Amendment 50

Catch Level Adjustments, Rebuilding Schedule, and Allocations for Red Porgy

Options Paper

August 24, 2020

Background

The Red Porgy stock in the South Atlantic was the first stock assessed through the Southeast Data, Assessment, and Review (SEDAR) process in 2002. The assessment indicated the stock was overfished but not undergoing overfishing. Subsequent update assessments in 2006 and 2012 also resulted in the same determinations. The stock has not rebuilt despite management efforts throughout its management history.

History of Red Porgy Stock Status

Assessment	Overfished	Overfishing
SEDAR 1 2002	X	
SEDAR 1 Update 2006	X	
SEDAR 1 Update 2012	X	
SEDAR 60 2020	X	X

The most recent assessment followed a standard approach with data through 2017 (SEDAR 60 2020) and using the revised estimates for recreational catch (Fishing Effort Survey). The assessment indicated that the South Atlantic Red Porgy stock is overfished and undergoing overfishing and is not making adequate progress towards rebuilding (**Figure 1**). The Council's Scientific and Statistical Committee (SSC) reviewed the assessment during their April 2020 meeting and found that the assessment represented the best scientific information available. The

Council received the results of the assessment and the SSC's recommendations at their June 2020 meeting and directed staff to begin work on a plan amendment to end overfishing as well as address rebuilding and allocations, etc. for review at the September 2020 meeting.

The Council received notification from the National Marine Fisheries Service (via letter dated June 12, 2020) of the status of the Red Porgy stock in the South Atlantic. Following notification that a stock is undergoing overfishing and overfished, the Magnuson-Stevens Fishery Conservation and Management Act requires the Council to develop a fishery management plan amendment with actions that end overfishing immediately and rebuild the affected stock. The Council has two years to develop an amendment; hence, the statutory deadline would be June 12, 2022.

