

**Gulf of Mexico Fishery Management Council**  
**Standing and Special Reef Fish SSC Meeting Summary**  
**Review of 2011 SEDAR 9 Update Assessment – Vermilion Snapper**  
**Tampa, Florida**  
**June 7-8, 2012**

**Vermilion Snapper ABC**

Brian Linton gave a presentation on a correction to the vermilion snapper ABC analysis and updated OFL, OY and ABC projections. The projection model calculates the fishing mortality rate needed to achieve a given SPR (e.g.,  $F_{SPR\ 30\%}$ ) by using an iterative process that begins with a high level of  $F$  which is then decremented until the specified SPR value is obtained. However, in the case of the directed yield projections for vermilion snapper, the  $F$  value for  $F_{SPR\ 30\%}$  was higher than the upper limit set for the iterative process, due to the high level of discards (i.e., shrimp bycatch). Therefore,  $F_{SPR\ 30\%}$  was not correctly estimated for the directed yield projections. This problem was corrected by recoding the projection model to allow a higher initial level of  $F$ . The directed yield projections were rerun using this new version of the projection model, and the results of these revised runs were presented to the SSC.

Yield projections were run using both  $F_{SPR\ 30\%}$  and  $F_{MAX}$  as proxies for  $F_{MSY}$ . The Vermilion snapper update assessment had previously used  $F_{SPR\ 30\%}$  as the proxy. In general,  $F_{MAX}$  will be greater than or equal to  $F_{MSY}$ , except in unusual cases where recruitment decreases rapidly as spawning biomass increases beyond a certain threshold. As a result, scientists and managers should be skeptical of  $F_{MSY}$  proxies that are greater than  $F_{MAX}$ . Examination of the YPR curve for vermilion snapper revealed that  $F_{SPR30}$  is greater than  $F_{MAX}$  for this stock under directed yield projections. Therefore, Dr. Linton suggested that  $F_{MAX}$  might be a better proxy to use with vermilion snapper. A similar situation existed for the gag assessment, for which  $F_{MAX}$  was chosen as the proxy.

**The Committee recommends that the  $F_{MSY}$  proxy for vermilion snapper be  $F_{MAX}$  instead of  $F_{SPR\ 30}$  as previously used.**

*Motion passed unanimously.*

It was noted that  $F_{MAX}$  is approximately equal to  $F_{SPR\ 45}$ .

The SSC noted that a vermilion snapper benchmark assessment is scheduled for 2015, and therefore decided to recommend a yield stream of OFL and ABC projections through 2015, with a default value for 2016 and beyond in the event that the assessment is delayed. The SSC considered setting the OFL to the equilibrium MSY level since the stock biomass is currently near or above its MSY level, but was concerned that there might be legal issues with not following the annual estimate of OFL. Therefore, the SSC passed the following motion for OFL. Note that the effect of bycatch mortality has been incorporated into the assessment. These values are for the directed yield. The values are from Table 25 of the vermilion snapper revised projections report dated 6/1/2012.

**The Committee recommends that the OFL for the vermilion snapper directed fishery be set at the values obtained from the  $F_{MAX}$  proxy:**

**2012 – 4.81 mp whole weight**

**2013 – 4.59 mp whole weight**

**2014 – 4.56 mp whole weight**

**2015 – 4.57 mp whole weight**

**2016 and subsequent years – equilibrium yield at  $F_{MAX}$  - 4.61 mp whole weight**

*Motion passed unanimously.*

The OFL values initially go down and then back up due to the presence of a weak year class passing through the system.

For ABC values, the SSC used a  $P^*$  of 39.8% that was previously calculated. Values for 2012 – 2014 are in Table 25 of the vermilion snapper revised projections report dated 6/1/2012. Brian Linton calculated the values for 2015 and 2016, which were 4.33 mp for both years.

**The Committee recommends that the ABC for the vermilion snapper directed fishery be set from the  $F_{MAX}$  proxy and a  $P^*$  of 39.8%:**

**2012 – 4.68 mp whole weight**

**2013 – 4.41 mp whole weight**

**2014 – 4.34 mp whole weight**

**2015 – 4.33 mp whole weight**

**2016 and subsequent years – 4.33 mp whole weight**

*Motion passed unanimously.*

Note: for reference, the previous OFL and ABC recommendations had been:

	OFL	ABC
2012	6.66 mp	6.48 mp
2013	5.60 mp	5.37 mp
2014	5.02 mp	4.78 mp
2015+	4.27 mp	na

(equilibrium yield at  $F_{SPR 30\%}$ )