South Atlantic Council's Snapper Grouper Amendment 16 Public Hearing (Gag & Vermilion) Amendment 18 (Red Snapper)

Prepared by: SAFMC Staff

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Need for Amendments 16 & 18

- Respond to recent stock assessments for gag, vermilion snapper, and red snapper
- Amendment 16 (Gag & Vermilion) – Public Hearing
  - **Update management reference points (MSY,OY,MSST) – "Guideposts"**
  - **Interim allocations**
  - **Regulations to end overfishing**
- Amendment 18 (Red Snapper) – Scoping – address new stock assessment

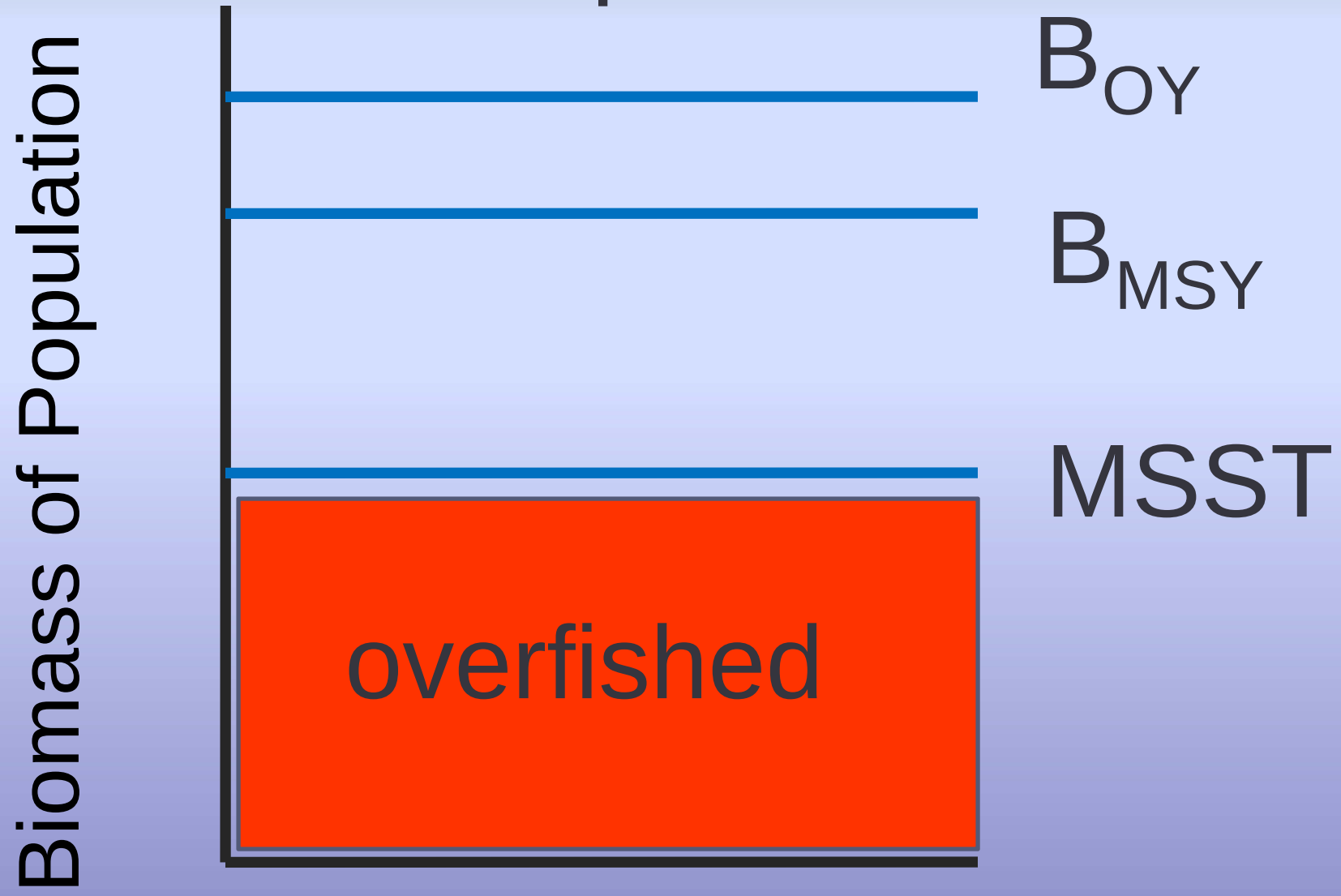
“Guideposts”

MSY = Largest average catch that can be continuously taken from stock (LIMIT).

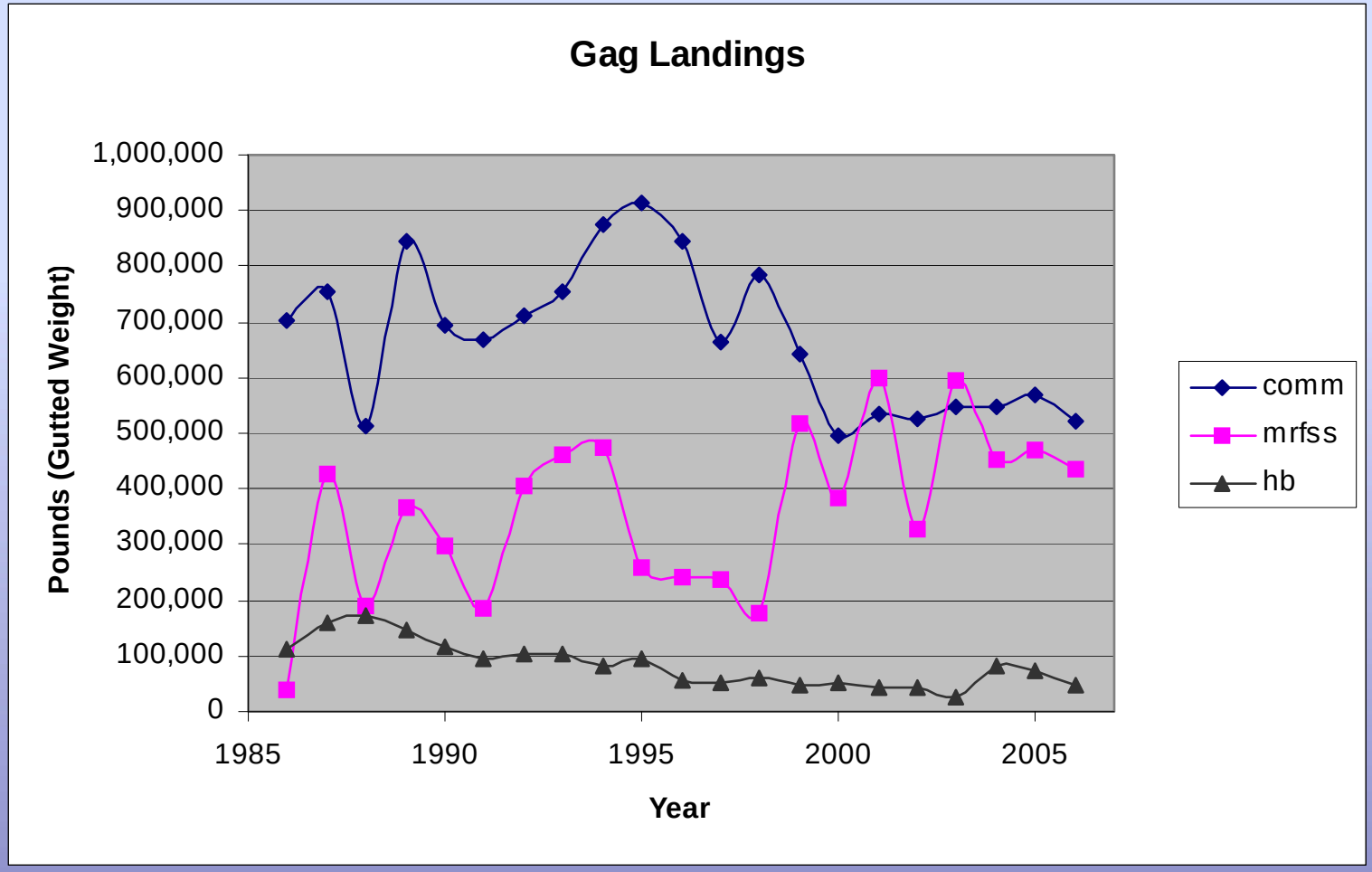
OY = Amount of catch that will provide the greatest overall long-term benefit to the nation (TARGET).

MSY>OY

“Guideposts”



Gag


Gag Landings
Pounds (Gutted Weight)
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
1985
1990
1995
2000
2005
Year
comm
mrfss
hb

Gag

MSY = 1.238 MILLION POUNDS
OY = 1.217 MILLION POUNDS

Table 4-8. Criteria used to determine the overfished and overfishing status of gag.

DETERMINATION	SSB_{2005}	MSST	F_{2004}	MFMT	STATUS
OVERFISHED?	7,470,000	6,816,000			Not Overfished (B_{2005}/MSST = 1.096)
OVERFISHING?			0.310	0.237	Overfishing (F_{2004}/MFMT = 1.309)

Source: Tables 36 and 44 in SEDAR 10 (2007).

Gag

- TAC = 694,000 POUNDS GUTTED WEIGHT
  - •GAG NOT OVERFISHED BUT BIOMASS < BMSY
  - •SSC RECOMMENDED BASED ON YIELD @ 75% FMSY
  - •AS BIOMASS INCREASES THE YIELD AT FOY IS EXPECTED TO INCREASE DURING 2009-2014
  - •COUNCIL RECOMMENDING TAC FIXED UNTIL MODIFIED; STOCK ASSESSMENT UPDATE SCHEDULED FOR LATE 2011

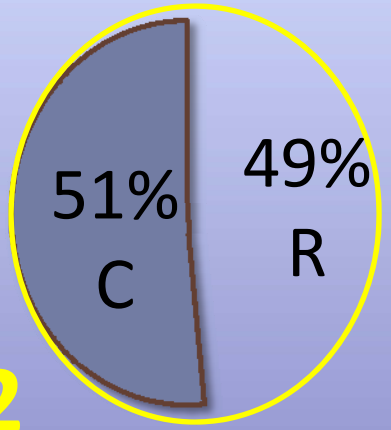
Interim Allocations

Gag Grouper

694,000 lbs

Alt 1

(no action)
(no allocation)



Alt 2

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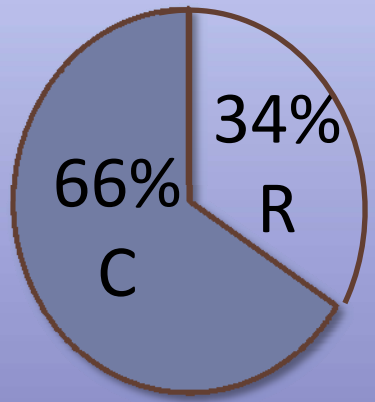

Alt 3

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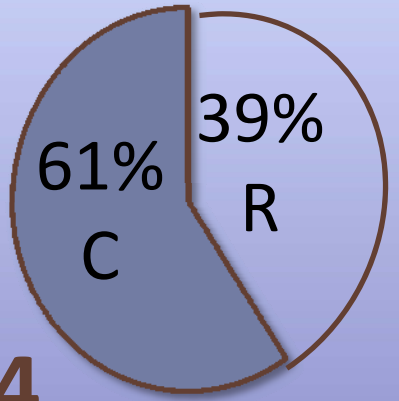


Alt 4

(86-05)

GAG

Table 4-10. Commercial quotas and recreational allocations* for gag (pounds gutted weight) based on the catch level required to end overfishing.

