

SEDAR 17

Management Information Worksheet

Vermilion Snapper

Details of specific regulatory requirements, including actual dates when actions went into effect, are critical to explaining catch trends and properly evaluating fishery-dependent CPUE. Current and proposed management specifications are critical to evaluating stock status as required in the SEDAR Terms of Reference. Information on current rebuilding plans is necessary to develop appropriate projections. Finally, several assumptions are necessary for developing accurate projections to evaluate impacts of changes in future fishing mortality.

Table 1. General Management Information

Species	Vermilion Snapper (<i>Rhomboplites aurorubens</i>)
Management Unit	Southeastern US
Management Unit Definition	All waters within South Atlantic Fishery Management Council Boundaries
Management Entity	South Atlantic Fishery Management Council
Management Contacts SERO / Council	Jack McGovern/Rick DeVactor
Current stock exploitation status	Overfishing
Current stock biomass status	Unknown

Table 2. Specific Management Criteria

Criteria	Current		Proposed in Amendment 16 ¹		Results from SEDAR 17	
	Definition	Value	Definition	Value	Definition	Value
MSST	$MSST = [(1-M) \text{ or } 0.5 \text{ whichever is greater}] * B_{MSY}$	Unknown ²	$MSST = [(1-M) \text{ or } 0.5 \text{ whichever is greater}] * B_{MSY}$	Unknown ²	$MSST = [(1-M) \text{ or } 0.5 \text{ whichever is greater}] * B_{MSY}$	TBD
MFMT	F_{MSY}	0.355 ³	F_{MSY}	0.355 ³	F_{MSY}	TBD
MSY	Yield at F_{MSY}	Not Specified	Yield at F_{MSY}	2,699,957 lbs whole weight ⁴	Yield at F_{MSY}	TBD
F_{MSY}	F_{MAX}	0.355 ³	F_{MAX}	0.355 ³	F_{MAX}	TBD
OY	Yield at F_{OY}	Not Specified	Yield at F_{OY}	Option1 ⁶ =(65%)(F_{MAX})= 547,887 lbs whole weight Option2 ⁶ =(75%)(F_{MAX})= 628,459 lbs whole weight Option3 ⁶ (85%)(F_{MAX})= 692,916 lbs whole weight	Yield at F_{OY}	TBD
F_{OY}	$F_{45\%SPR}$	0.25 ⁵	$F_{OY} = 65\%, 75\%, 85\% F_{MAX}$	0.23 (65% F_{MAX}); 0.27 (75% F_{MAX}); 0.30 (85% F_{MAX})	$F_{OY} = 65\%, 75\%, 85\% F_{MSY}$	TBD
M	n/a	0.25	M	0.25	M	TBD

¹The Council is developing Amendment 16 to the Snapper Grouper FMP that would end overfishing of vermilion snapper and establish management reference points. The Council is scheduled to approve submittal to the Secretary of Commerce at their September 2008 meeting.

²This value is unknown at this time given the high level of uncertainty with the biomass values.

³Source: Vermilion SEDAR Update 2007.

⁴The Council's SSC did not endorse the estimate of MSY at equilibrium from the vermilion snapper SEDAR Update (2007).

⁵Source: Powers 1999. The vermilion snapper SEDAR Update (2007) did not produce a F_{OY} value.

⁶Does not represent yield at equilibrium. OY values for 65%, 75%, and 85% of F_{MAX} were determined using the Baranov equation.

Table 3. Stock Rebuilding Information

The current stock biomass status is unknown; no rebuilding plan required.

Table 4. Stock projection information

(This provides the basic information necessary to bridge the gap between the terminal year of the assessment and the year in which any changes may take place or specific alternative exploitation rates should be evaluated.)

Requested Information	Value
First Year of Management	2009
Projection Criteria during interim years should be based on (e.g., exploitation or harvest)	Fixed Exploitation; Modified Exploitation; Fixed Harvest*
Projection criteria values for interim years should be determined from (e.g., terminal year, avg of X years)	Average of previous 3 years

*Fixed Exploitation would be $F=F_{MSY}$ (or $F<F_{MSY}$) that would rebuild overfished stock to B_{MSY} in the allowable timeframe. Modified Exploitation would be allow for adjustment in $F\leq F_{MSY}$, which would allow for the largest landings that would rebuild the stock to B_{MSY} in the allowable timeframe. Fixed harvest would be maximum fixed harvest with $F\leq F_{MSY}$ that would allow the stock to rebuild to B_{MSY} in the allowable timeframe.

First year of Management: Earliest year in which management changes resulting from this assessment are expected to become effective
interim years: those between the terminal assessment year and the first year that any management could realistically become effective.

