



# SEDAR 60 South Atlantic Red Porgy

SAFMC meeting, June 8<sup>th</sup> – 12<sup>th</sup>

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May 12, 2020



# Assessment history



- SEDAR 1, 2002 benchmark assessment
- SEDAR 1, 2006 update assessment
- SEDAR 1, 2012 update assessment
- SEDAR 60, 2020 Assessment Report



- An initial rebuilding plan was put into effect for Red Porgy (SAFMC Amendment 4, 01/01/1992) with a rebuilding time frame of 10 years, beginning in 1991
- In the SEDAR 1, 2002 benchmark SA Red Porgy was found not to be rebuilt ( $SSB_{2001}/SSB_{MSY} = 0.43$ ) but not undergoing overfishing ( $F_{2001}/F_{MSY} = 0.45$ )
- Update assessments also found it was not rebuilt but overfishing was not occurring
- In SEDAR 60 Red Porgy was found not rebuilt and undergoing overfishing ( $SSB_{2017}/SSB_{MSY} = 0.2705$ ,  $F_{2005-2017}/F_{MSY} = 1.73$ )

# SEDAR 60 Assessment Process



- Data Scoping Webinar (June 29, 2018)
- SSC MRIP workshop (August 19-21, 2019)
- Data/assessment scoping webinar (March 25, 2019)
- Data webinar (November 15, 2019)
- In-Person Workshop (Beaufort, NC; December 10-12, 2019)
- Three assessment webinars (January 13, February 6, February 28, 2020)
- SSC Review (April 30, 2020)

# SEDAR 60 Assessment Process



Participants (55 total):

|                           |                           |
|---------------------------|---------------------------|
| Analytical Team           | 4                         |
| Panelists                 | 15 (including 4 SSC reps) |
| Appointed Observers       | 4                         |
| Appointed Council Members | 1                         |
| Staff                     | 6                         |
| Other observers           | 13                        |
| Non-panel Data Providers  | 12                        |



Seven Terms of Reference (ToRs) 1 & 2 shown here)

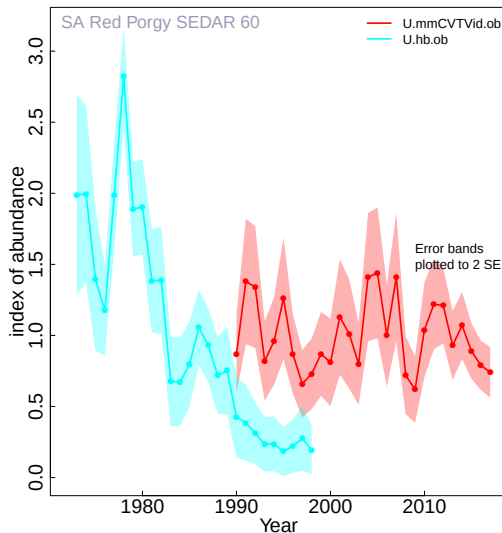
1. Prepare a standard assessment, based on the approved 2012 SEDAR 1 South Atlantic Red Porgy Update assessment with data through 2017. (*See the [SEDAR 60, 2020 Assessment Report](#) for full documentation*)
2. Evaluate and document the following specific changes in input data or deviations from the update model.
  - ▶ Consider including the SERFS video index
  - ▶ Incorporate the latest BAM model configurations and updates to data calculation methodologies, detailing the changes made and the impacts of those changes, between the 2012 SEDAR 1 South Atlantic Red Porgy Update assessment model and the proposed SEDAR 60 model.
  - ▶ Re-consider use of age and length composition data.