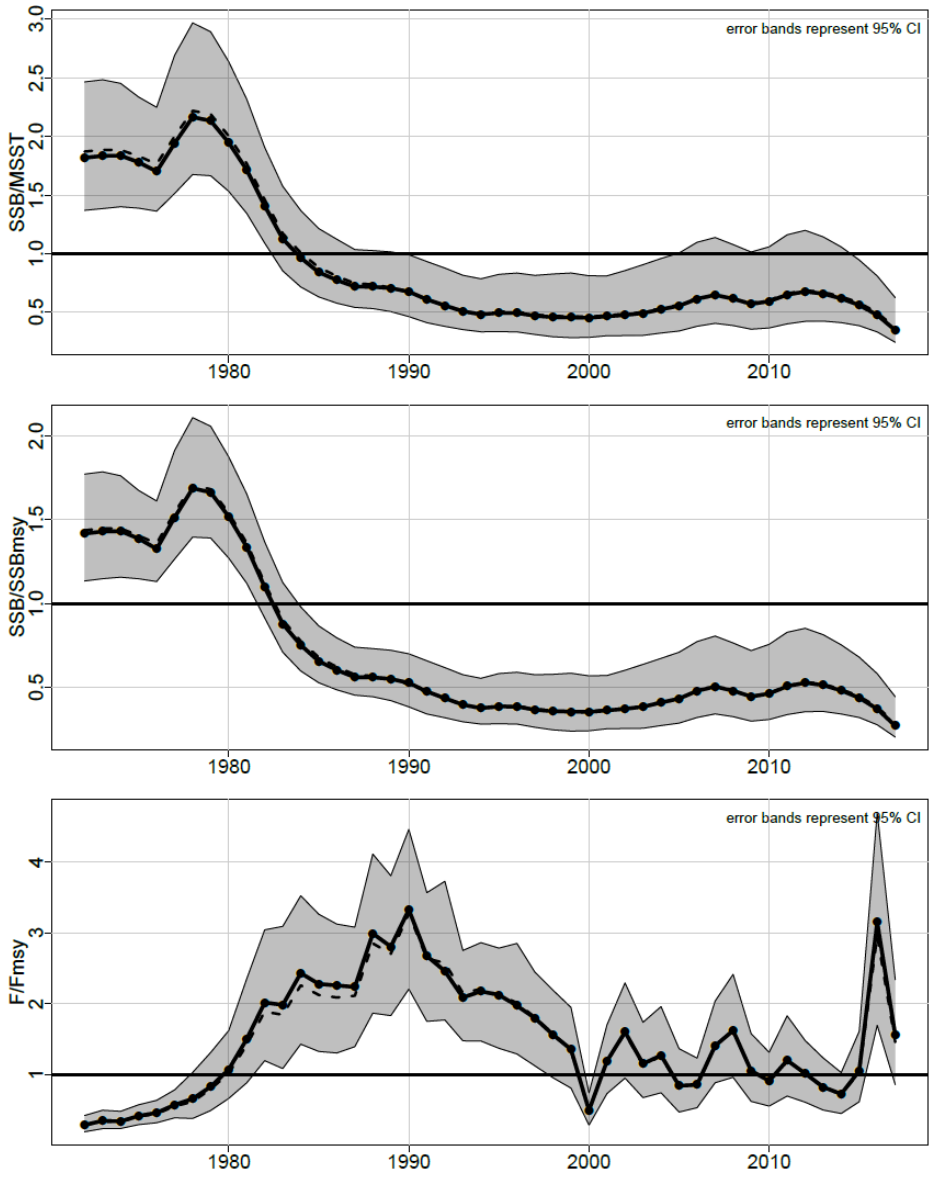

Figure 1. Estimated time series of spawning sock biomass (SSB) and fishing mortality (F) relative to benchmarks. Top: SSB relative to the minimum stock size threshold (MSST), if less than 1 stock is

overfished. Middle: SSB relative to SSB_{MSY}, if less than 1 stock is overfished. Bottom: F relative to F_{MSY}, if > 1 stock is undergoing overfishing.

Proposed management changes in this amendment

- Revise the rebuilding schedule for Red Porgy in the South Atlantic
- Adjust catch levels (annual catch limit and recreational annual catch target)
- Revise sector allocations
- Revise management measures

Objectives for this meeting

- Provide guidance on options for development

Tentative amendment timing

September 2020	Review options paper and provide guidance to staff
December 2020	Review draft amendment and approve for scoping
Jan-Feb 2021	Conduct scoping hearings
March 2021	Review scoping comments, review preliminary analyses, and provide guidance to staff
June 2021	Review modifications to the amendment, select preferred alternatives, and approve for public hearings
Jul-Aug 2021	Conduct public hearings
September 2021	Review public comment and approve all actions
December 2021 or March 2022	Review final draft amendment and consider approval for formal review
Mid to late 2022	Regulations effective

Acceptable Biological Catch and Overfishing Limit

The SSC reviewed the Red Porgy stock assessment (SEDAR 60 2020) at their April 2020 meeting. The SSC found that the assessment addressed the terms of reference appropriately, was conducted using the best scientific information available, was adequate for determining stock status and supporting fishing level recommendations and addressed uncertainty consistent with expectations and available information. The SSC applied the acceptable biological catch (ABC) control rule and recommended the following ABC and overfishing limit (OFL) for Red Porgy. Recommendations are based on **landed catch** and are highlighted in blue (**Table 1**).

The current ABC for red porgy is 328,000 lbs ww and the total ACL for Red Porgy is 328,000 lbs ww (Regulatory Amendment 18, SAFMC 2013).

Table 1. South Atlantic Red Porgy OFL and ABC recommendations (SEDAR 60).