		Alternative 2 (preferred)		Alternative 3		Alternative 4	
Year	Catch Level	Comm	Rec	Comm	Rec	Comm	Rec
2009 Onwards	694,000	353,940	340,060	458,040	235,960	423,340	270,660

Table 4-11. Historical gag landings.

	Gag Landings (gutted weight)			Total	Total
Year	Commercial	Headboat	MRFSS	Recreational	Landings
2001	532,000	53,000	455,000	508,000	1,040,000
2002	534,000	51,000	266,000	317,000	851,000
2003	560,000	32,000	519,000	551,000	1,111,000
2004	551,000	82,000	517,000	599,000	1,150,000
2005	568,681	71,736	468,814	540,550	1,109,231
2006	520,824	46,537	437,493	484,031	1,004,854
Avg 04-06	546,835	66,758	474,436	541,194	1,008,028

Source: 2001-2004 data are from the SSC based on gutted weight in the SEDAR 10 (2007) assessment; 2005 and 2006 data are from ALS and converted to gutted weight.

Table 4-12. Percentage reductions by sector across the alternative gag allocations.

Alternative	Commercial Reduction	Recreational Reduction
2 **(Preferred)**	35%	37%
3	16%	56%
4	23%	50%

Gag

COMMERCIAL REGULATION (-35%)

- **ALT 1. NO ACTION**
  - **24”TL; March/April no sale & bag limit only**
- **ALT 2 (PREFERRED)**
  - **Jan-April Spawning Closure (20% reduction)**

Gag

COMMERCIAL REGULATION (-35%)

- ALT 3 (PREFERRED)
  - PQBM = 1,000 pounds
  - Directed Com Quota = 352,940 pounds GW
- ALT 4 Divide directed commercial quota (based on 1999-2005 commercial landings)
  - 63.3% NC&SC = 223,411 pounds GW
  - 36.7% GA&FL = 129,529 pounds GW

GAG COMMERCIAL IMPACTS BY GEAR (Pref = 2, 3a & 3aS)

Table 4-28. Reductions in commercial vessels' net operating revenues from various alternatives on gag spawning closure, overall quotas, and regional quotas, in thousand 2005 dollars, by gear type.

Model	Diving	Vertical Lines	Longlines	Other Gears	Traps / Pots	Trolling	not recorded	Total
Vessel trips landing at least one pound of gag								
Baseline (3%)	$472	$3,449	$34	$12	$13	$42	$0	$4,023
Baseline (7%)	$455	$3,321	$33	$11	$13	$40	$0	$3,872
	Spawning closure							
Alt. 2	-25.3%	-18.9%	-50.0%	-37.2%	-31.3%	-32.5%	0.0%	-20.1%
	Single quota							
Alt. 3a	-17.4%	-21.5%	0.0%	-5.3%	-28.7%	-38.8%	0.0%	-21.0%
Alt. 3b	-1.8%	-1.2%	0.0%	0.0%	-1.5%	-1.7%	0.0%	-1.2%
Alt. 3c	-5.6%	-4.9%	0.0%	0.0%	-11.1%	-9.0%	0.0%	-5.0%
	Single quota with spawning closure							
Alt. 3aS	-25.3%	-18.9%	-50.0%	-37.2%	-31.3%	-32.5%	0.0%	-20.1%
Alt. 3bS	-22.6%	-16.2%	-50.0%	-37.2%	-25.2%	-28.4%	0.0%	-17.4%
Alt. 3cS	-22.6%	-16.9%	-50.0%	-37.2%	-29.2%	-30.4%	0.0%	-18.1%
	Regional quota							
Alt. 4a	-27.0%	-23.3%	-25.2%	-20.4%	-30.9%	-36.8%	0.0%	-23.9%
Alt. 4b	-8.8%	-4.8%	0.0%	-1.7%	-9.2%	-7.7%	0.0%	-5.3%
Alt. 4c	-14.9%	-9.7%	-0.9%	-1.7%	-15.8%	-17.8%	0.0%	-10.4%
	Regional quota with spawning closure							
Alt. 4aS	-23.9%	-23.1%	-50.0%	-37.2%	-39.3%	-36.4%	0.0%	-23.6%
Alt. 4bS	-22.6%	-16.2%	-50.0%	-37.2%	-25.2%	-28.4%	0.0%	-17.4%
Alt. 4cS	-22.6%	-16.9%	-50.0%	-37.2%	-29.2%	-30.4%	0.0%	-18.1%

GAG COMMERCIAL IMPACTS BY AREA (Pref = 2, 3a & 3aS)

Table 4-29. Reductions in commercial vessels' net operating revenues from various alternatives on gag spawning closure, overall quotas, and regional quotas, in thousand 2005 dollars, by area.

	North Carolina	South Carolina	Georgia and northeast FL	Central and south FL	Florida Keys	Other	Total
Vessel trips landing at least one pound of gag							
Baseline (3%)	$1,135	$1,508	$919	$442	$18	$0	$4,023
Baseline (7%)	$1,093	$1,452	$884	$426	$17	$0	$3,872
	Spawning closure						
Alt. 2	-12.7%	-18.3%	-25.0%	-34.5%	-38.8%	0.0%	-20.1%
	Single quota						
Alt. 3a	-23.3%	-22.0%	-19.5%	-15.4%	-8.0%	0.0%	-21.0%
Alt. 3b	-1.0%	-1.2%	-1.6%	-0.9%	-0.5%	0.0%	-1.2%
Alt. 3c	-5.3%	-5.2%	-4.5%	-4.4%	-2.3%	0.0%	-5.0%
	Single quota with spawning closure						
Alt. 3aS	-12.7%	-18.3%	-25.0%	-34.5%	-38.8%	0.0%	-20.1%
Alt. 3bS	-10.0%	-15.1%	-22.7%	-32.7%	-38.3%	0.0%	-17.4%
Alt. 3cS	-11.0%	-16.1%	-22.7%	-32.7%	-38.3%	0.0%	-18.1%
	Regional quota						
Alt. 4a	-23.7%	-22.3%	-27.3%	-23.0%	-27.5%	0.0%	-23.9%
Alt. 4b	-5.0%	-4.5%	-6.5%	-6.0%	-2.2%	0.0%	-5.3%
Alt. 4c	-10.0%	-9.4%	-12.7%	-9.7%	-8.6%	0.0%	-10.4%
	Regional quota with spawning closure						
Alt. 4aS	-18.9%	-24.5%	-23.3%	-32.9%	-38.3%	0.0%	-23.6%
Alt. 4bS	-10.0%	-15.1%	-22.7%	-32.7%	-38.3%	0.0%	-17.4%
Alt. 4cS	-11.0%	-16.1%	-22.7%	-32.7%	-38.3%	0.0%	-18.1%

Gag

RECREATIONAL REGULATIONS (-37%)

- ALT 1. NO ACTION
  - 24”TL; 5 grouper bag w/2 gag; March/April no sale
- ALT 2 (PREFERRED)
  - Jan-April Spawning Closure (31% reduction)

Gag

RECREATIONAL REGULATIONS (-37%)

- ALT 5a (PREFERRED)
  - 5 grouper -> 3 grouper; 2 gag or black -> 1
  - Exclude captain & crew on for-hire vessels
  - This + spawning closure = 36% reduction
- ALT 5b
  - Keep 5 grouper & 2 gag or black
  - Include captain & crew on for-hire vessels
  - Dec – April spawning closure = 42% reduction

GAG RECREATIONAL IMPACTS BY FISHING MODE (Pref = 2 & 5a)

Table 4-30. Reductions in producer and consumer surplus from various alternatives on gag spawning closure and bag limits, in 2005 dollars, by fishing mode.

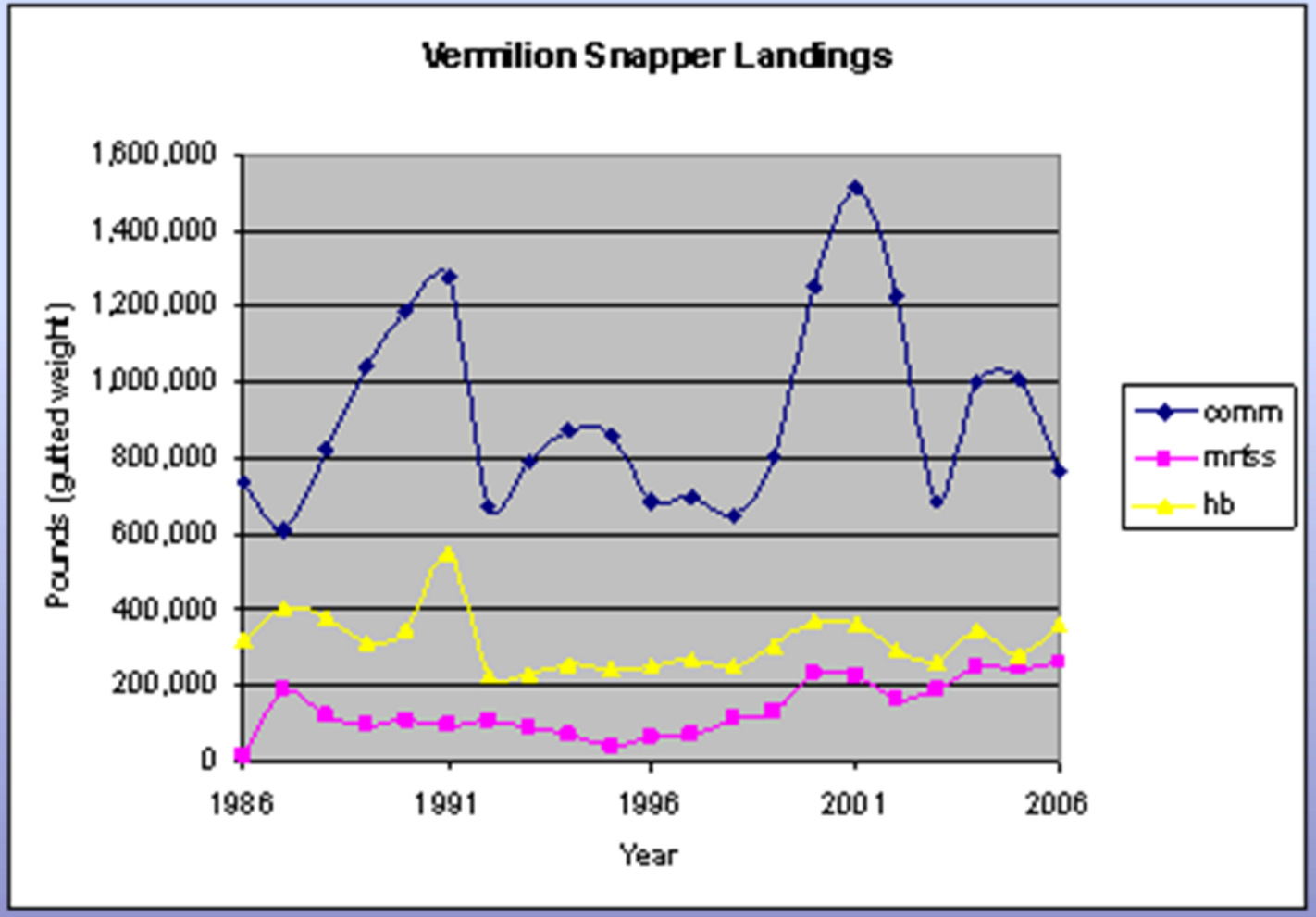
		Producer Surplus	Consumer Surplus	Total Effects	Producer Surplus	Consumer Surplus	Total Effects
		3% Discount Rate			7% Discount Rate		
Alt 2	Charter	$219,621	$123,178	$342,799	$211,411	$118,573	$329,984
	Headboat	$57,323	$235,006	$292,329	$55,180	$226,221	$281,401
	Private/Shore		$417,706	$417,706		$402,090	$402,090
	TOTAL	$276,944	$775,889	$1,052,833	$266,591	$746,884	$1,013,475
Alt. 5a	Charter	$279,995	$158,939	$438,934	$269,528	$152,997	$422,525
	Headboat	$71,510	$303,234	$374,743	$68,836	$291,898	$360,734
	Private/Shore		$538,975	$538,975		$518,826	$518,826
	TOTAL	$351,504	$1,001,147	$1,352,652	$338,364	$963,721	$1,302,085
Alt. 5b	Charter	$276,297	$154,965	$431,263	$265,968	$149,172	$415,141
	Headboat	$72,116	$295,653	$367,769	$69,420	$284,600	$354,021
	Private/Shore		$525,501	$525,501		$505,856	$505,856
	TOTAL	$348,414	$976,119	$1,324,532	$335,389	$939,628	$1,275,017

GAG RECREATIONAL IMPACTS BY AREA (Pref = 2 & 5a)

Table 4-31. Reductions in producer and consumer surplus from various alternatives on gag spawning closure and bag limits, in 2005 dollars, by area.

