

Tab B, No. 7

Vermilion Scoping Options

On October 30, 2003, NOAA Fisheries determined that the Gulf of Mexico vermilion snapper fishery was overfished and undergoing overfishing based on a stock assessment conducted in 2001 (Porch and Cass-Calay, 2001). The Council prepared a plan to end overfishing and rebuild the stock (Amendment 23 to the Reef Fish FMP). In 2006, a new stock assessment was conducted through the Southeast Data, Assessment and Review (SEDAR) process (SEDAR 9 Assessment Report 3, 2006). That assessment determined that vermilion snapper was neither overfished (Figure 1) nor undergoing overfishing (Figure 2) but that stock biomass levels were generally declining and fishing mortality was increasing. Additionally, under projected constant fishing mortality levels that existed prior to the implementation of Amendment 23 regulations on July 8, 2005, SSB is expected to increase slightly. After receiving the Assessment Report and recommendations from its SSC and Reef Fish Advisory Panel, the Council decided at their August 2006 meeting to move forward with an amendment to reduce or rescind the management regulations in Amendment 23.

Figure 1. Historical and projected ratio of SSB_{2004}/SSB_{MSY} from 1950 through 2017. Dashed line is the level at which the stock is rebuilt.

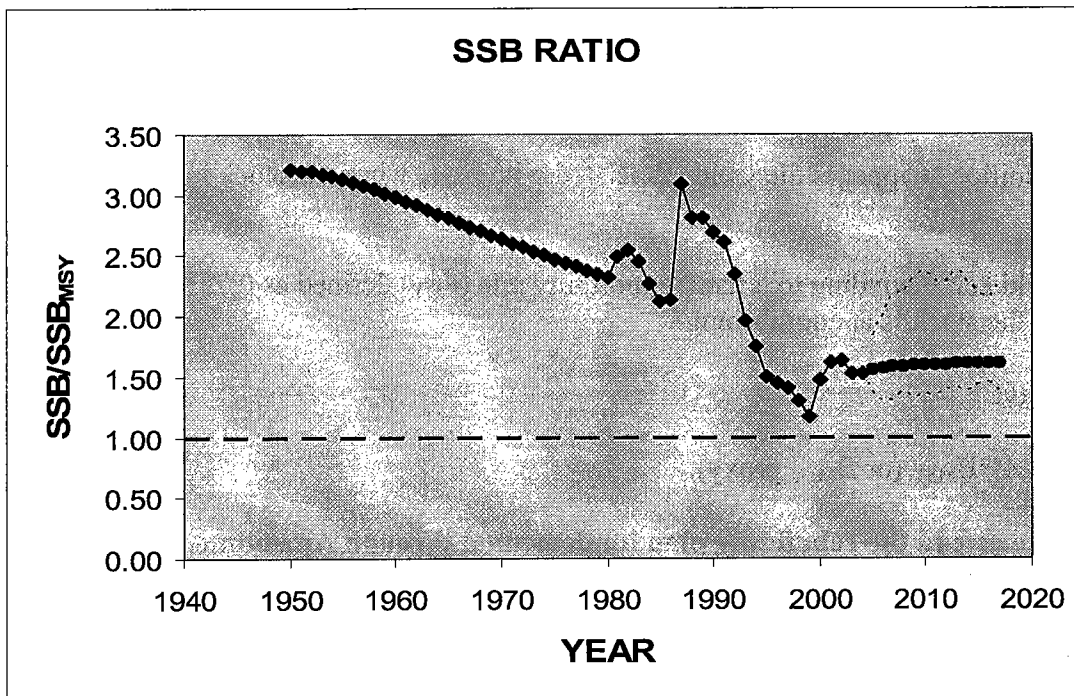
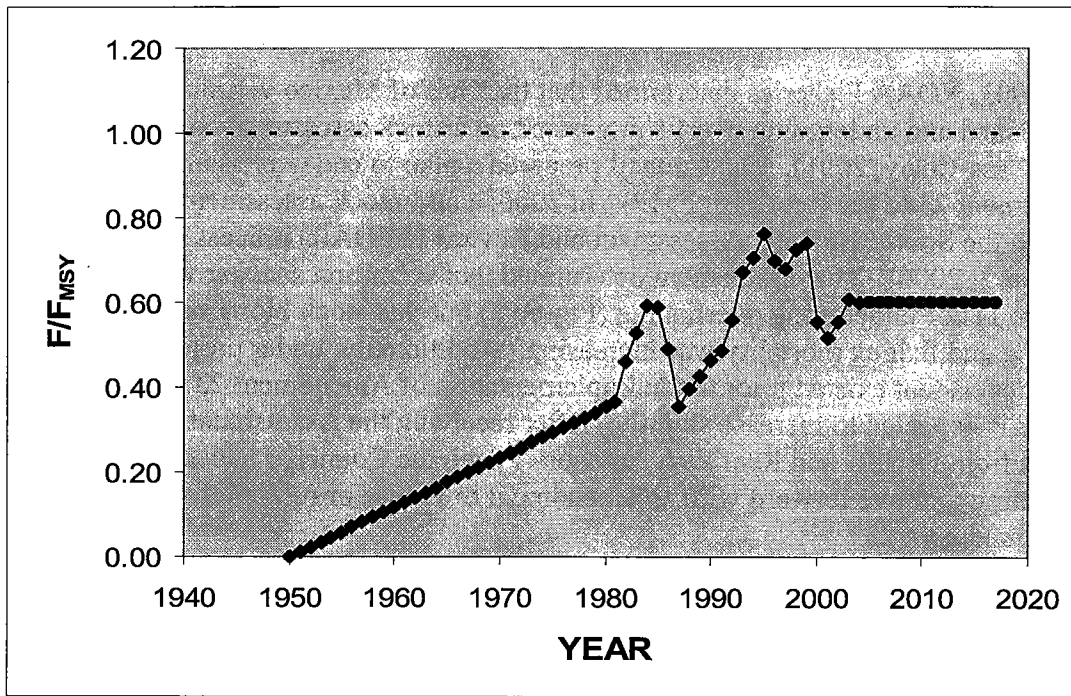


