

## 5.2 Re-define Minimum Stock Size Threshold (MSST)

The South Atlantic Council has typically set the MSST level at one minus the natural mortality ( $M$ ) (or 0.5, whichever is greater) times the spawning stock biomass at  $MSY$  ( $SSB_{MSY}$ ). However, when  $M$  is relatively small, such as 0.14 for red grouper, the current definition of MSST would trigger a rebuilding plan if biomass fell slightly below  $SSB_{MSY}$ . In this situation, natural variation in recruitment could cause stock biomass to frequently alternate between an overfished and rebuilt condition. This may lead to administrative, and potentially economic, adverse effects as the occurrence of unnecessary rebuilding plans/restrictive management measures would increase. To avoid this, the South Atlantic Council is redefining the MSST level in this amendment.

**Preferred Alternative 3** would set the MSST at 75% of  $SSB_{MSY}$  and thus provide a larger buffer than the current one between the level at which the stock is considered to be at equilibrium ( $SSB_{MSY}$ ) and the overfished level (MSST).

Many regions in the U.S. have been setting MSSTs at 50% of  $SSB_{MSY}$ , and one alternative in this amendment considers setting MSST at this level. If MSST is set at 50% of  $SSB_{MSY}$ , by the time a stock is found to be overfished, significant management measures may be required to rebuild the stock due to the low biomass levels.

It is noted that the latest stock assessment (SEDAR 19 2010) indicates the stock is above 75% of  $SSB_{MSY}$ . However, the assessment found the stock to be overfished under the previous biological benchmarks and, therefore, the South Atlantic Council must still implement a rebuilding plan to bring the population to the  $SSB_{MSY}$  level. The South Atlantic Council chose **Alternative 3 (Preferred)** as their preferred to be consistent with how they have approached setting of the MSSTs in other snapper grouper stocks with a low natural mortality. The Council changed the MSST definitions for snowy grouper and golden tilefish through Amendments 15A and 15B, respectively. They were changed to  $SSB_{MSY}$  (0.75), the same definition as the current preferred for red grouper in Amendment 24. The Council changed them for the same reasons they are considering for red grouper: the 1- $M$  definition puts MSST very close to  $SSB_{MSY}$  for species with a relatively low  $M$ . SEDAR 4 (2004) estimated natural maturity for snowy grouper and golden tilefish at 0.12 and 0.08, respectively.  $M$  for red grouper is 0.14 (SEDAR 19 2010).

At their April 2011 meeting, the SSC provided the following recommendation regarding revisions to the MSST: The SSC saw no reason to reconsider the MSST values because red grouper had been previously rated as a Tier 1-assessed stock with a  $P^*$  of 30% (and hence a 70% expected success rate at rebuilding).

With regard to the new MSST method derived by SEFSC (**Alternative 5**), the SSC did not feel it could evaluate the technique at this time. The SSC also indicated the technique should be considered in the future, but at present did not recommend using it in a generic sense or specifically in the case of red grouper. The SSC recommended delaying the application of the new approach until the SEFSC could provide further information.

The biological impacts of lowering the MSST could be adverse if biomass is lowered to levels below those expected through natural variations in recruitment before fishery managers are made aware of the overfished condition. However, since reauthorization of the Magnuson-Stevens Act, setting of a rebuilding plan may have become less important in specifying allowable harvest and conserving the stock. As stated in the SEFSC evaluation of the MSST issue contained in **Appendix D**:

“When specifying an appropriate buffer between the biomass limit and biomass target [...], it may be worth considering that biomass controls are the second tier of a two-tiered system. With reauthorization of the Magnuson-Stevens Act came stricter requirements on fishing mortality (the first tier) through the use of annual catch limits and accountability measures. The intent of ACLs and AMs is to end overfishing for all managed stocks. Their use is expected to help accomplish management objectives, including rebuilding stocks that are marginally below an optimal level. Thus, formal rebuilding plans may be less critical for conservation than they were prior to the reauthorization, and perhaps they should be triggered only for those stocks that are more severely depleted.”

As stated above, the SSC concurred with this point.

The South Atlantic Council’s ability to retain fishing mortality rate to ensure overfishing is not occurring (i.e., keeping harvest below ACLs through the regulations and system of AMs) becomes more important in the conservation of the stock than the implementation of a rebuilding plan. As such, the South Atlantic Council believes the reduction in adverse administrative, and potentially economic effects, is justified as the possibility of biological harm to the stock from changing MSST is low due to the presence of ACLs and AMs for red grouper.

The Snapper Grouper AP recommended selecting **Alternative 1 (No Action)** as the preferred. Similarly, the majority of public comments that addressed this action also recommended **Alternative 1 (No Action)**.

The South Atlantic Council concluded that **Alternative 3 (Preferred)** (MSST=75% of  $SSB_{MSY}$ ) best meets the purpose and need to implement measures expected to prevent overfishing and achieve optimum yield (OY) while minimizing, to the extent practicable, adverse social and economic effects. The preferred alternative also best meets the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.