

History of Vermilion Snapper Stock Assessments (for SEDAR 17)

The most recent assessment of the Atlantic stock of vermilion snapper was conducted through the SEDAR Update Process (SEDAR Update #3). A three-day SEDAR stock assessment workshop (AW) was convened at the NOAA Center for Coastal Fisheries and Habitat Research Beaufort, North Carolina, beginning on Monday, April 4, 2007 (Anonymous 2007). The workshop's objectives were to conduct an update assessment of the vermilion snapper (*Rhomboplites aurorubens*) off the southeastern U.S. and to conduct stock projections based on possible management scenarios. Participants in the update assessment included state and federal scientists, SAFMC AP and SSC members, and various observers. All decisions regarding stock assessment methods and acceptable data were made by consensus.

Available data on the species included all those utilized for the benchmark assessment (Anonymous 2003) conducted in 2002 – no additional data sources were identified during the scoping workshop (SW). These data were abundance indices, recorded landings, and samples of annual size compositions from indices and landings. Four abundance indices were used in the benchmark assessment: one from the NMFS headboat survey and three from the SC MARMAP fishery independent monitoring program. Landings data were available from all recreational and commercial fisheries.

As in the benchmark assessment, the update assessment used a statistical catch at length model. Benchmarks were based on proxies for MSY-related quantities. The AW provided the base run of the model, identical to that used in the benchmark assessment. This base run was used for the estimation of benchmarks and stock status. The ratio of fishing mortality in 2006 to F_{MAX} was 2.05, compared to 1.71 in the benchmark assessment, suggesting overfishing. Four projections were considered: $F=F_{MAX}$; $F=85\%F_{MAX}$; $F=75\%F_{MAX}$ and $F=65\%F_{MAX}$; the results of each were very similar.

References (available from SEDAR website):

Anonymous. 2003. Complete Assessment and Review Report of South Atlantic Vermilion Snapper. Results of a series of workshops convened between October 2002 and February 2003. SEDAR2-SAR2. South Atlantic Fishery Management Council, Charleston, SC.

Anonymous. 2007. Report of Stock Assessment: Vermilion Snapper. SEDAR Update Process #3. Assessment Workshop of April 2-4, 2007. NOAA Fisheries, Sustainable Fisheries Branch, Beaufort, North Carolina, 43 pp.