# Data

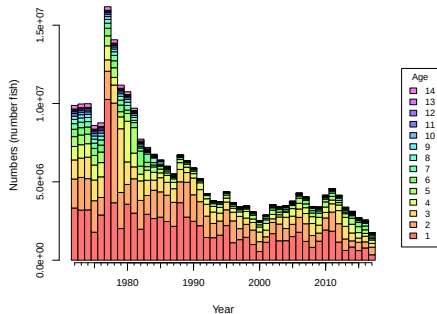
## Indices of abundance



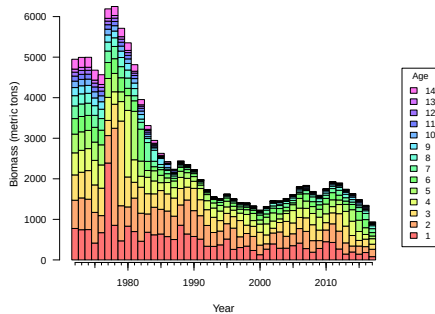
- SERFS chevron trap/video (mmCVTVid)
  - ▶ SERFS Chevron trap index (S60\_WP01 Bubley and Smart 2019) a newly developed SERFS video index (S60\_WP07 Cheshire and Bacheler 2018) combined with the Conn method (i.e. hierarchical Bayesian model), as in several past SEDAR assessments
- Headboat (hb)



Numbers-at-age

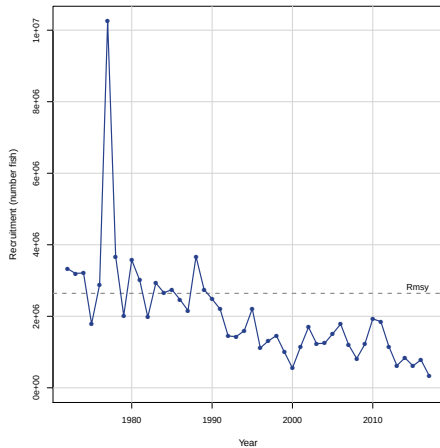


Biomass-at-age

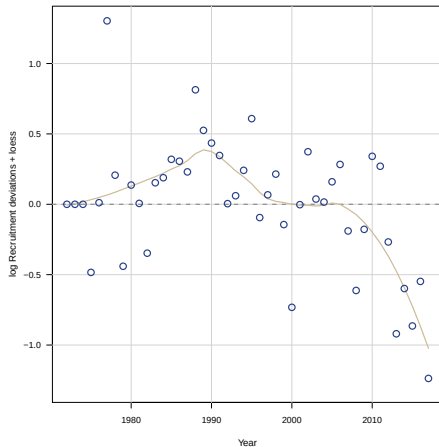




### Recruitment

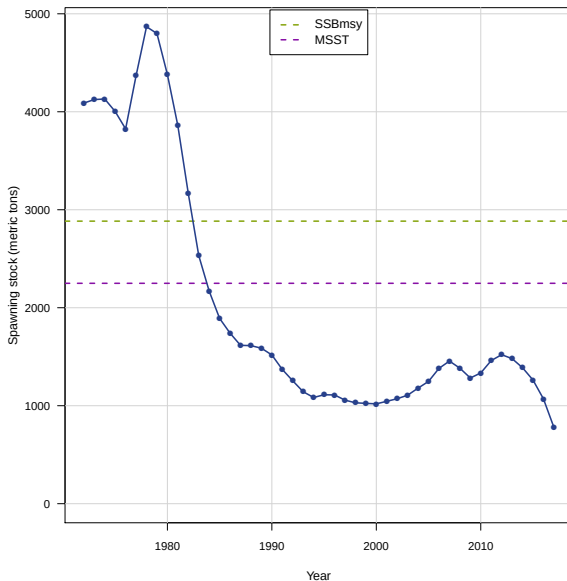


### log recruitment deviations

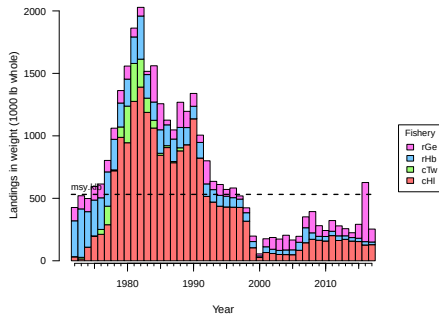


# Data

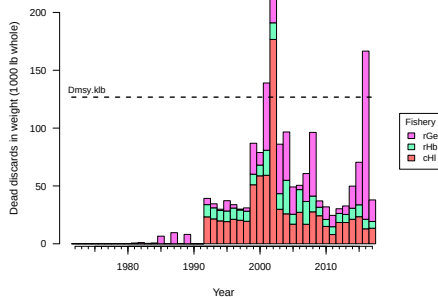
## Spawning stock biomass (SSB)