		Producer Surplus	Consumer Surplus	Total Effects	Producer Surplus	Consumer Surplus	Total Effects
		3% Discount Rate			7% Discount Rate		
Alt. 2	Florida	$256,226	$702,456	$958,682	$246,648	$676,196	$922,844
	Georgia	$1,114	$325	$1,438	$1,072	$312	$1,384
	South Carolina	$10,946	$44,638	$55,583	$10,536	$42,969	$53,505
	North Carolina	$8,659	$28,471	$37,130	$8,335	$27,407	$35,742
	TOTAL	$276,944	$775,889	$1,052,833	$266,591	$746,884	$1,013,475
Alt. 5a	Florida	$330,614	$906,395	$1,237,009	$318,255	$872,511	$1,190,766
	Georgia	$1,437	$419	$1,856	$1,383	$403	$1,786
	South Carolina	$14,123	$57,597	$71,720	$13,595	$55,444	$69,039
	North Carolina	$11,173	$36,737	$47,910	$10,755	$35,363	$46,119
	TOTAL	$357,347	$1,001,147	$1,358,495	$343,989	$963,721	$1,307,710
Alt. 5b	Florida	$322,349	$883,735	$1,206,084	$310,298	$850,698	$1,160,997
	Georgia	$1,401	$408	$1,809	$1,349	$393	$1,742
	South Carolina	$13,770	$56,157	$69,927	$13,255	$54,058	$67,313
	North Carolina	$10,894	$35,818	$46,712	$10,486	$34,479	$44,966
	TOTAL	$348,414	$976,119	$1,324,532	$335,389	$939,628	$1,275,017

Vermilion Snapper



Vermilion Snapper: Allow NMFS Regional Administrator (RA) to Make Adjustments to Management Measures

Table 4-58. Commercial and recreational management measures to be employed by RA based on reduction harvest needed to achieve the yield at F_{OY}.

%REDUCTION	COMMERCIAL	RECREATONAL
Alternative 2A. 10%	**QUOTA ALLOCATED BY SEASON**	**12", 10 FISH & NO CLOSURE**
Alternative 2B. 20%	**QUOTA ALLOCATED BY SEASON**	**12", 10 FISH & NO CLOSURE**
Alternative 2C. 30%	**QUOTA ALLOCATED BY SEASON**	**12", 9 FISH & NO CLOSURE**
Alternative 2D. 40%	**QUOTA ALLOCATED BY SEASON**	**12", 9 FISH & NOV-MARCH CLOSURE**
Alternative 2E. 50%	**QUOTA ALLOCATED BY SEASON**	**12", 5 FISH & NOV-MARCH CLOSURE**
Alternative 2F. 60%	**QUOTA ALLOCATED BY SEASON**	**12", 5 FISH & OCT – APRIL CLOSURE**

Table 4-59. Directed quota associated with reduction in harvest required from new vermilion snapper assessment.

Reduction	10%	20%	30%	40%	50%	58%*	60%
Commercial quota	**832,744**	**740,217**	**647,690**	**555,163**	**462,636**	**385,002**	**370,108**
Jan-June 50%	416,372	370,108	323,845	277,581	231,318	192,501	185,054
PQBM	6,000	9,000	11,000	16,000	19,000	24,000	24,000
Directed quota Jan-June	**410,372**	**361,108**	**312,845**	**261,581**	**212,318**	**168,501**	**161,054**
July-Dec 50%	416,372	370,108	323,845	277,581	231,318	192,501	185,054
PQBM	19,000	21,000	24,000	29,000	34,000	37,000	37,000
Directed quota July-Dec	**397,372**	**349,108**	**299,845**	**248,581**	**197,318**	**155,501**	**148,054**

Vermilion Snapper

MSY = 2.432 MILLION POUNDS GW
OY = 0.566 MILLION POUNDS GW

- STOCK STATUS:
  - F2006/FMAX = 0.729/0.355 = 2.05
  - BENCHMARK ASSESSMENT (2003) = 1.71
  - CONTINUED OVERFISHING
  - BIOMASS UNKNOWN

Vermilion Snapper

- **TAC = 566,179 POUNDS GUTTED WEIGHT**
  - **VERMILION BIOMASS UNKNOWN; NEW ASSESSMENT AVAILABLE DECEMBER 2008**
  - **SSC RECOMMENDED BASED ON YIELD @ 75% FMSY**
  - **COUNCIL RECOMMENDING TAC FIXED UNTIL MODIFIED (NEW BENCHMARK WILL BE USED TO UPDATE TAC AND OTHER VALUES)**

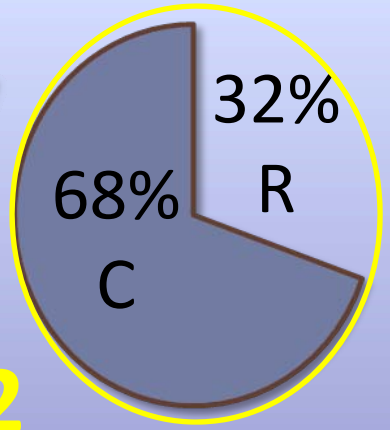
Interim Allocations

Vermilion Snapper

566,179 lbs GW

Alt 1

(no action)
(no allocation)



Alt 2

(86-05)

VERMILION SNAPPER

Table 4-39. Preliminary vermilion snapper commercial quotas and recreational allocations (pounds gutted weight).

Vermilion Snapper		Allocation Alternative 1. 64%C/36%R		Allocation Alternative 2. 68%C/32%R	
	Annual	Commercial	Recreational	Commercial	Recreational
Year	TAC* (gutted weight)	Quota** (gutted weight)	Allocation** (gutted weight)	Quota (gutted weight)	Allocation (gutted weight)
2009 Onwards	566,179	362,355	203,824	385,002	181,177

*The harvest based on 75% of F_{MAX} is being used to determine TAC. This number may be modified based on the SSC's deliberations in June 2008.

**Alternative 1 would not specify a commercial or recreational allocation for vermilion snapper.

Table 4-38. Historical vermilion snapper landings (gutted weight).

Vermilion Snapper Landings (pounds gutted weight)				Total	Total
Year	Commercial	Headboat	MRFSS	Recreational	Landings
2001	1,515,535	362,718	222,690	585,408	2,100,943
2002	1,228,928	294,094	159,450	453,544	1,682,472
2003	686,586	258,957	187,733	446,690	1,133,276
2004	1,001,297	342,138	238,594	580,732	1,582,029
2005	1,009,300	281,059	251,560	532,619	1,541,919
2006	765,216	362,476	262,328	624,804	1,390,021
Avg 04-06	925,271	328,558	251,311	579,868	1,505,139

Source: ALS, MRFSS Web site; Headboat survey. Data do not include dead discards and MRFSS data are A+B1; weight not converted from numbers.

COM RED. = 58%

REC RED. = 69%

VERMILION SNAPPER

COMMERCIAL REGULATION (-58%)

- **ALT 1. NO ACTION**
  - **12”TL; Com. Q=1,100,000 pounds GW**
- **ALT 2 (PREFERRED)**
  - **PQBM = 57,000 pounds GW**
  - **Directed Quota = 328,002 pounds GW**

VERMILION SNAPPER

COMMERCIAL REGULATION (-58%)

- ALT 3a Divide directed commercial quota into seasons (50/50) (PREFERRED)
  - Directed Com Quota Jan-June = 168,501 lb GW
  - Directed Com Quota July-Dec = 155,501 lb GW
- ALT 3b Divide directed commercial quota into seasons (40/60)
  - Directed Com Quota Jan-June = 127,001 lb GW
  - Directed Com Quota July-Dec = 196,001 lb GW
- ALT 3c Divide directed commercial quota into seasons (50/50)
  - Directed Com Quota Jan-Aug = 149,501 lb GW
  - Directed Com Quota July-Dec = 171,501 lb GW

Vermilion Snapper Commercial Impacts by Gear Type (Alt. 2 & 3a Preferred)

Table 4-54. Reductions in commercial vessels' net operating revenues from various alternatives on vermilion snapper overall quota and seasonal quotas, in thousand 2005 dollars, by gear type.

Model	Diving	Vertical Lines	Longlines	Other Gears	Traps / Pots	Trolling	not recorded	Total
Vessel trips landing at least one pound of vermilion snapper								
Baseline (3%)	$109	$4,348	$4	$9	$18	$24	$0	$4,511
Baseline (7%)	$105	$4,185	$4	$9	$17	$23	$0	$4,342
	Overall quota							
Alt. 2	-61.6%	-61.4%	0.0%	-34.3%	-59.1%	-35.3%	0.0%	-61.1%
	Seasonal quotas							
Alt. 3a	-62.0%	-64.0%	-73.1%	-41.8%	-44.1%	-58.5%	0.0%	-63.8%
Alt. 3b	-60.2%	-63.9%	-90.0%	-41.8%	-44.1%	-63.6%	0.0%	-63.7%
Alt. 3c	-65.4%	-68.2%	-73.1%	-70.1%	-48.8%	-58.6%	0.0%	-68.0%

Vermilion Snapper Commercial Impacts by Area (Alt. 2 & 3a Preferred)

Table 4-55. Reductions in commercial vessels' net operating revenues from various alternatives on vermilion snapper overall quota and seasonal quotas, in thousand 2005 dollars, by area.

Model	North Carolina	South Carolina	Georgia and northeast FL	Central and south FL	Florida Keys	Other	Total
Vessel trips landing at least one pound of vermilion snapper							
Baseline (3%)	$1,514	$1,812	$1,090	$69	$25	$0	$4,511
Baseline (7%)	$1,458	$1,744	$1,050	$67	$24	$0	$4,342
	Overall quota						
Alt. 2	-66.4%	-60.8%	-55.1%	-54.6%	-48.6%	0.0%	-61.1%
	Seasonal quotas						
Alt. 3a	-65.3%	-64.6%	-61.1%	-58.0%	-57.7%	0.0%	-63.8%
Alt. 3b	-63.3%	-65.0%	-62.8%	-61.0%	-52.0%	0.0%	-63.7%
Alt. 3c	-72.8%	-68.1%	-62.2%	-55.3%	-60.5%	0.0%	-68.0%

VERMILION SNAPPER

RECREATIONAL REGULATIONS (-69%)

- ALT 1. NO ACTION - 12”TL; 10 bag limit
- ALT 4a. 14”TL & bag = 3 (71% reduction)
- ALT 4b. 13”TL & bag = 1 (73% reduction)
- ALT 4c. 13”TL & bag = 6 (53% reduction); close Sept & Oct (16% reduction); Tot. Red.=61%
- **ALT 4d. (Preferred) 12”TL & bag = 4 (45% reduction); close Oct thru May 15th (38% red.); Tot. Red. = 66%**

Vermilion Snapper Recreational Impacts by Fishing Mode (Alt. 4d Preferred)

Table 4-56. Reductions in producer and consumer surplus from various alternatives on vermilion snapper bag limits, size limits, and seasonal closure, in 2005 dollars, by fishing mode.