Projection Criteria: The parameter which should be used to determine population removals, typically either an exploitation rate or an average landings value or a pre-specified landings target.

Table 5. Quota Calculation Details

Quota Detail	Value
Current Quota Value	Commercial quota set at 1,221,000 lbs whole weight (1,100,000 million lbs gutted weight)
Next Scheduled Quota Change	Through Amendment 16
Annual or averaged quota ?	annual
If averaged, number of years to average	n/a

How is the quota calculated - conditioned upon exploitation or average landings?
Quota specified in Amendment 13C is based on the average commercial catch during 1999-2003.

The quota specified in Amendment 16 would divide the total allowable catch (TAC) recommended by the SSC into a commercial and recreational portion based on the Council's preferred allocation alternative. The SSC specified a TAC based on the yield at F_{OY} of 628,459 lbs whole weight (566,179 lbs gutted weight). The Council's preferred allocation alternative would allocate 68% of the TAC to the commercial sector and 32% to the recreational sector resulting in a commercial quota of 427,352 lbs whole weight (385,002 lbs gutted weight).

Does the quota include bycatch/discard estimates? If so, what is the source of the bycatch/discard values? What are the bycatch/discard allowances?

The quota specified in Amendment 16 would be adjusted for an estimation of the expected dead discards after a quota is met. This estimate is the catch of vermilion snapper on trips targeting co-occurring species (incidental catch) and adjusted for the SEDAR accepted release mortality rate (dead discards). The source of data is the NMFS logbook.

Are there additional details of which the analysts should be aware to properly determine quotas for this stock?

- In determining incidental catch, a co-occurring species is targeted if at least 100 lbs whole weight is taken on a trip.
- After a quota is met or during a seasonal closure, if vermilion snapper makes up greater than 75% of the catch on a trip, the trip is not included in analyses.
- There will not be an increase in fishing effort before or after a seasonal closure.
- Some trips will not be taken after a quota is met. A range of 0 to 60% is used.
- Fishermen can avoid vermilion snapper to some degree by changing hook size, method of fishing, and location. A range of 0 to 60% is used.
- Dead discards determined by applying release mortality rate of 40% for commercially caught vermilion snapper.

Table 6. Federal Regulatory and FMP History

Description of Action	FMP/Amendment	Effective Date
4" trawl mesh size to achieve a 12" TL minimum size	Original FMP (SAFMC 1983)	8/31/83
Prohibit trawls	Amendment 1 (SAFMC 1988)	1/12/89
Prohibit fish traps, entanglement nets & longlines within 50 fathoms; bag limit of 10 vermillion per person per day; 10" TL recreational minimum size limit & 12" TL commercial minimum size limit	Amendment 4 (SAFMC 1991)	1/1/92
<i>Oculina</i> Experimental Closed Area	Amendment 6 (SAFMC 1993)	6/27/94
Limited entry program: transferable permits and 225-lb non-transferable permits	Amendment 8 (SAFMC 1997)	12/98
Recreational size limit increased to 11" TL; Vessels with longlines may only possess deepwater species	Amendment 9 (SAFMC 1998c)	2/24/99
Commercial quota set at 1.1 million lbs gutted weight; recreational size limit increased for 12" TL. After the commercial quota is met, all purchase and sale is prohibited and harvest and/or possession is limited to the bag limit.	Amendment 13C (SAFMC 2006)	10/23/06

Table 7. State Regulatory History – North Carolina and South Carolina

Description of Action	State	Effective Date
12 inch TL minimum size commercial	NC	5/24/99
11 inch TL minimum size recreational	NC	5/24/99
Creel limit: 10 fish per person per day if taken for recreational purposes	NC	5/24/99
Consistency with federal regulations	NC	2000-2007
Consistency with federal regulations	SC	1988-2007

Table 8. Annual Regulatory Summary

Commercial Fishery Regulations			Recreational Fishery Regulations	
Effective Date	Size Limit	Quota	Size Limit	Possession Limit
1/1/92	12" TL		10" TL	10/person/day
2/24/99			11" TL	
10/23/06		1.1 million pounds (gutted weight) ¹	12" TL	

¹After the commercial quota is met, all purchase and sale is prohibited and harvest and/or possession is limited to the bag limit.

References

Powers, J. 1999. Control parameters and alternatives for control rules for selected stocks under the jurisdiction of the South Atlantic Fishery Management Council. Southeast Fisheries Science Center.

SEDAR Update. 2006. Report of Stock Assessment: Vermillion Snapper. SEDAR Update Process #3. Assessment Workshop of April 2–4, 2007. Beaufort, North Carolina.