Figure 2. Historical and projected ratio of F_{2004}/F_{MSY} from 1950 through 2017. Dashed line is the level at which the stock is undergoing overfishing.



Biological reference points and status criteria from Amendment 23 are:

MSY for vermilion snapper is the yield associated with F_{MSY} when the stock is at equilibrium.

OY is the yield corresponding to a fishing mortality rate (F_{OY}) defined as $0.75 \cdot F_{MSY}$ (or F_{MSY} proxy) when the stock is at equilibrium.

MFMT = F_{MSY} .

MSST to $(1-M) \cdot B_{MSY}$ (or B_{MSY} proxy).

Action 1: Revise or end the rebuilding plan implemented through Amendment 23.

Alternative 1: Status Quo. Maintain the rebuilding plan as established in Amendment 23.

Rebuild the vermilion snapper stock in ten years using a stepped strategy that holds harvest constant for an initial four year interval consistent with the average of the same four years under a constant fishing mortality rate, then three-year intervals thereafter. The allowable harvest starting in 2004 would be 1.475 mp and equates to a 25.5 percent reduction in directed harvest based on 2003 estimated landings.

This Alternative would increase stock biomass which is already above the level required for optimum yield as currently defined by the biological reference points.

Alternative 2: Rescind the rebuilding plan established by Amendment 23.

The current rebuilding plan is not necessary since the current assessment determined that the Gulf of Mexico stock of vermilion snapper has never been overfished. Rescinding the rebuilding plan does not automatically mean that the management measures implemented through Reef Fish Amendment 23 are void; that must be done through another Action.

Action 2 Reduce or rescind management measures implemented through Amendment 23.

Amendment 23 approved the following management measures for reducing harvest:

The minimum size for recreationally caught vermilion snapper will be 11 inches TL and the bag limit will be 10 fish within the current 20-reef fish aggregate bag limit. (21.5 percent reduction)

The minimum size for commercially caught vermilion snapper will be 11 inches TL and the closed season will be April 22 through May 31. (26.3 percent harvest reduction)

Fifteen months have passed since Amendment 23 was implemented on July 8, 2005. Comparable recreational and commercial landings data are currently available only through December, 2005. These landings were compared to the July through December, 2002 to 2004 average to determine if the expected reductions in harvest could be substantiated. Commercial landings decreased by about 32.5 percent and length frequency data from the same time periods suggest that the minimum size was effective starting in July, 2005. Recreational landings decreased by about ten percent and discards increased by about 120 percent. Length frequency sampling from MRFSS indicated that the minimum size became effective by September, 2005. While these results appear to follow the expected trends, the time frame is short and other circumstances such as recruitment pulses could change the size frequency and magnitude of landings. So, for the purposes of this discussion, the expected harvest reductions described in Amendment 23 will be used.

Alternative 1: Status quo. Maintain the regulations as implemented by Amendment 23.

This Alternative will allow the stock to improve more rapidly than is currently projected. As of 2004, SSB exceeded SSB_{OY} and is expected to remain stable or increase slightly based on the projections using constant F through 2016. However, the Review Panel's Declaration of Stock Status states that fishing mortality is tending to increase and biomass is decreasing and that a further decrease in stock size is likely if present conditions continue. Fishing mortality has been cyclic and increasing over the observed time period, 1981 through 2004. Any reduction in F associated with harvest reductions implemented by Amendment 23 (expected to be approximately 25.5 percent) should improve stock condition.

Alternative 2: Reduce the minimum size limit for vermilion snapper to 10 inches TL.

Increasing the minimum size to 11 inches TL was expected to reduce harvest in the recreational sector by 20.4% and in the commercial sector by 12.6%. Within the recreational sector, headboat fishers were expected to be affected far more than charter vessels or private recreational fishers. Decreasing the size limit to 10 inches TL should increase harvest by a similar amount and reduce regulatory discards in both sectors.

Alternative 3: The 10 fish bag limit for Vermilion snapper will be rescinded and vermilion snapper will remain within the current 20 fish aggregate bag limit for those species without a species-specific bag limit.

This alternative eliminates the bag limit specific to vermilion snapper but keeps vermilion snapper in the 20 fish aggregate bag limit which includes lane snapper, gray triggerfish, almaco jack, and tilefishes. This alternative should allow vermilion snapper harvest to increase by about 1.4%. Combined with a decrease in the size limit, the total increase in recreational harvest is expected to be 21.5 percent.

Alternative 4: Rescind the commercial closed season for vermilion snapper.

The commercial season closure extends from April 22 through the end of May. This alternative is expected to increase the commercial harvest by about 15.8 percent. Combined with the decrease in size limit, the total increase in commercial harvest is expected to be 26.3 percent.