		Producer Surplus	Consumer Surplus	Total Effects	Producer Surplus	Consumer Surplus	Total Effects
		3% Discount Rate			7% Discount Rate		
Alt. 4a	Charter	$42,312	$449,493	$491,805	$40,730	$432,690	$473,420
	Headboat	$55,862	$1,675,190	$1,731,052	$53,773	$1,612,566	$1,666,339
	Private/Shore		$303,798	$303,798		$292,441	$292,441
	TOTAL	$98,173	$2,428,481	$2,526,654	$94,503	$2,337,697	$2,432,200
Alt. 4b	Charter	$42,312	$449,493	$491,805	$40,730	$432,690	$473,420
	Headboat	$55,436	$1,662,430	$1,717,866	$53,364	$1,600,283	$1,653,647
	Private/Shore		$307,596	$307,596		$296,097	$296,097
	TOTAL	$97,748	$2,419,519	$2,517,267	$94,094	$2,329,069	$2,423,163
Alt. 4c	Charter	$28,598	$303,803	$332,401	$27,529	$292,446	$319,975
	Headboat	$47,899	$1,436,398	$1,484,297	$46,108	$1,382,701	$1,428,809
	Private/Shore		$246,836	$246,836		$237,609	$237,609
	TOTAL	$76,496	$1,987,037	$2,063,533	$73,637	$1,912,755	$1,986,392
Alt. 4d	Charter	$43,162	$458,528	$501,690	$41,549	$441,387	$482,936
	Headboat	$62,366	$1,870,234	$1,932,599	$60,034	$1,800,318	$1,860,353
	Private/Shore		$348,988	$348,988		$335,942	$335,942
	TOTAL	$105,528	$2,677,750	$2,783,278	$101,583	$2,577,647	$2,679,230

Vermilion Snapper Recreational Impacts by Area (Alt. 4d Preferred)

Table 4-57. Reductions in producer and consumer surplus from various alternatives on vermilion snapper bag and size limits, in 2005 dollars, by area.

		Producer Surplus	Consumer Surplus	Total Effects	Producer Surplus	Consumer Surplus	Total Effects
		3% Discount Rate			7% Discount Rate		
Alt. 4a	Florida	$74,228	$1,794,531	$1,868,760	$71,453	$1,727,446	$1,798,899
	Georgia	$0	$0	$0	$0	$0	$0
	South Carolina	$10,674	$316,926	$327,599	$10,275	$305,078	$315,353
	North Carolina	$13,272	$317,024	$330,296	$12,776	$305,173	$317,948
	Total	$98,173	$2,428,481	$2,526,654	$94,503	$2,337,697	$2,432,200
Alt. 4b	Florida	$73,906	$1,787,909	$1,861,815	$71,144	$1,721,071	$1,792,214
	Georgia	$0	$0	$0	$0	$0	$0
	South Carolina	$10,627	$315,756	$326,384	$10,230	$303,952	$314,182
	North Carolina	$13,214	$315,854	$329,068	$12,720	$304,046	$316,766
	Total	$97,748	$2,419,519	$2,517,267	$94,094	$2,329,069	$2,423,163
Alt. 4c	Florida	$57,838	$1,468,325	$1,526,164	$55,676	$1,413,435	$1,469,111
	Georgia	$0	$0	$0	$0	$0	$0
	South Carolina	$8,317	$259,316	$267,633	$8,006	$249,622	$257,628
	North Carolina	$10,341	$259,396	$269,737	$9,955	$249,699	$259,654
	Total	$76,496	$1,987,037	$2,063,533	$73,637	$1,912,755	$1,986,392
Alt. 4d	Florida	$79,789	$1,978,729	$2,058,518	$76,806	$1,904,758	$1,981,564
	Georgia	$0	$0	$0	$0	$0	$0
	South Carolina	$11,473	$349,456	$360,930	$11,044	$336,393	$347,437
	North Carolina	$14,266	$349,564	$363,830	$13,733	$336,497	$350,229
	Total	$105,528	$2,677,750	$2,783,278	$101,583	$2,577,647	$2,679,230

Reduce Bycatch of Snapper Grouper Species

Alternative 1. No Action. Do not require use of venting tools, dehooking devices, and circle hooks to reduce bycatch.

Alternative 2. Reduce recreational and commercial bycatch mortality by requiring the following for a person on board a vessel to fish for snapper grouper species in the South Atlantic EEZ: (a) use of venting and dehooking tools and (b) use of non-offset, non-stainless steel circle hooks when using natural baits to fish for snapper grouper species in one of the following South Atlantic EEZ fisheries:

Alternative 2a. Commercial snapper grouper fishery.

Alternative 2b. Recreational snapper grouper fishery.

Alternative 2c (Preferred). Both commercial and recreational snapper grouper fisheries.

Reduce Bycatch of Snapper Grouper Species

Regulations recently implemented in the Gulf of Mexico under Gulf Reef Fish Amendment 14/27 are as follows:

(m) Required gear in the Gulf reef fish fishery. For a person on board a vessel to fish for Gulf reef fish in the Gulf EEZ, the vessel must possess on board and such person must use the gear as specified in paragraphs (m)(1) through (m)(3) of this section.

(1) Non-stainless steel circle hooks. Non-stainless steel circle hooks are required when fishing with natural baits.

(2) Dehooking device. At least one dehooking device is required and must be used to remove hooks embedded in Gulf reef fish with minimum damage. The hook removal device must be constructed to allow the hook to be secured and the barb shielded without re-engaging during the removal process. The dehooking end must be blunt, and all edges rounded. The device must be of a size appropriate to secure the range of hook sizes and styles used in the Gulf reef fish fishery.

(3) Venting tool. At least one venting tool is required and must be used to deflate the swim bladders of Gulf reef fish to release the fish with minimum damage. This tool must be a sharpened, hollow instrument, such as a hypodermic syringe with the plunger removed, or a 16-gauge needle fixed to a hollow wooden dowel. A tool such as a knife or an ice pick may not be used. The venting tool must be inserted into the fish at a 45-degree angle approximately 1 to 2 inches (2.54 to 5.08 cm) from the base of the pectoral fin. The tool must be inserted just deep enough to release the gases, so that the fish may be released with minimum damage.

Amendment 16 Schedule

- Public hearings – **May 2008**
- **Comments due May 16, 2008 (5:00 PM)**
- Council will review comments June 8th-13th 2008
- Council sends for formal review by Secretary of Commerce – **June or September 2008**
- Regulations effective – **by October 1, 2008 or January 1, 2009 at the latest**

Additional Information

- Additional public hearings listed on page **24**
- Council members listed on page 26
- SAFMC Web site: **www.safmc.net**
- Email comments: **SGAmend16@safmc.net**
- Council staff responsible:
  gregg.waugh@safmc.net

South Atlantic Council's Snapper Grouper Amendment 18 (Red Snapper) Scoping

Prepared by: SAFMC Staff

May 2008

1990 PDT/NMFSTOCK ASSESSMENT

1. THE PDT HIGHLY RECOMMENDS ESTABLISHMENT OF REEF FISH **RESERVES** EQUAL IN AREA TO 20% OF THE "LIVE BOTTOM" ALONG THE SOUTHEASTERN UNITED STATES AS WELL AS ESTABLISHING A HOST OF MINIMUM SIZE LIMITS.
2. RED SNAPPER – **21" SIZE LIMIT** TO ACHIEVE 40% SPR. PROJECTED TO REDUCE FISHING MORTALITY BY 41% OFF NC, SC & GA AND 51% OFF NORTH FL.
3. SG AMENDMENT 4, PAGE 28: ASSESSMENT RESULTS FOR RED SNAPPER INDICATED THAT: "CONDITIONS EXISTING UNDER THE **HEADBOAT FISHERY** ARE CURRENTLY PRODUCING A SSR (EQUILIBRIUM, BOTH SEXES) OF 15 PERCENT FOR THE CAROLINAS, AND 5 PERCENT FOR NORTH FLORIDA. A 58 PERCENT REDUCTION IN F OR A MINIMUM SIZE OF 490 MM (19.3") IS REQUIRED TO ACHIEVE A SSR OF 30 PERCENT, AND A 72 PERCENT REDUCTION IF F OR A MINIMUM SIZE OF 530 MM (21") IS NEEDED TO ACHIEVE A SSR OF 40 PERCENT. THE **COMMERCIAL HOOK AND LINE FISHERY** OPERATING OFF THE CAROLINAS IS PRODUCING A SSR OF 24 PERCENT. A 19 PERCENT REDUCTION IN F OR A MINIMUM SIZE OF 392 MM (15.4") IS REQUIRED TO ACHIEVE A SSR OF 30 PERCENT, AND A 41 PERCENT REDUCTION IN F OR A MINIMUM SIZE OF 490 MM (19.3") IS NEEDED TO OBTAIN A SSR OF 40%.

1990 PDT/NMFSTOCK ASSESSMENT

3. CONTINUED: SG AMENDMENT 4, PAGE 28: THE **NORTH FLORIDA COMMERCIAL FISHERY** IS PRODUCING A SSR OF 17 PERCENT. A 37 PERCENT REDUCTION IN F OR A MINIMUM ISZE OF 421 MM (16.6”) IS REQUIRED TO ACHIEVE A SSR OF 30 PERCENT, AND 51 PERCENT REDUCTION IN F OR A MINIMUM SIZE OF 483 MM (19.0”) IS NEEDED TO ACHIEVE A SSR OF 40 PERCENT..THE PDT BELIEVES THE MOST APPROPRIATE GOAL FOR MANAGEMENT OF THE RED SNAPPER RESOURCE IS A 40 PERCENT SSR AND RECOMMENDS ADOPTION OF A 21” (530 MM) TOTAL LENGTH MINI8MUM SIZE LIMIT. STUDIES CONDUCTED BY THE NMFS AND STATE OF SOUTH CAROLINA REVEAL **80-100 PERCENT SURVIVAL** OF CAUGHT AND RELEASED RED SNAPPER. THE IMPACT OF IMPOSING A **BAG LIMIT** WAS EVALUATED UTILIZING HEADBOAT DATA FROM ALL AREAS. EVEN WITH A 72 PERCENT REDUCTION IN F NEEDED TO ACHIEVE THE PDT’S RECOMMENDED SSR 40%, A BAG LIMIT WOULD NOT BE EFFECTIVE. FOR EXAMPLE A 1 FISH PER ANGLER BAG WOULD REDUCE F BY ONLY 50 PERCENT FOR THE CAROLINAS 7.6 PERCENT FOR NORTH FLORIDA, AND ONLY 45 PERCENT FOR SOUTH FLORIDA. INSTEAD OF A SIZE LIMIT, THE NORTH FLORIDA COMMERCIAL FISHERY COULD BE REDUCED 51 PERCENT AND THE CAROLINAS COMMERCIAL FISHERY F REDUCED 41 PERCENT TO ACHIEVE A SSR OF 40 PERCENT.”

SNAPPER GROUPER AMENDMENT 4 (APRIL 1991)
REGULATIONS EFFECTIVE 1/1/92

RED SNAPPER SIZE LIMIT – THE COUNCIL CONCLUDED THAT INCLUDING RED SNAPPER WITHIN THE 20” MINIMUM SIZE GROUPING WOULD BE APPROPRIATE. THE RESULTING SSRS OF 33% AND 40% FOR THE RECREATIONAL AND COMMERCIAL FISHEREIS, RESPECTIVELY, EXCEED THEIR OVERFISHING LEVEL OF 30%.