OFL RECOMMENDATIONS				
Year	**Landings (lbs ww)**	**Discards (lbs ww)**	**Numbers of Fish**	**Discards (number)**
2021	103,000	24,000	64,000	20,000
2022	106,000	25,000	66,000	20,000
2023	109,000	25,000	69,000	21,000
2024	112,000	25,000	70,000	21,000
2025	114,000	26,000	71,000	21,000
2026	116,000	26,000	72,000	21,000
ABC RECOMMENDATIONS				
Year	**Landings (lbs ww)**	**Discards (lbs ww)**	**Numbers of Fish**	**Discards (number)**
2021	78,000	18,000	49,000	15,000
2022	84,000	19,000	52,000	16,000
2023	88,000	20,000	55,000	16,000
2024	92,000	20,000	57,000	16,000
2025	96,000	21,000	59,000	17,000
2026	98,000	21,000	60,000	17,000

Note: The SSC had a difficult time implementing the ABC control rule because Red Porgy is under a rebuilding plan, which has made little to no progress given low recruitment in recent years.

Options for Proposed Actions

1. Revise the Red Porgy rebuilding schedule

- The current rebuilding plan was designed to rebuild the Red Porgy stock by the end of 2016. This was not achieved so the rebuilding plan needs to be revised.

- Guidance on how to define the upper (T_{max}) and lower (T_{min}) bounds of a rebuilding schedule are specified in National Standard 1 (NS1) of the National Standard Guidelines.[1] The options below are based on the guidelines, which are prescriptive for a stock that has not rebuilt at the completion of a rebuilding plan.

- "T_{min} means the amount of time the stock or stock complex is expected to take to rebuild to its MSY biomass level in the absence of any fishing mortality. In this context, the term "expected" means to have at least a 50 percent probability of attaining the B_{msy}, where such probabilities can be calculated. The starting year for the T_{min} calculation should be the first year that the rebuilding plan is expected to be implemented."

- "If T_{min} for the stock or stock complex is 10 years or less, then T_{max} is 10 years."

- "If T_{min} for the stock or stock complex exceeds 10 years, then one of the following methods can be used to determine T_{max}:
    - T_{min} plus the length of time associated with one generation time for that stock or stock complex. "Generation time" is the average length of time between when an individual is born and the birth of its offspring,
    - The amount of time the stock or stock complex is expected to take to rebuild to B_{msy} if fished at 75 percent of MFMT, or
    - T_{min} multiplied by two."

- Options for developing a range of alternatives:

    Option 1 (No Change). The Red Porgy stock in the South Atlantic was under an 18-year rebuilding schedule that was expected to rebuild the stock by the end of 2016. Red Porgy currently not under a rebuilding plan.

    Option 2. Revise the rebuilding timeframe to equal the shortest possible time to rebuild in the absence of fishing mortality (T_{MIN}). This would equal 12 years with the rebuilding period ending in 2032. 2021 would be Year 1.

        Note: this option assumes that fishing mortality is zero and discards are eliminated. Therefore, it can be expected that under this scenario

[1] National Standard Guidelines are available at the following web address: https://www.fisheries.noaa.gov/national/laws-and-policies/national-standard-guidelines

rebuilding will take longer than 12 years if discards are assumed to be greater than zero.

Option 3. Revise the rebuilding timeframe to equal T_{MIN} times two. This would equal 24 years. 2021 would be Year 1.

Option 4. Revise the rebuilding timeframe to equal T_{MIN} + one generation time. This would equal 18 years. 2021 would be Year 1.

Note: the updated generation time for Red Porgy is 6.64 years (N. Klibanski, SEFSC 2020)

Option 5. Revise the rebuilding timeframe to equal the time estimated to rebuild the stock with a 50% probability of success while maintaining fishing mortality at 75% of the Maximum Fishing Mortality Threshold during the rebuilding period. This would equal 26 years with the stock rebuilt in 2046. 2021 would be Year 1.

Others?

Committee Action:

Provide guidance on range of options to develop

2. Revise the Red Porgy annual catch limit and optimum yield

- New ACLs are needed since the SSC recommended new OFL and ABC values.