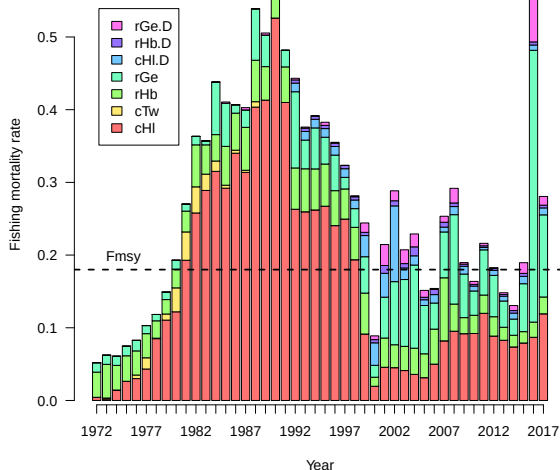


Landings (1000 lb)

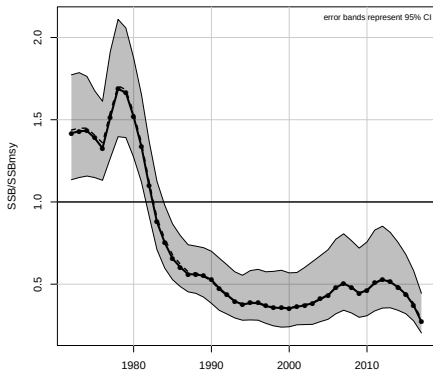


Discards (1000 lb)

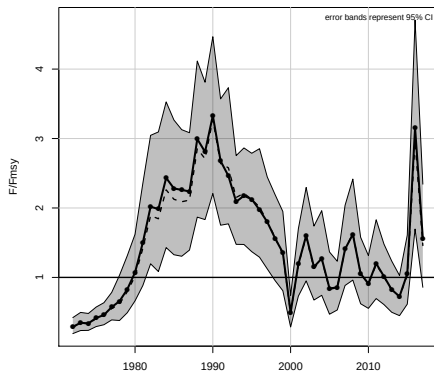


$F$  by fleet

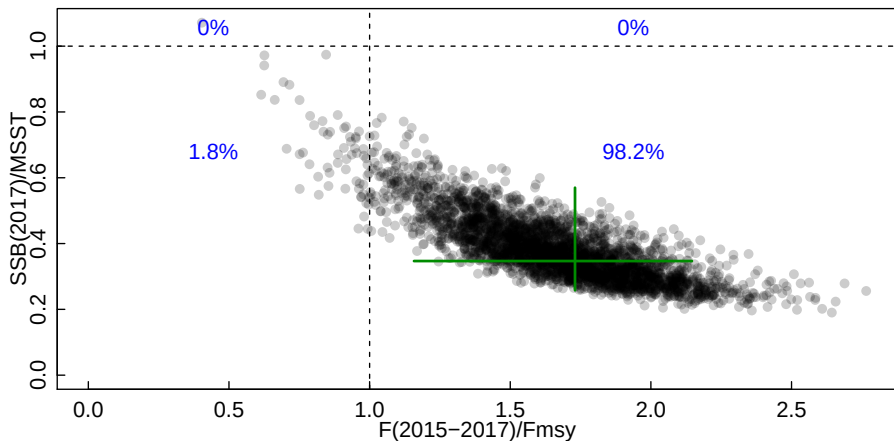
Not rebuilt



Undergoing overfishing



## Uncertainty in stock and fishery status



- Projections were constructed as specified in ToR 5
- Projections were made to 2026 or 2032, with projected fishing level changes beginning in 2021.
- Fishing mortality for 2018-2020 was set at  $F_{\text{current}} = 0.31$  (geometric mean  $F$  from 2015-2017)
- Projections at fixed  $F$  from 2018 – 2036
- To determine OFL:
  - ▶  $F$  based on  $P^* = 50\%$
  - ▶  $F = F_{\text{MSY}}$
- To evaluate the existing rebuilding plan:
  - ▶  $F = 75\%F_{\text{MSY}}$
- Additional projection:
  - ▶  $F = 0$