RED SNAPPER BAG LIMIT – SPECIFY A SNAPPER AGGREGATE BAG LIMIT OF 10 EXCLUDING VERMILION SNAPPER AND SPECIFY THAT NO MORE THAN TWO CAN BE RED SNAPPERS.

PREVIOUS STOCK ASSESSMENT – NMFS/MANOOCH ET AL. 1997

1. LANDINGS = 1986-1996
2. MAXIMUM AGE = 25; FEW FISH > AGE 12 LANDED
3. NATURAL MORTALITY (M) = 0.15 – 0.30
4. SPR (86-91)=3-15%; SPR (92-95)=11-32%
5. FULL F (86-91)=0.48-0.31; FULL F (92-95)=0.69-0.50
6. WE BELIEVE THAT M IS PROBABLY OVER 0.20 BUT NOT OVER 0.30
7. SPR = 25% FOR M = 0.25 AND 32% FOR M=0.30 FOR 1992-95)
8. WE CONCLUDE THAT THE RED SNAPPER STOCK IS IN A "TRANSITIONAL" CONDITION. THAT IS, THE STATUS OF THE STOCK IS LESS THAN DESIRABLE, BUT DOES APPEAR TO BE RESPONDING FOR THE BETTER TO SOMETHING, POSSIBLY MANAGEMENT, IN THE MOST RECENT YEARS.

NEW ASSESSMENT

1. **LANDINGS = 1945-2006**
2. **MAXIMUM AGE = 54 YEARS; MAX OF 53 USED IN ASSESSMENT**
3. **M = SCALED LORENZEN = 0.07-0.17 FOR FISH WITH INCREMENT COUNTS 2 TO 53**
4. **DISCARD MORTALITY INCLUDED**
5. **SPR IN 2006 = 3%; SPR (1995)=2.4%; SPR (1991)=2.5%**
6. **F IN 2006 = 0.84; F (1995) = 1.16; F (1991) = 0.75**
7. **STOCK OVERFISHED & OVERFISHING**

Red Snapper – SEDAR Stock Assessment
SEDAR Assessment – SSC to review June 2008

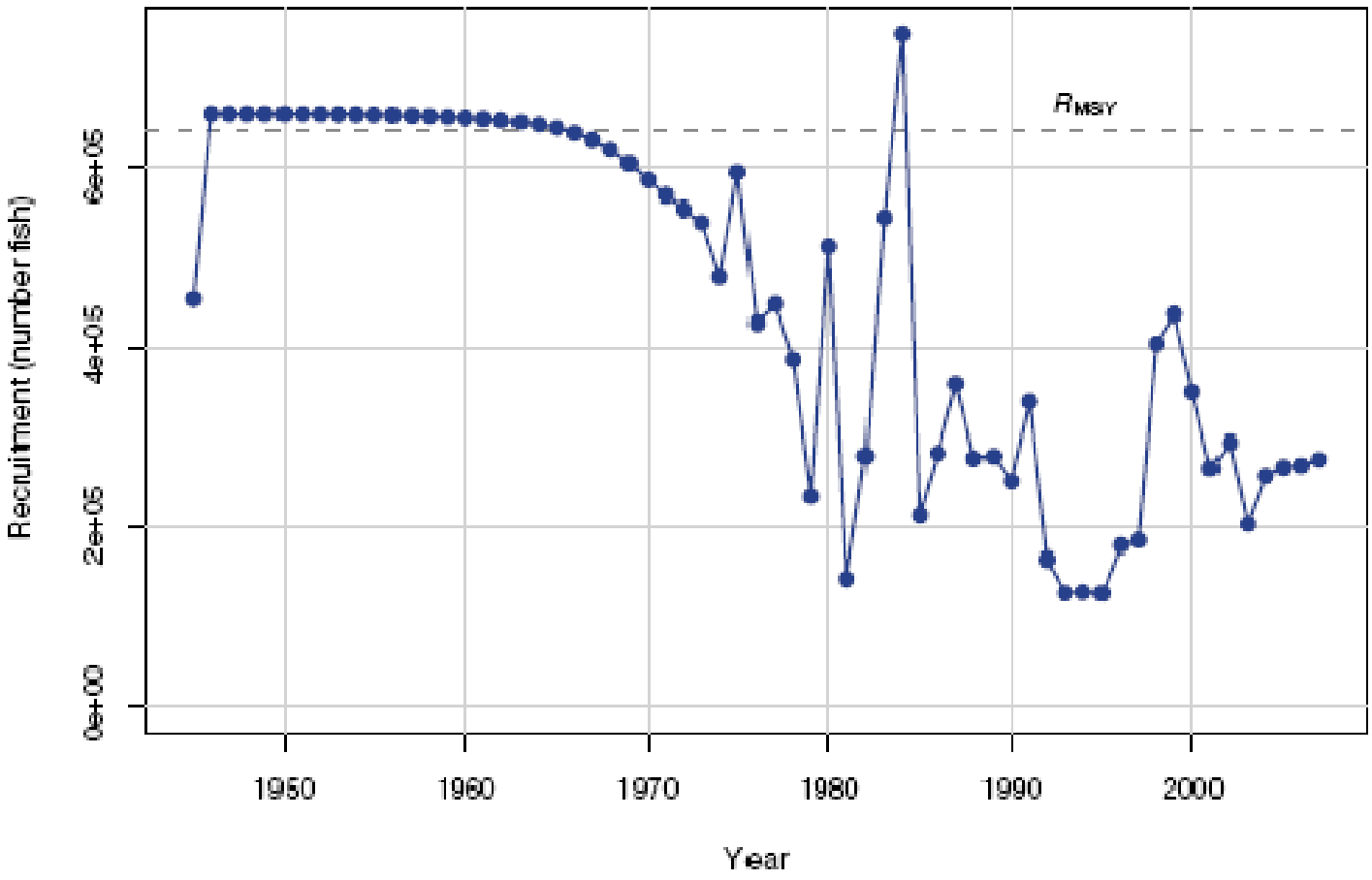
Historical Commercial landings 1927-61 (Historical Catch Statistics, 1879-1989)
Extend commercial back to 1900 by linear interpolation.
Recreational landings do not include Monroe County, FL; MRFSS data 1981 onwards;
Workgroup extended landings back to 1946 for all modes

Table 1. Assessment data availability.

Fishery	Landings	Estimated Discards	Indices
Commercial handline	1945-2006	1984-2006	1993-2006
Commercial dive	1984-2006	–	–
Headboat	1972-2006	1984-2006	1976-2006
Recreational (MRFSS)	1981-2006	1984-2006	1983-2006

RED SNAPPER RECRUITMENT

Figure 3.21. Red snapper: Top panel – Estimated recruitment of age-1 fish. Bottom panel – log recruitment residuals.



RED SNAPPER – BACKGROUND INFORMATION

Table 5.5. CPUE of red snapper off the southeastern U.S. based on handline gear reported in commercial logbooks. Columns are year, nominal CPUE (lb/hook-hr), nominal CPUE relative to its mean, standardized CPUE, lower (LCI) and upper (UCI) 95% confidence intervals of the standardized CPUE, annual sample size (N = number of positive and zero trips), and coefficient of variation (CV) of the standardized CPUE.

YEAR	Nominal CPUE	Relative nominal	Standardized CPUE	LCI	UCI	N	CV
1993	0.294	0.888	1.052	0.918	1.205	1862	0.068
1994	0.246	0.745	0.856	0.743	0.986	2058	0.071
1995	0.360	1.087	0.879	0.760	1.017	2293	0.073
1996	0.285	0.861	0.691	0.580	0.825	2104	0.088
1997	0.325	0.983	0.610	0.498	0.748	2013	0.102
1998	0.263	0.795	0.688	0.558	0.847	1782	0.105
1999	0.291	0.880	0.851	0.699	1.035	1596	0.098
2000	0.312	0.943	0.869	0.706	1.069	1571	0.104
2001	0.452	1.366	1.347	1.175	1.545	1869	0.068
2002	0.391	1.181	1.475	1.291	1.684	1758	0.066
2003	0.385	1.162	1.220	1.029	1.446	1446	0.085
2004	0.438	1.323	1.523	1.278	1.815	1369	0.088
2005	0.356	1.075	1.263	1.038	1.537	1354	0.098
2006	0.235	0.709	0.677	0.521	0.878	1269	0.131

RED SNAPPER – BACKGROUND INFORMATION

Table 5.9. CPUE of red snapper off the southeastern U.S. based on headboat data. Columns are year, nominal CPUE (number/hook-hr), nominal CPUE relative to its mean, standardized CPUE, lower (LCI) and upper (UCI) 95% confidence intervals of the standardized CPUE, annual sample size (N = number of positive and zero trips), and coefficient of variation (CV) of the standardized CPUE.

YEAR	Nominal CPUE	Relative nominal	Standardized CPUE	LCI	UCI	N	CV
1976	0.0444	3.328	3.127	0.930	10.511	789	0.666
1977	0.0293	2.193	2.078	0.434	9.963	812	0.921
1978	0.0299	2.242	2.120	0.556	8.081	1419	0.751
1979	0.0276	2.067	2.138	0.537	8.504	1264	0.781
1980	0.0152	1.138	1.129	0.193	6.589	1333	1.085
1981	0.0258	1.934	2.777	0.782	9.866	998	0.703
1982	0.0110	0.823	1.044	0.164	6.629	1282	1.162
1983	0.0185	1.383	1.705	0.401	7.243	1450	0.829
1984	0.0214	1.606	1.554	0.332	7.276	1340	0.902
1985	0.0222	1.663	2.285	0.672	7.770	1643	0.674
1986	0.0072	0.539	0.511	0.059	4.442	2039	1.489
1987	0.0079	0.591	0.612	0.079	4.728	2048	1.357
1988	0.0091	0.678	0.563	0.069	4.580	1942	1.413
1989	0.0137	1.026	0.952	0.148	6.111	1301	1.171
1990	0.0112	0.838	0.987	0.161	6.031	1357	1.126
1991	0.0074	0.553	0.619	0.071	5.374	1384	1.489
1992	0.0025	0.186	0.081	0.003	2.546	2051	4.285
1993	0.0039	0.295	0.213	0.013	3.554	1862	2.498
1994	0.0047	0.353	0.225	0.014	3.732	1513	2.488
1995	0.0053	0.400	0.302	0.022	4.205	1395	2.157
1996	0.0037	0.277	0.202	0.010	4.075	1104	2.927
1997	0.0032	0.239	0.223	0.010	5.195	820	3.302
1998	0.0040	0.298	0.179	0.009	3.503	1465	2.847
1999	0.0060	0.446	0.293	0.021	4.018	1448	2.131
2000	0.0072	0.537	0.389	0.033	4.642	1270	1.911
2001	0.0135	1.010	0.822	0.125	5.400	1460	1.194
2002	0.0167	1.250	1.005	0.173	5.839	1350	1.081
2003	0.0098	0.734	0.518	0.050	5.365	973	1.708
2004	0.0131	0.981	0.969	0.161	5.824	1368	1.112
2005	0.0115	0.859	0.903	0.136	5.998	1190	1.204
2006	0.0071	0.531	0.473	0.043	5.224	1132	1.797

RED SNAPPER – BACKGROUND INFORMATION

Table 5.10. Number of intercepts from MRFSS that caught red snapper or reported red snapper as a targeted species. The index of abundance was computed for 1983–2006, because of total sample size and distribution across states.