- Does the Council wish to modify the optimum yield separately from the ACL? The Council has specified OY=ACL=ABC for most snapper grouper species. National Standard 1 guidelines state that although a Council can establish an annual OY, it must establish a long-term OY.

- OFL and ABC recommendations are for landed catch as discards are considered in the assessment.

- How does the Council wish to specify the sector ACLs (pounds or numbers of fish)?

    - Both commercial and recreational ACLs are currently specified in pounds whole weight (lbs ww). The commercial trip limit is specified in numbers of fish but typically reported as pounds of fish.
    - The recreational bag limit is specified in numbers of fish and reported in numbers and pounds of fish, although numbers of fish is more common.
    - The projections from the SEDAR assessment include both numbers and pounds of fish.

- Commercial landings of Red Porgy in the South Atlantic averaged 81.7% of the commercial ACL from 2014 through 2019. Commercial in-season closures have not occurred since 2013 (**Table 2**).

Table 2. Commercial landings of Red Porgy from 2014 through 2019 and percentage of the commercial ACL landed each year.

Year	Landings (lbs ww)	ACL (lbs ww)	% ACL
2019*	104,608	164,000	63.7
2018	126,209	164,000	76.9
2017	126,761	164,000	77.3
2016	124,914	164,000	76.2
2015	153,681	164,000	93.7
2014	158,985	154,500	102.9

Source: SEFSC Commercial ACL data (7/7/20)
* 2019 data are preliminary

- Recreational landings of Red Porgy in the South Atlantic averaged 64.5% of the recreational ACL from 2014 through 2019 (**Table 3**).

Table 3. Recreational landings (lbs ww) of Red Porgy from 2014 through 2019 and corresponding proportional standard error (PSE) and percentage of recreational ACL landed each year.

Year	Landings (lbs ww)	ACL (lbs ww)	% ACL	PSE
2019	29,540	164,000	18.0	42.3
2018	111,729	164,000	68.1	79.7
2017	89,317	164,000	54.5	33.9
2016	236,519	164,000	144.2	34.8
2015	106,722	164,000	65.1	32.6
2014	57,364	154,500	37.1	31.7

Source: SEFSC (7/14/20).
Note: Dataset includes headboat landings. 2014-2017 are CHTS estimates, 2018+ estimates are calculated from the current MRIP-FES survey.

- **Figure 2** below shows Red Porgy commercial and recreational landings by year from 1986 through 2019. Commercial landings (lbs ww) are in black. Recreational landings (lbs ww) estimates based on the Coastal Household Telephone Survey (CHTS) are shown in blue and revised recreational landings estimates based on the Fishing Effort Survey (FES) are shown in red. Note that headboat data are included.