- Projection tables are available for all scenarios in the [SEDAR 60, 2020 Assessment Report](#) (Tables 31-34)
- Projection of  $F = 0$  from 2021 to 2032 shown below (Table 34)

| Year | R.b  | R.med | F.b  | F.med | S.b<br>(mt) | S.med<br>(mt) | L.b<br>(n) | L.med<br>(n) | L.b<br>(w) | L.med<br>(w) | D.b<br>(n) | D.med<br>(n) | D.b<br>(w) | D.med<br>(w) | pr.reb |
|------|------|-------|------|-------|-------------|---------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|--------|
| 2018 | 1019 | 972   | 0.31 | 0.3   | 723         | 770           | 140        | 142          | 230        | 235          | 42         | 39           | 52         | 49           | 0.000  |
| 2019 | 956  | 918   | 0.31 | 0.3   | 720         | 771           | 123        | 128          | 200        | 208          | 47         | 43           | 53         | 50           | 0.000  |
| 2020 | 951  | 917   | 0.31 | 0.3   | 751         | 806           | 121        | 125          | 187        | 196          | 51         | 47           | 56         | 53           | 0.000  |
| 2021 | 987  | 946   | 0.00 | 0.0   | 813         | 870           | 0          | 0            | 0          | 0            | 0          | 0            | 0          | 0            | 0.001  |
| 2022 | 1054 | 998   | 0.00 | 0.0   | 963         | 1029          | 0          | 0            | 0          | 0            | 0          | 0            | 0          | 0            | 0.002  |
| 2023 | 1213 | 1147  | 0.00 | 0.0   | 1117        | 1190          | 0          | 0            | 0          | 0            | 0          | 0            | 0          | 0            | 0.005  |
| 2024 | 1366 | 1266  | 0.00 | 0.0   | 1283        | 1361          | 0          | 0            | 0          | 0            | 0          | 0            | 0          | 0            | 0.014  |
| 2025 | 1521 | 1395  | 0.00 | 0.0   | 1463        | 1544          | 0          | 0            | 0          | 0            | 0          | 0            | 0          | 0            | 0.031  |
| 2026 | 1679 | 1517  | 0.00 | 0.0   | 1658        | 1739          | 0          | 0            | 0          | 0            | 0          | 0            | 0          | 0            | 0.062  |
| 2027 | 1838 | 1652  | 0.00 | 0.0   | 1865        | 1945          | 0          | 0            | 0          | 0            | 0          | 0            | 0          | 0            | 0.115  |
| 2028 | 1997 | 1757  | 0.00 | 0.0   | 2085        | 2164          | 0          | 0            | 0          | 0            | 0          | 0            | 0          | 0            | 0.185  |
| 2029 | 2154 | 1897  | 0.00 | 0.0   | 2314        | 2387          | 0          | 0            | 0          | 0            | 0          | 0            | 0          | 0            | 0.278  |
| 2030 | 2306 | 2014  | 0.00 | 0.0   | 2550        | 2616          | 0          | 0            | 0          | 0            | 0          | 0            | 0          | 0            | 0.382  |
| 2031 | 2452 | 2092  | 0.00 | 0.0   | 2792        | 2849          | 0          | 0            | 0          | 0            | 0          | 0            | 0          | 0            | 0.485  |
| 2032 | 2591 | 2235  | 0.00 | 0.0   | 3036        | 3090          | 0          | 0            | 0          | 0            | 0          | 0            | 0          | 0            | 0.583  |



# Questions?