Year	Total	NC	SC	GA	FL
1982	48	0	14	0	34
1983	168	0	29	8	131
1984	398	15	81	7	295
1985	215	18	29	17	151
1986	154	4	4	11	135
1987	196	112	5	17	62
1988	279	134	7	8	130
1989	284	127	49	10	98
1990	114	82	5	0	27
1991	137	62	15	12	48
1992	278	63	0	93	122
1993	180	34	2	93	51
1994	257	76	6	95	80
1995	171	54	0	70	47
1996	98	15	6	53	24
1997	76	0	44	15	17
1998	131	7	23	46	55
1999	386	27	80	47	232
2000	508	16	110	40	342
2001	555	44	22	30	459
2002	567	61	19	23	464
2003	535	47	24	64	400
2004	554	9	38	181	326
2005	400	14	33	115	238
2006	493	25	32	164	272

RED SNAPPER – BACKGROUND INFORMATION

Table 5.11. CPUE of red snapper off the southeastern U.S. based on MRFSS data. Relative CPUE is CPUE standardized to its mean.

YEAR	CPUE (number/ angler-trip)	Relative CPUE	PSE
1983	2.770	1.716	17.6
1984	2.533	1.569	15.3
1985	2.199	1.362	17.4
1986	1.154	0.715	32.2
1987	1.047	0.648	37.0
1988	1.137	0.704	24.9
1989	0.943	0.584	17.1
1990	0.323	0.200	29.9
1991	1.093	0.677	27.3
1992	1.723	1.067	15.2
1993	1.854	1.148	23.3
1994	1.201	0.744	20.9
1995	1.226	0.759	15.8
1996	1.073	0.665	28.0
1997	1.737	1.076	34.7
1998	1.295	0.802	21.5
1999	2.387	1.479	12.9
2000	2.163	1.340	12.2
2001	1.800	1.115	11.4
2002	1.604	0.994	13.7
2003	1.863	1.154	13.6
2004	2.088	1.294	11.7
2005	1.949	1.207	11.1
2006	1.585	0.982	15.5

RED SNAPPER – BACKGROUND INFORMATION

Max. Age Gulf = 57; Atlantic = 54

Table 2.1. Red Snapper: Size (mid-year), sex ratio and female maturity at age. Length is total length, weight is whole weight.

Age	Length (mm)	Length (in)	Weight (kg)	Weight (lb)	Sex Ratio	Female Maturity
1	332.9	13.11	0.5	1.04	0.5	0.237
2	450.5	17.74	1.2	2.66	0.5	0.644
3	543.6	21.40	2.2	4.77	0.5	0.913
4	617.1	24.30	3.2	7.07	0.5	0.984
5	675.2	26.58	4.2	9.36	0.5	0.997
6	721.2	28.39	5.2	11.48	0.5	1.000
7	757.5	29.82	6.1	13.37	0.5	1.000
8	786.3	30.96	6.8	15.01	0.5	1.000
9	809.0	31.85	7.4	16.39	0.5	1.000
10	826.9	32.56	8.0	17.55	0.5	1.000
11	841.1	33.11	8.4	18.50	0.5	1.000
12	852.3	33.56	8.7	19.28	0.5	1.000
13	861.2	33.91	9.0	19.91	0.5	1.000
14	868.2	34.18	9.3	20.41	0.5	1.000
15	873.8	34.40	9.4	20.82	0.5	1.000
16	878.2	34.57	9.6	21.15	0.5	1.000
17	881.6	34.71	9.7	21.41	0.5	1.000
18	884.4	34.82	9.8	21.62	0.5	1.000
19	886.5	34.90	9.9	21.78	0.5	1.000
20	888.2	34.97	9.9	21.91	0.5	1.000

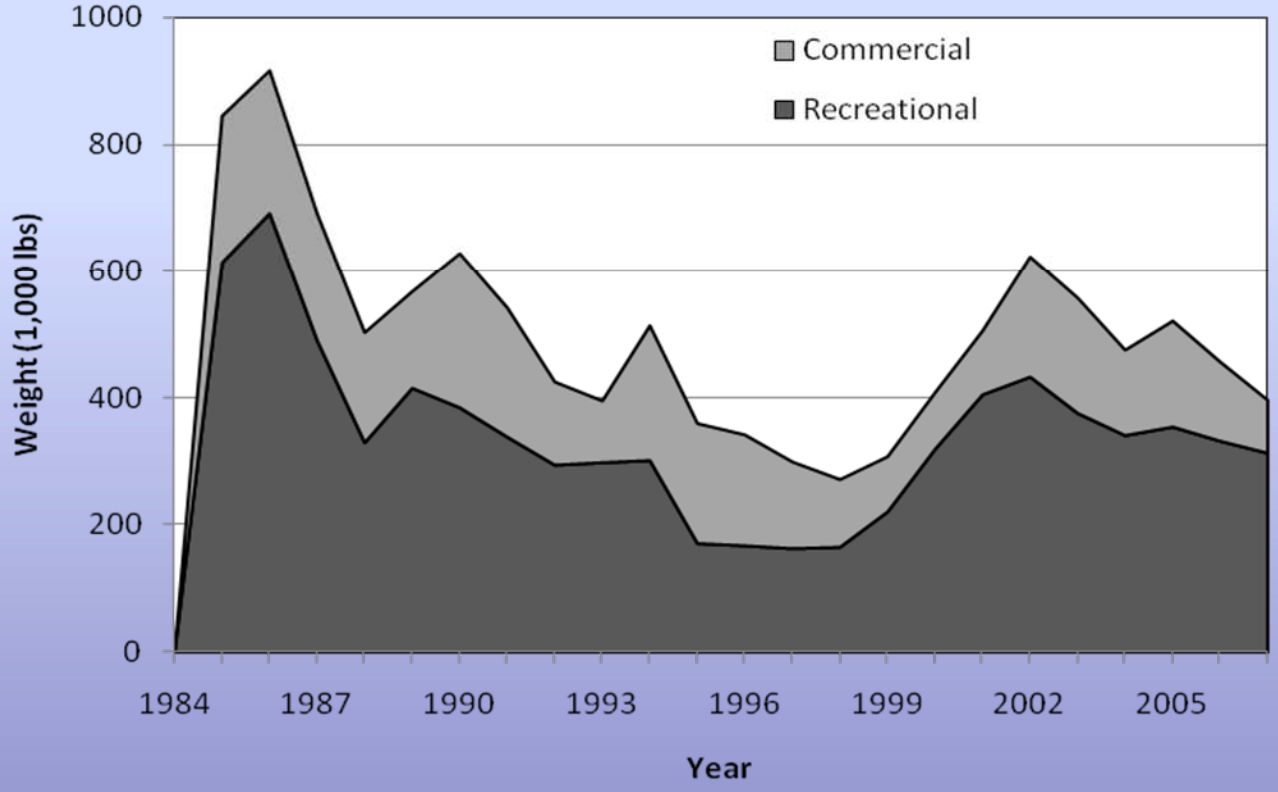
RED SNAPPER – BACKGROUND INFORMATION

- **DISCARD MORTALITY**
  - **GULF REC= 15% @ 20-40m TO 40% @ >40 m**
  - **GULF COM= 71% @ 55m TO 88% @ 83 m**
  - **ATL REC = 40% (30%-50% SENSITIVITY)**
  - **ATL COM = 90% (80% - 100% SENSITIVITY)**

- **SPAWNING**
  - **OCCURS FROM MAY THROUGH OCTOBER**
  - **PEAKED DURING JULY THROUGH SEPTEMBER**

Red Snapper SEDAR Results

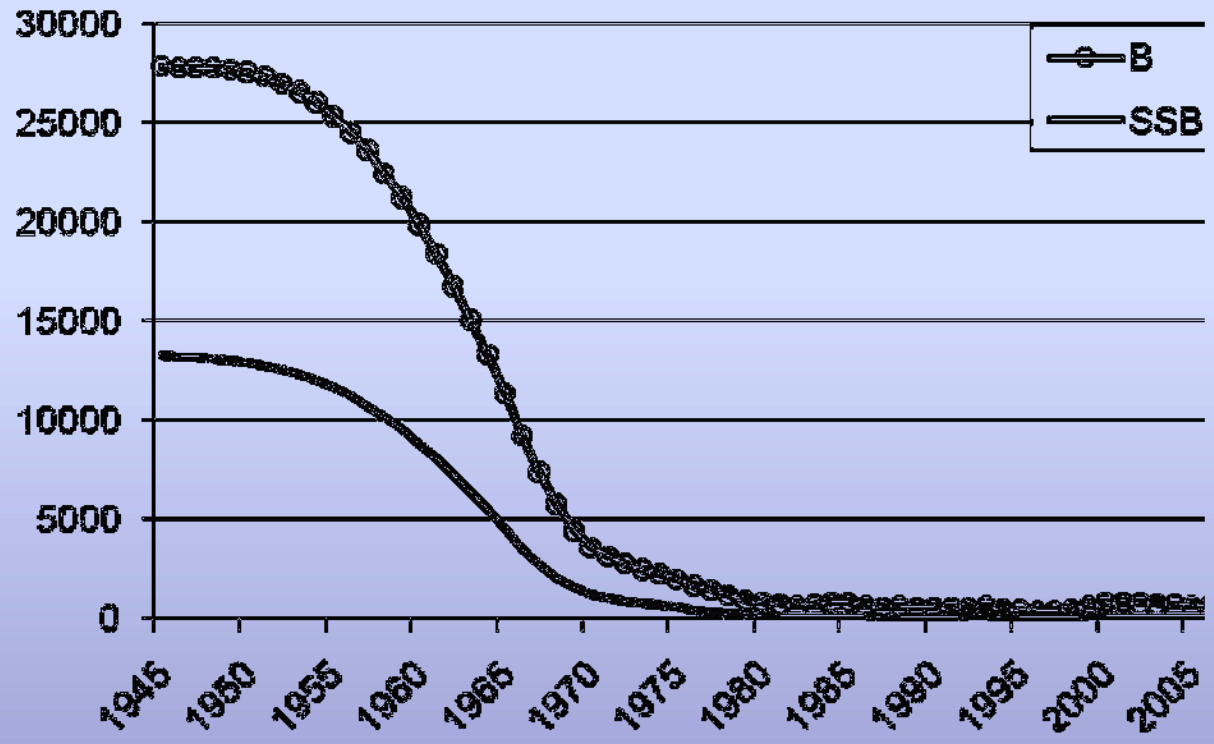
Figure 2. Landings by fishery sector, 1984–2006. (Note: Discards by weight were unavailable in this assessment). Note: (1) 8/31/83 – 4" trawl mesh & 12" TL; (2) 1/12/89 – no trawls; and (3) 1/1/92 – no traps, 20" TL & recreational bag of 2 red snapper.