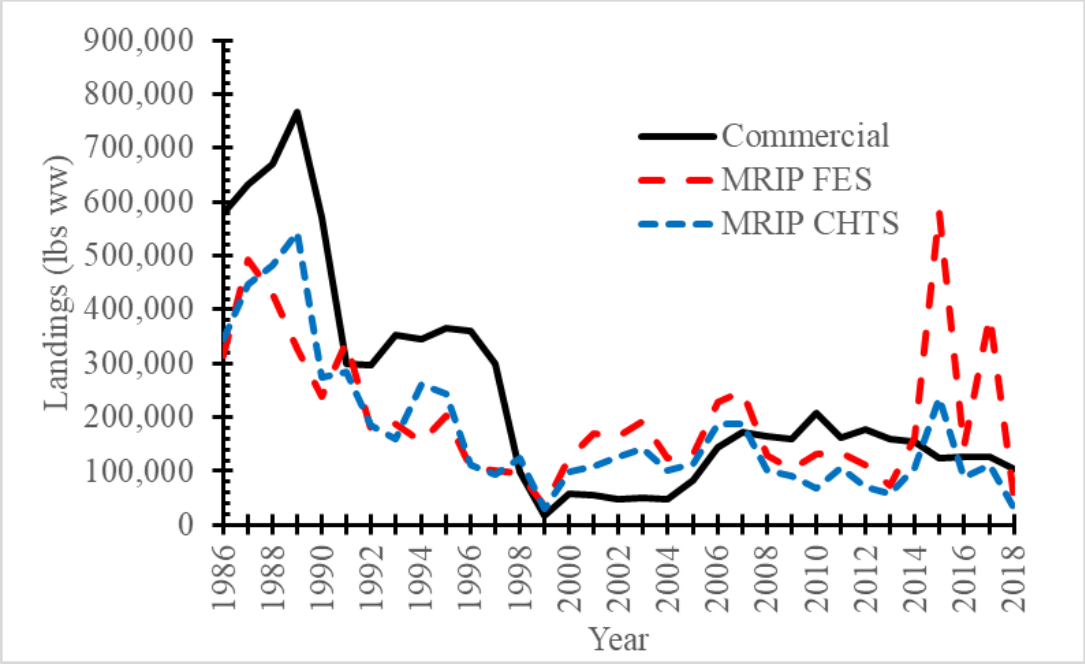

Figure 2. Red Porgy commercial and recreational landings (lbs ww) by year from 1986 through 2019. Commercial landings are in black. Recreational landings estimates based on the Coastal Household Telephone Survey (CHTS) are in blue and revised recreational landings estimates based on the Fishing Effort Survey (FES) are in red.

- Options for developing a range of alternatives:

Option 1 (No Change). The current annual catch limit and optimum yield for Red Porgy are equal to the acceptable biological catch (328,000 pounds whole weight).

Option 2. Revise the annual catch limit and optimum yield for Red Porgy to equal the updated acceptable biological catch based on the results of the latest stock assessment (SEDAR 60 2020). The 2026 annual catch limit would remain in place until modified.

Year	Total ACL (lbs ww)	Total ACL (numbers)
2021*	78,000	49,000
2022	84,000	52,000
2023	88,000	55,000
2024	92,000	57,000
2025	96,000	59,000
2026	98,000	60,000

Note: Given the timing of amendment development, new catch levels would likely be effective during the 2022 fishing year.

Option 3. Revise the total annual catch limit and optimum yield for Red Porgy and set equal to 90% of the updated acceptable biological catch. The 2026 annual catch limit would remain in place until modified.

Year	Total ACL (lbs ww)	Total ACL (numbers)
2021*	70,200	44,100
2022	75,600	46,800
2023	79,200	49,500
2024	82,800	51,300
2025	86,400	53,100
2026	88,200	54,000

Note: Given the timing of amendment development, new catch levels would likely be effective during the 2022 fishing year.

Option 4. Revise the total annual catch limit and optimum yield for Red Porgy and set equal to 80% of the updated acceptable biological catch. The 2026 annual catch limit would remain in place until modified.

Year	Total ACL (lbs ww)	Total ACL (numbers)
2021*	62,400	39,200
2022	67,200	41,600
2023	70,400	44,000
2024	73,600	45,600
2025	76,800	47,200
2026	78,400	48,000

Note: Given the timing of amendment development, new catch levels would likely be effective during 2022 fishing year.

Committee Action:

Provide guidance on range of options to develop.

3. Revise the Red Porgy sector allocations

- Allocations need to be reviewed since the recreational landings stream changed in the new assessment. Landings estimates now conform to the new Fishing Effort Survey.

- Sector allocations for Red Porgy were implemented through Amendment 15B to the FMP (SAFMC 2009). An equal allocation was selected because it was closest to status quo at the time (2001-2003 landings were 51% recreational and 49% commercial). The Council discussed having to adjust the total allowable catch if the commercial sector was allocated greater than 50% due to higher commercial discard mortality.

