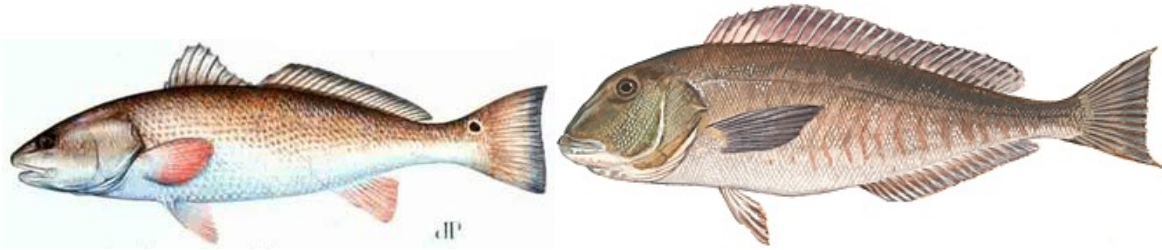


10/10/2019

Status Determination Criteria and Optimum Yield for Reef Fish and Red Drum



Summary of Revised Actions and Alternatives

October 2019



2.1 Action 1 - Maximum Sustainable Yield (MSY) Proxies

Alternative 1. No action. The MSY proxy for stocks or complexes that do not have an MSY proxy will remain undefined.

SSC Preferred Alternative 2. For stocks or complexes that do not have an MSY proxy, the MSY proxy is the yield when fishing at:

Option 2a: 20% spawning potential ratio ($F_{30\% SPR}$).

SSC Preferred Option 2b: 30% spawning potential ratio ($F_{30\% SPR}$).

Option 2c: 40% spawning potential ratio ($F_{40\% SPR}$).

SSC Preferred Alternative 3. For goliath grouper, the MSY proxy is the yield when fishing at:

Option 3a: 30% spawning potential ratio ($F_{30\% SPR}$).

SSC Preferred Option 3b: 40% spawning potential ratio ($F_{40\% SPR}$).

Option 3c: 50% spawning potential ratio ($F_{50\% SPR}$).

SSC Preferred Alternative 4. For red drum, the MSY proxy is the yield when fishing at:

SSC Preferred Option 4a: the yield that provides for an escapement rate of juvenile fish to the spawning stock biomass (SSB) equivalent to 30% of those that would have escaped had there been no inshore fishery.

Option 4b: the yield when fishing at 30% spawning potential ratio ($F_{30\% SPR}$).

SSC Preferred Alternative 5: For future assessments of reef fish stocks and red drum, the MSY proxy equals the yield produced by F_{MSY} or F_{PROXY} recommended by the Council's SSC and subject to approval by the Council through a plan amendment.

*Note: **Alternatives 2-5** can be selected concurrently.

2.2 Action 2 - Maximum Fishing Mortality Threshold

Alternative 1. No action. Maintain current definitions of the Maximum Fishing Mortality Threshold (MFMT). These are: $F_{26\% \text{ SPR}}$ for red and gray snapper¹; $F_{50\% \text{ SPR}}$ for goliath grouper; F_{MAX} for gag (where MAX is maximum yield per recruit); and $F_{30\% \text{ SPR}}$ for all other reef fish stocks and red drum.

SSC Preferred Alternative 2. For stocks where an MSY proxy has not been defined, set the MFMT equal to the fishing mortality at the MSY proxy for each stock or stock complex as determined in Action 1.

Alternative 3. If a stock is in a rebuilding plan, set the MFMT equal to the fishing mortality rate that is projected to rebuild the stock to B_{MSY} within the rebuilding time period (F_{Rebuild}). After the stock has recovered, the MFMT is equal to the fishing mortality at the stock's MSY proxy.

*Note: **Alternative 2** and **Alternative 3** can be selected together as preferred alternatives.

¹ This reflects the preferred alternative for gray snapper in Amendment 51.

2.3 Action 3 - Minimum Stock Size Threshold

Alternative 1. No action. Do not define minimum stock size threshold (MSST) for stocks and stock complexes in sub-actions 1.1-1.3. Stocks with established minimum stock size threshold (MSST) will be retained for gag, gray triggerfish, greater amberjack, hogfish, red grouper, red snapper, vermillion snapper, and gray snapper².

Alternative 2. $MSST = (1-M) * B_{MSY}$ (or proxy) where M is the natural mortality rate. This alternative applies to stocks and stock complexes in sub-actions 1.1-1.3.

SSC Preferred Alternative 3. $MSST = 0.75 * B_{MSY}$ (or proxy). This alternative applies to stocks and stock complexes in sub-actions 1.1-1.3.

Alternative 4. $MSST = 0.50 * B_{MSY}$ (or proxy). This alternative applies to stocks and stock complexes in sub-actions 1.1-1.3.

SSC Preferred Alternative 5: For stocks assessed across the South Atlantic and Gulf Councils' jurisdictions (Goliath grouper, mutton snapper, yellowtail snapper, and black grouper). MSST for these species would use existing definitions of MSST defined by the South Atlantic Council.

*Note: **Alternative 5** can be selected with **Alternative 2, 3, or 4**.

Species	MSST	Allocation S Atl:Gulf
Mutton snapper	$0.75 * SSB_{30\%SPR}$	82:18
Yellowtail snapper	$0.75 * SSB_{30\%SPR}$	75:25
Black grouper	$0.75 * SSB_{30\%SPR}$	47:53
Goliath grouper	$(1-M) * B_{MSY}$	---

M = 0.12 for Goliath Grouper

² This reflects the preferred alternative for gray snapper in Amendment 51.

2.4 Action 4 – Optimum Yield

Alternative 1: No action. Do not define optimum yield (OY) for stocks and stock complexes in Action 1.

SSC Preferred Alternative 2: For reef fish stocks where OY is undefined, with the exception of goliath grouper, OY, implicitly accounting for relevant economic, social, or ecological factors, would be the yield from fishing at:

Option 2a. 50% of F_{MSY} proxy.

Option 2b. 75% of F_{MSY} proxy.

Option 2c. 90% of F_{MSY} proxy.