Red Snapper SEDAR Results

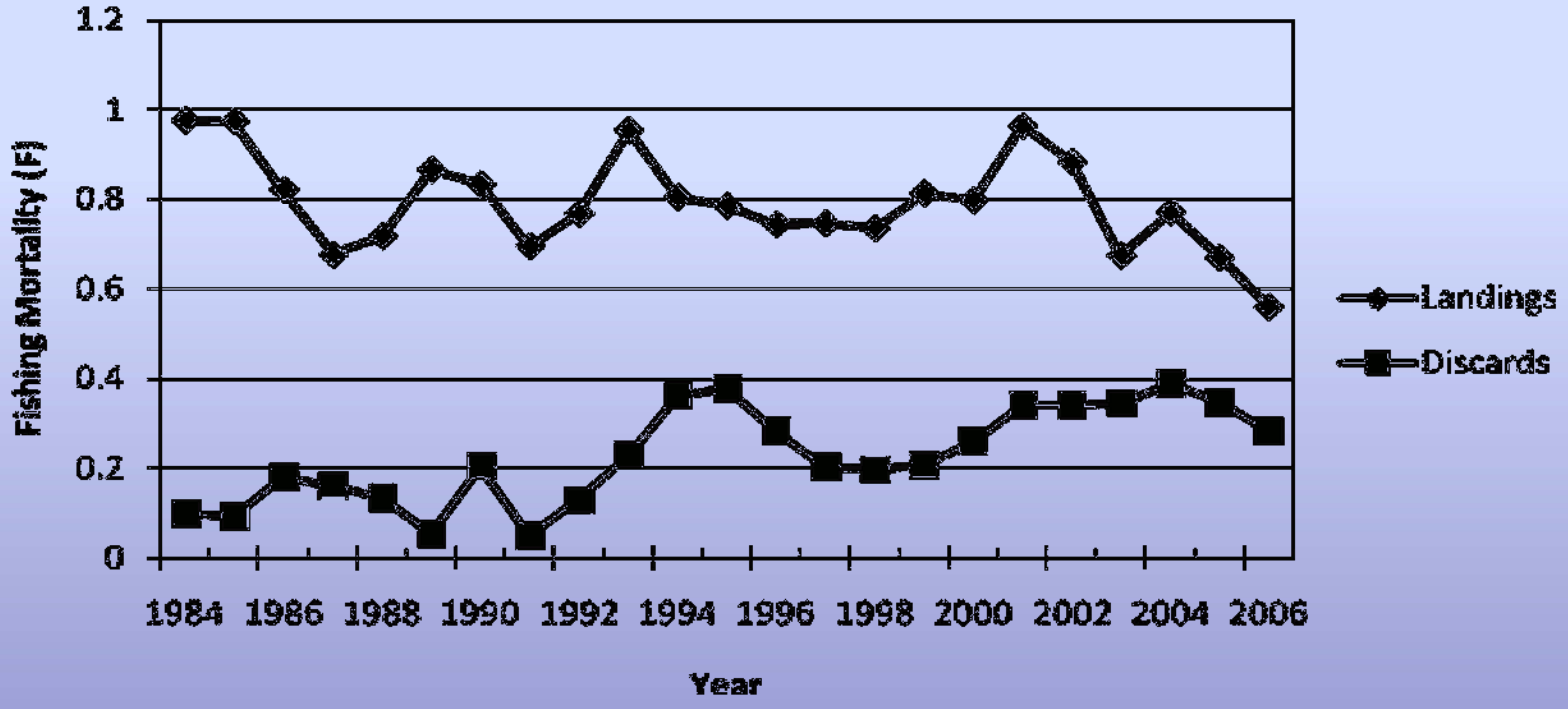
Figure 1. Biomass and Spawning Stock

Biomass (metric tons) (MSST=7,275 MT).



Red Snapper SEDAR Results

Figure 3. Fully recruited fishing mortality.
Note: (1) 8/31/83 – 4" trawl mesh & 12" TL; (2) 1/12/89 – no trawls; and (3) 1/1/92 – no traps, 20" TL & recreational bag of 2 red snapper.



Red Snapper SEDAR Results

Figure 4. Fishing Mortality (F)/Fishing Mortality at Maximum Sustainable Yield ($F_{40\%}$) Ratio. Note: (1) 8/31/83 – 4" trawl mesh & 12" TL; (2) 1/12/89 – no trawls; and (3) 1/1/92 – no traps, 20" TL & recreational bag of 2 red snapper.

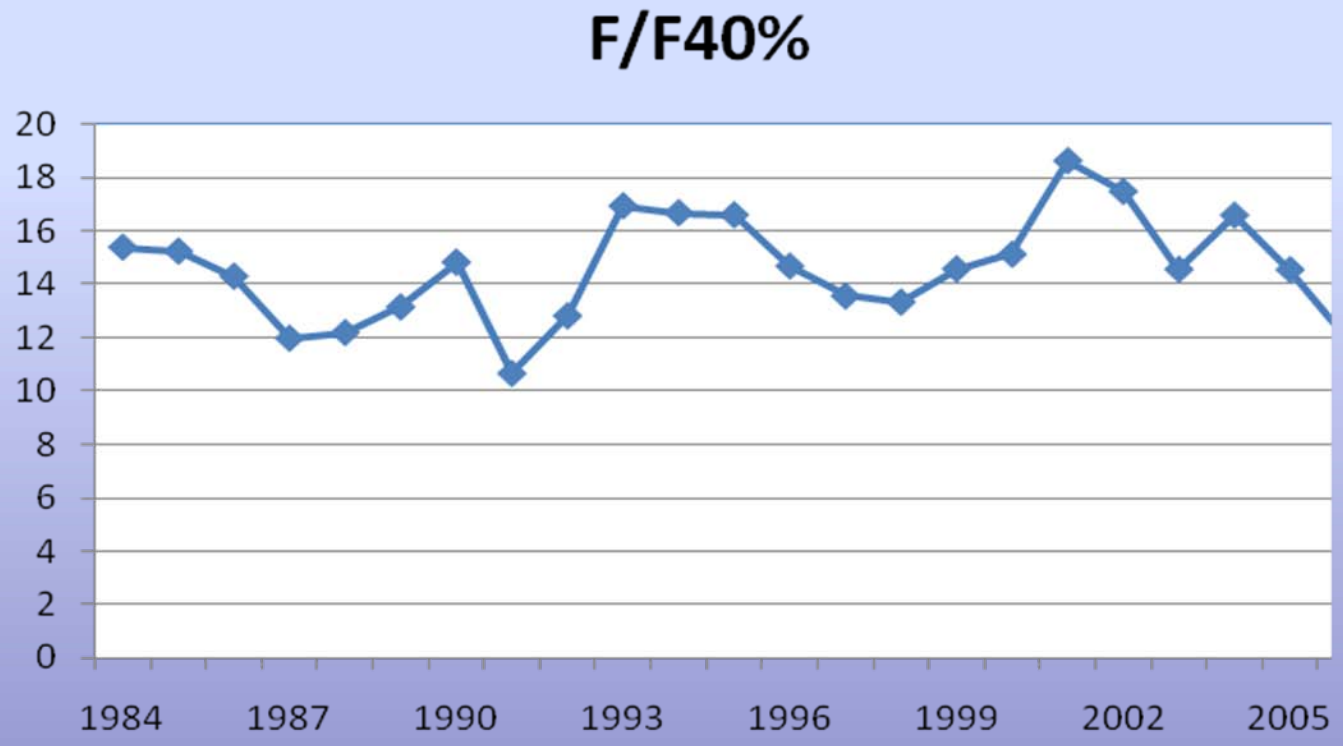
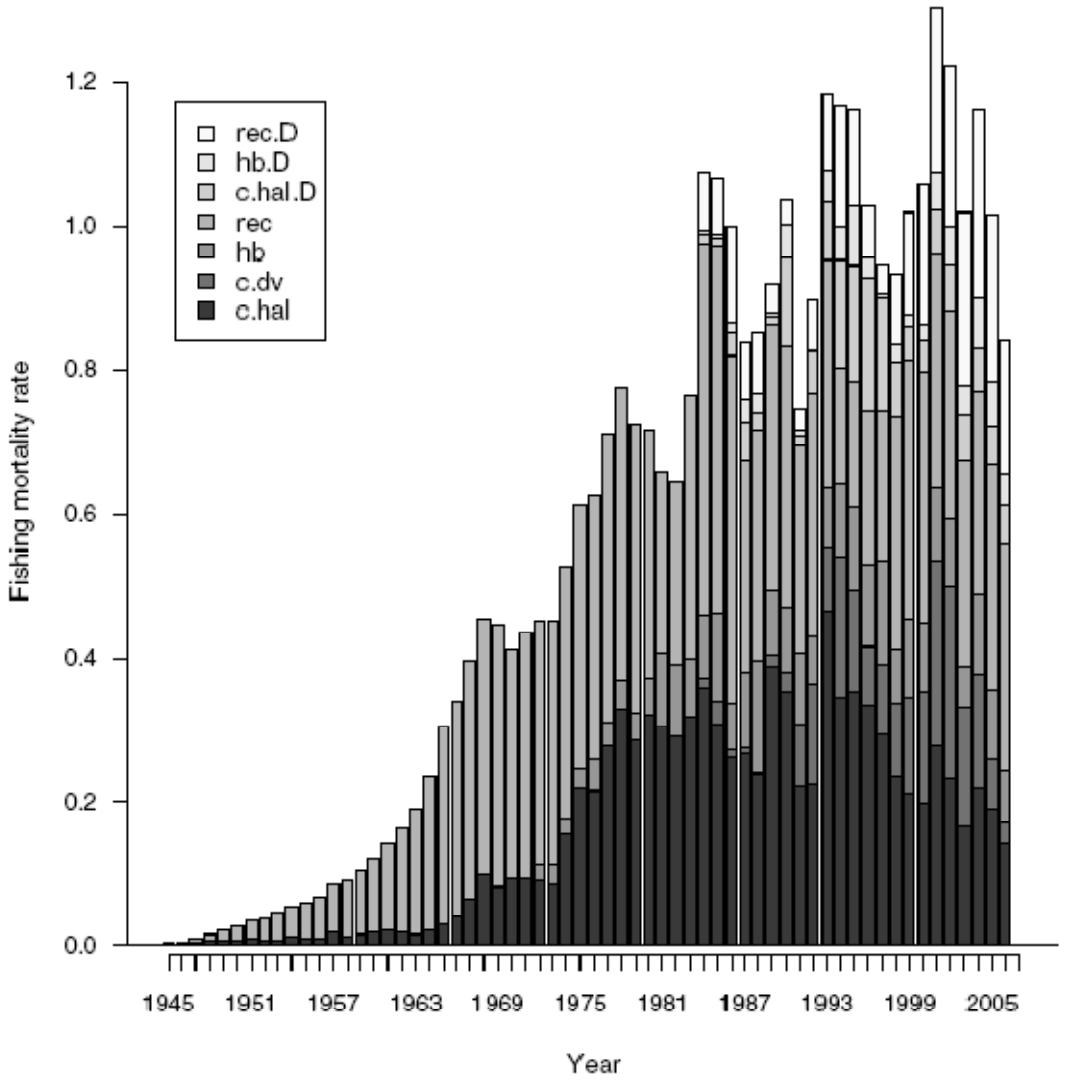
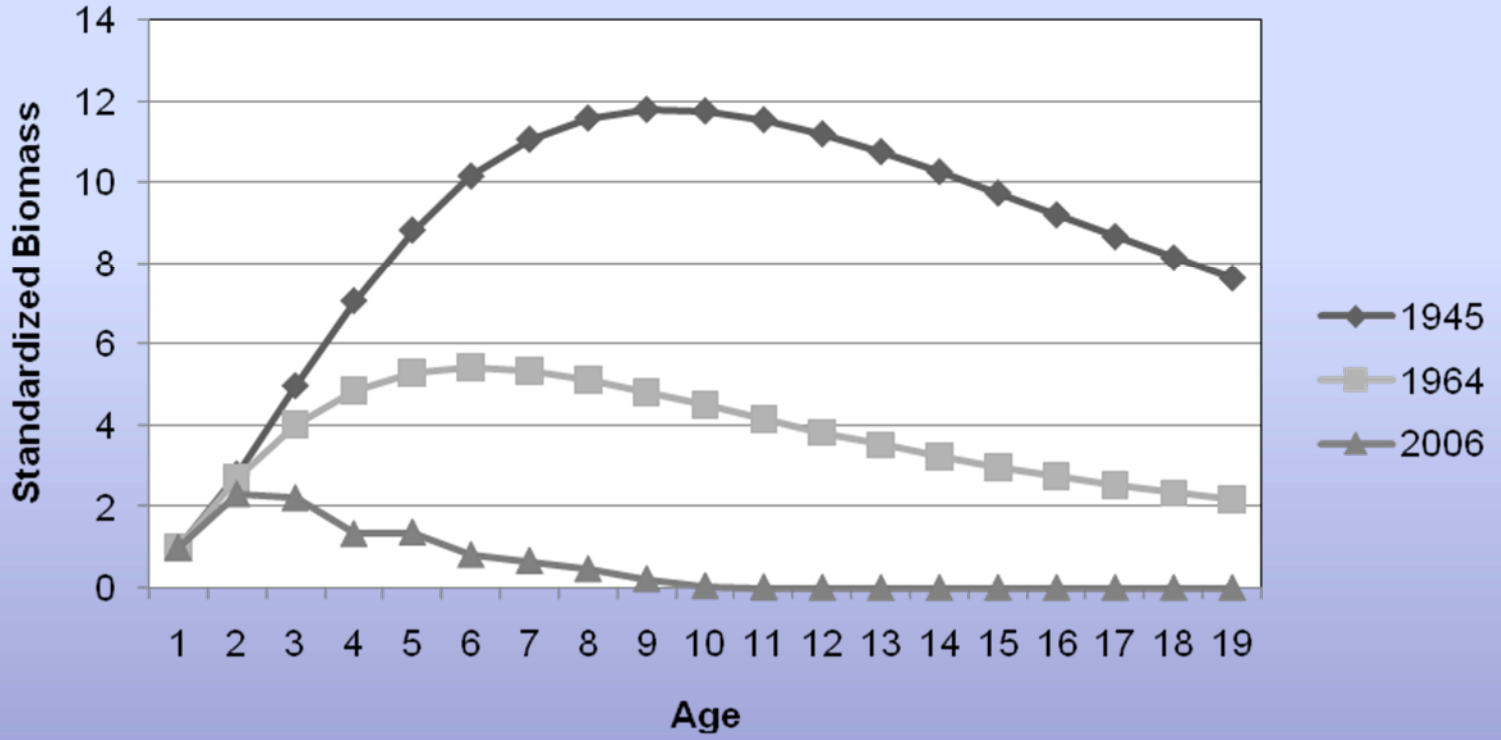


