the mandated deadline.

The SSC emphasizes that this recommendation takes into account scientific uncertainty only. The SSC does not take management uncertainty into account in its recommendations for 2010. The SSC notes that recent management efficacy has been less than 100% (i.e., the TAL has been exceeded routinely in recent years).

Sources of scientific uncertainty:

- New assessment model assumed age-specific natural mortality (M), which had substantial effects on reference points and stock status - this issue is still a considerable source of scientific uncertainty;
- Retrospective patterns in F and SSB still persist, but the pattern has changed and the effects are much smaller in recent years;
- Projections indicate that the stock is less likely to rebuild within the reference rebuilding time period at fishing mortality rates higher than $F_{40\%}$; and
- Recruitment from the 2008 year class looks high, but, as for most stocks, it will take several years of tracking this year class in the fishery-independent surveys to validate its strength.

Scup

By consensus the SSC recommends to the Council a one-year interim ABC for scup for 2010, based on a 10% increase in the 2009 TAC (i.e., recommended 2010 TAC=17.094 million pounds).

The SSC notes that the recommended TAC is in line with advice from the assessment and the independent peer review that despite the apparently high stock biomass, quotas should be expanded slowly because of the high degree of

scientific uncertainty in stock status. Much of the uncertainty is due to inadequate coverage by the fishery-independent surveys and observations of fishery discards. The SSC notes that no management uncertainty is included in this advice.

Sources of scientific uncertainty:

- There has been a substantial change in the approach to the assessing scup and the sensitivity and reliability of the new stock assessment is not fully understood;
- Assessment model is informed by fishery independent survey indices which are truncated above age 2 and commercial catch at age data for older ages; it is unclear the extent to which the fishery provides an unbiased estimate of stock abundance; therefore, considerable uncertainty exists about the population dynamics of older fish in the population; and
- Discard estimates are major source of uncertainty: discard estimates are imprecise and discard mortality is a significant component of fishing mortality for this stock.

Black sea bass

By consensus, the SSC recommends to the Council that it maintain the 2009 *status quo* measures in 2010 (i.e., recommended 2010 TAL=2.3 million pounds).

The SSC notes that this advice is based on consideration of the scientific uncertainty inherent in the management of this species as a result of its unusual life history and the unknown reliability of fishery-independent surveys for this species. The SSC recommends initiation of a fishery-independent survey that reliably tracks age- and sex-specific stock abundance. The SSC notes that no consideration of management uncertainty is included in this advice.

Sources of scientific uncertainty:

- Assessment assumes constant M for both sexes; life history characteristics for this species (protogynous hermaphrodite), where males and females are on different growth tracks, may result in sex-dependent Ms;
- Fishery-independent indices may not correspond to stock abundance because surveys do not adequately sample preferred sea bass habitat; and
- Significant and unidirectional retrospective patterns are evident.

Bluefish

By consensus, the SSC recommends to the Council that it adopt a TAC (ABC) associated with $F=0.15$ for 2010 (i.e., associated TAC=34.377 million pounds and TAL=29.264 million lbs).

The SSC notes that this advice is based on consideration of the scientific uncertainty associated with the stock assessment of this species. We note that no management uncertainty is included in this advice.

Sources of scientific uncertainty:

- Age composition data are sparse for some portions of the catch-at-age matrix; the lack of medium size and age fish in the catch persists and the cause of this observation is unknown;
- Fishery-independent trawl and seine surveys do not sample this pelagic species effectively, so survey indices may not track stock abundance; and
- The recreational component of the fishery represents the majority of the catch and recreational catch estimates for bluefish (and a number of other species) at the state level are highly imprecise and may also be biased.

General Remarks

1. All ABCs recommended by the SSC should be considered interim (i.e., for one year only).
2. The *ad hoc* approach used by the SSC to develop ABCs for summer flounder, scup, black sea bass, and bluefish will change once the Omnibus Amendment is adopted by the Council and approved by the Secretary of Commerce. The amendment will contain control rules for establishing ABCs for all stocks under the Council's purview.
3. As currently presented, the stock assessment reports are not sufficient for the SSC to do its job in evaluating uncertainty. The SSC is working through the SARC/SAW process to amend terms of reference to include analyses of uncertainty, and this is an evolving process. Uncertainty analyses should not only include an analysis of the model used in the stock assessment, but analyses of the uncertainties contained in the input data as well, especially survey estimates, age keys, discard observations, and port sampling.
4. Many of the uncertainties noted for the four stocks reviewed by the SSC are not unique. For example, assuming a constant natural mortality rate (M) for all adult age groups is a common practice, and is necessitated by the lack of age- and year-specific estimates.