

**SAFMC SSC INPUT FOR MACKEREL SEDAR TERMS OF REFERENCE  
May 2007**

**I. The mackerel motions from their May 19, 2004 meeting in Charleston, SC are as follows:**

1. Landings - important to have most recent data
2. Discards - recreational and commercial bycatch data should be incorporated in the assessment; shrimp trawl bycatch data should be used if viable (DW recommended using the discard data.)
3. Growth curves/data - should have used "newer" growth data rather than "old" data (DW recommended using newer growth data.). Incorporate the new data in the assessment.
4. Natural Mortality - DW recommended 0.2 (0.15-0.25) for both groups. RW rejected this and used existing ranges (Gulf 0.15-0.25 with 0.2 as point estimate; Atlantic 0.1-0.2 with 0.15 as point estimate). Recommend that the RW explain why the DW recommendation was rejected; needs to be more than "consistency".
5. Fecundity - using data about 20 years old; batch vs. total spawning. Relationship between total spawning for a batch spawning fish. We question the use of this fecundity data. Need additional information on how data were used, implications of using the data and alternative assessment methods that would exclude the data.
6. Mixing rate - no scientific results indicate there is no mixing. RW supports 25-75% mixing but using 100% in base run.
  - a. SSC Subcommittee recommends using a 50% mixing rate:
    - a. most defensible (values above and below 50%)
    - b. AW, RW & Chair of RW suggested 50%
    - c. sensitivities on each side (25-75 or 40-60)
    - d. use 50% for the base run
7. Alternative model structures should be considered including methods that take into account aging errors (e.g., forward projecting); whatever model is chosen should be justified.
8. ABC - along the lines of the 50% mixing run in Table 19 but need to re-run after addressing the previous recommendations (see above). Best point estimate and range should be provided when the assessment is re-run.
9. Risk levels - policy not scientific decision. The SSC could provide recommendations on potential outcomes based on a risk level but the Council should specify the risk level.
10. SSC recommends that the Mackerel SEDAR Assessment not be forwarded to the Council; the assessment should go back to the Assessment Workshop stage and incorporate the recommendations provided above and then to the Review Workshop.

**II. The SAFMC SSC reviewed the sub-committee report during their June 12-14, 2006 meeting and concluded the following:**

The SSC agrees with the findings of the joint ad-hoc subcommittee regarding mackerel stock identification.

The SSC would like to stress the need for additional stock identification research. The otolith microchemistry technique is an appropriate and useful method to further resolve this issue. Currently, microchemistry data are extremely limited, both temporally and geographically (only 2 winters in South Florida). Sampling must be expanded both temporally and geographically.

Based on currently available data, the SSC supports the ad-hoc subcommittee's conclusion that between 20% and 80% of the winter mixing zone landings likely are contributed by the Atlantic migratory group. No single point estimate for mixing rate can be justified from the limited existing analyses for partitioning past catches or projecting catches into the future due to uncertainty. Stochastic simulations which incorporate the uncertainty can be used to partition past catches as well as future projections. This

will provide a distribution of outcomes. None of the studies justify the continued acceptance of the status quo (100% Gulf migratory group in the mixing zone).

The SSC restates that the next assessment should not be an update because many issues (e.g. age, growth, and fecundity) were not adequately addressed in SEDAR 5 and still require the major review associated with a benchmark assessment. Also, changes in management strategies will require socioeconomic analyses of potential impacts.