Figure 3.31. Red snapper: Estimated instantaneous fishing mortality rate (per year) by fishery. c.hal refers to commercial handline, c.dv to commercial diving, hb to headboat, rec to general recreational, c.hal.D to commercial discard mortalities, c.hb.D to headboat discard mortalities, and rec.D to general recreational discard mortalities.



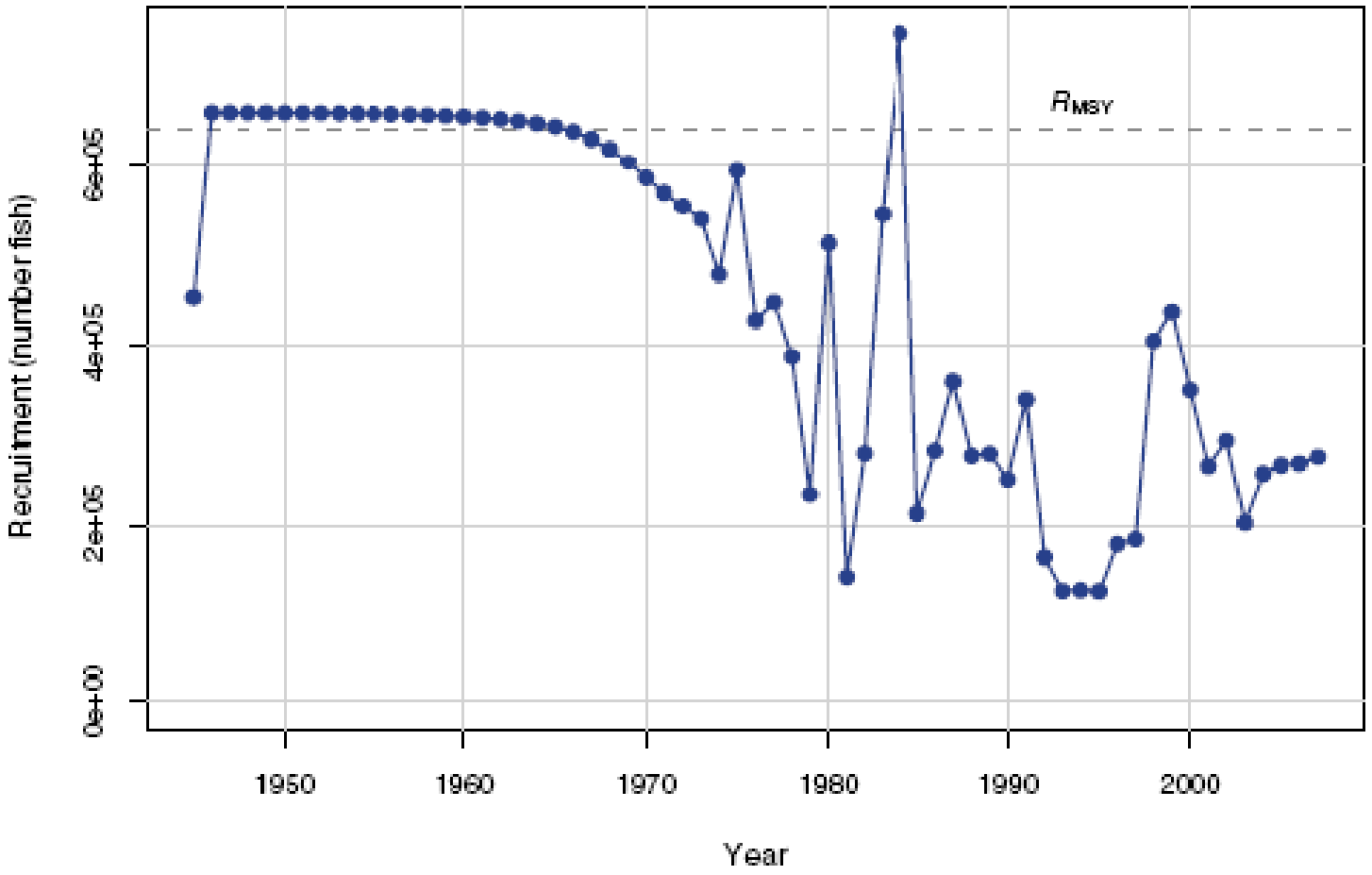
Red Snapper SEDAR Results

Figure 5. Age structure of the population (standardized to year-1 biomass). Note: (1) 8/31/83 – 4" trawl mesh & 12" TL; (2) 1/12/89 – no trawls; and (3) 1/1/92 – no traps, 20" TL & recreational bag of 2 red snapper.



Red Snapper SEDAR Results

Figure 3.21. Red snapper: Top panel – Estimated recruitment of age-1 fish. Bottom panel – log recruitment residuals.



Red Snapper SEDAR Results

Table 2. Status Summary Table (conditioned on the base run of the model).

Quantity	Units	Estimate
MFMT ($F_{40\%}$)	per year	0.07
$B_{40\%}$	mt	17347
$SSB_{F40\%}$	mt	7891
$MSST_{F40\%}$	mt	7275
$MSY_{F40\%}$	1000 lb	2314
$D_{F40\%}$	1000 fish	37
F_{MSY}	per year	0.112
$F_{2006}/F_{40\%}$	–	12.021
$SSB_{2006}/SSB_{F40\%}$	–	0.025
$SSB_{2006}/MSST_{F40\%}$	–	0.027

Red Snapper SEDAR Results

Tables 3a & 3b show the results of the 12 projection scenarios. What the discard-only projections show is that in order to rebuild the stock, the total catch (landings and discards) of red snapper will need to be reduced, not just the landings.

Red Snapper SEDAR Results – Table 3a.

Projection Scenario	Projected Recovery Date
F = 0 (assumes we can really limit all sources of mortality to zero; unrealistic in a multispecies fishery like the snapper grouper fishery)	**2020**
F = $F_{current}$ (reflecting 2004-2006) (best estimate of the current fishing mortality rate)	**0.3% of recovered value by 2040**
F_{MSY} (assumes fishing at the fishing mortality rate that produces maximum sustainable yield)	**97.5% of recovered value by 2040**
$F_{65\%MSY}$ (assumes fishing at65% of the fishing mortality rate that produces maximum sustainable yield)	**2025**
$F_{75\%MSY}$ (assumes fishing at 75% of the fishing mortality rate that produces maximum sustainable yield)	**2027**
$F_{85\%MSY}$ (assumes fishing at 85% of the fishing mortality rate that produces maximum sustainable yield)	**2030**
$F_{Rebuild}$ ($F_{Rebuild}$ = 0.109, about 97% of F_{MSY}) (assumes fishing at the fishing mortality rate that rebuilds the stock by the recovery deadline of 2040)	**2040**

Red Snapper SEDAR Results – Table 3b

Discard Only Scenarios: Commercial diving excluded and assumed that all fish expected to be caught as bycatch associated with targeting other species were released and they were subject to various levels of discard mortality; assumed that any individual fish could be caught only once per.	
F = $F_{current}$ **Discard mortality: Com = 0.9, Rec = 0.4** (these are the discard mortality rates recommended for use in the assessment)	**15% of recovered value by 2040**
F = $F_{current}$ **Discard mortality: Com = 0.8, Rec = 0.2** (discard mortality rates lower than used in the assessment)	**25% of recovered value by 2040**
F = $F_{current}$ **Discard mortality: Com = 1.0, Rec = 0.6** (discard mortality rates higher than those used in the assessment)	**9.8% of recovered value by 2040**
F = $F_{Rebuild}$= 0.262 **Discard mortality: Com = 0.9, Rec = 0.4** (these are the discard mortality rates recommended for use in the assessment)	**2040**
F = $F_{Rebuild}$= 0.286 **Discard mortality: Com = 0.7, Rec = 0.4** (if the commercial discard mortality rate is lower than that recommended for use in the assessment)	**2040**

Red Snapper – Potential Management Measures

Given the need to reduce total fishing mortality (landings and discards) by at least 87% (from F=0.841 to F=0 .109), the Council is considering the following measures to end overfishing and rebuild red snapper:

Emergency/interim rule - prohibit all harvest and possession of red snapper. If the Council approved this request at the June 2008 meeting, the estimated effective date would be around January 1, 2009. The Council is also considering a measure in Snapper Grouper Amendment 16 that would reduce recreational and commercial bycatch mortality by requiring the use of venting and dehooking tools and non-offset, non-stainless steel circle hooks when using natural baits to fish commercially or recreationally for snapper grouper species. The estimated effective date for Amendment 16 is January 1, 2009.

Red Snapper – Potential Management Measures

AMENDMENT 18 – POTENTIAL MEASURES:

1. MSY/OY/MFMT/MSST
2. ANNUAL CATCH LIMIT & ACCOUNTABILITY MEASURES
3. ANNUAL CATCH TARGET
4. ALLOCATIONS (FOR-HIRE, RECREATIONAL & COMMERCIAL)
5. BAG/SIZE/POSSESSION LIMITS - RECREATIONAL
6. QUOTAS/TRIP LIMITS/POSSESSION LIMITS – COMMERCIAL
7. TIME/AREA CLOSURES – RECREATIONAL & COMMERCIAL

Amendment 18 Schedule

- Scoping through May 16, 2008 at 5 pm
- SSC/AP/Council Review Scoping – June 2008
- Council Decision about Emergency – June 2008
- Council Works on Options – Sept. & Dec. 2008
- Council Approves for Public Hearing – March 2009
- Public hearings – May 2009
- SSC/AP/Council Review PH Input – June 2009
- Council Approve – June or September 2009
- Estimated Effective Date – January 1, 2010

Additional Information

- Additional scoping meetings listed on page **15**
- Council members listed on page **17**
- SAFMC Web site: **www.safmc.net**
- Email comments: **RedSnapperScoping@safmc.net**
- Council staff responsible: **gregg.waugh@safmc.net**