- The current allocations formula was adopted through the Comprehensive ACL Amendment (SAFMC 2011) for unassessed snapper grouper species. The same formula has also been used to allocate the total ACL for some assessed species (i.e., golden Tilefish). The allocations formula was **not** used to establish Red Porgy sector allocations.

- Options for developing a range of alternatives:

  Option 1 (No Change). The Red Porgy total annual catch limit is allocated 50% to the commercial sector and 50% to the recreational sector.

  Option 2. Apply the current allocation formula: ACL = ((mean landings 2006-2008)*0.5)) + ((mean landings 1986-2008)*0.5). This would result in a commercial allocation of 51.43% and a recreational allocation of 48.57% using revised recreational landings estimates.

  Option 3. Remove sector allocations and manage under a total ACL.

  Others?

Committee Action:

Provide guidance on range of options to develop.

4. Revise the Red Porgy recreational annual catch target

- The current Red Porgy recreational annual catch target (ACT) was based on the previous ACL values and exceeds the SSC recommended ABC for the stock.

- The Red Porgy ACT and formula were implemented through the Comprehensive ACL Amendment (SAFMC 2011).

- Recreational ACTs are not currently used to trigger regulatory action in the South Atlantic.

- Options for developing a range of alternatives:

  Option 1 (No Change). The Red Porgy recreational annual catch target is 117,555 pounds whole weight and is determined using the existing formula (annual catch target = recreational annual catch limit x (1-mean Proportional Standard Error over the previous 5 years)).

  Option 2. Revise the Red Porgy recreational annual catch target based on a revised recreational annual catch limit and updated proportional standard error estimates for 2015-2019.

  Option 3. Remove the existing recreational annual catch target and do not specify a new recreational annual catch target for Red Porgy.

  Others?

Committee Action:

Provide guidance on range of options to develop.

5. Modify Red Porgy management measures

- The current Red Porgy management measures may need to be modified since the revised catch level recommendations are less than previous catch levels.

- Current commercial regulations: 14-inch minimum size limit and trip limit of 60 fish from January 1 to April 30 and 120 fish from May 1 through December 31.

  Note: Vision Blueprint Regulatory Amendment 27 (effective February 26, 2020) implemented a commercial split season for Red Porgy and revised the commercial trip limit:
  Specify two commercial fishing seasons for Red Porgy. Allocate the commercial Red Porgy annual catch limit into two quotas: 30% to the period January 1 through April 30 (Season 1) and 70% to the period May 1 through December 31 (Season 2). Any remaining quota from Season 1 would transfer to Season 2. Any remaining quota from Season 2 would not be carried forward. Remove the sale and purchase prohibition and the possession limit of three per person per day or three per person per trip, whichever is more restrictive, during January 1 to April 30 each year. Retain the commercial trip limit of 120 fish from May 1 through December 31 and specify a commercial trip limit from January 1 through April 30 of 60 fish.

- Current recreational regulations: 14-inch minimum size limit and 3 Red Porgy per person/day or 3 per/person/trip, whichever is more restrictive.

- More restrictive harvest limits will likely be needed since both sectors' current catch exceed the recommended ABC.

- The total commercial hook-and-line discard mortality estimate ranged from 45 to 64% with a proposed midpoint value of 53% (SEDAR 60 2020).

- The total recreational hook-and-line discard mortality estimate ranged from 27% to 53% with a proposed midpoint value of 41% (SEDAR 60 2020).

- Other information that might be useful when considering new management measures:

  - Red Porgy are protogynous with transition from female to male occurring between 13 and 15 inches in the South Atlantic based on fishery-independent data collected from 2012 through 2016 (Wyanski et al, SEDAR60-WP02, 2020).

  - Red Porgy are winter spawners, with the peak of spawning season being January through March (Klibansky and Scharf 2013, Farmer et al. 2017).

Committee Action:

Provide guidance on range of options to develop.