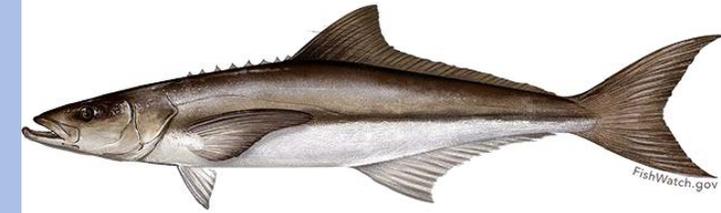


SSC *Review of Gulf Cobia*

Tab C, No. 5(b)

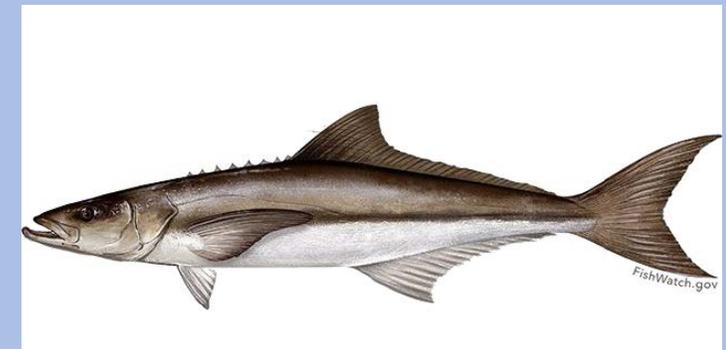


FishWatch.gov

“Update” stock assessment

1. Update the approved SEDAR 28 Gulf of Mexico cobia base model with data through 2018.
2. Document any changes or corrections made to model and input data sets and provide updated input data tables. Provide commercial and recreational landings and discards in pounds and numbers.
3. Update model parameter estimates and their variances, model uncertainties, estimates of stock status and management benchmarks, and provide the probability of overfishing occurring at specified future harvest and exploitation levels.

SSC *Review of Gulf Cobia*

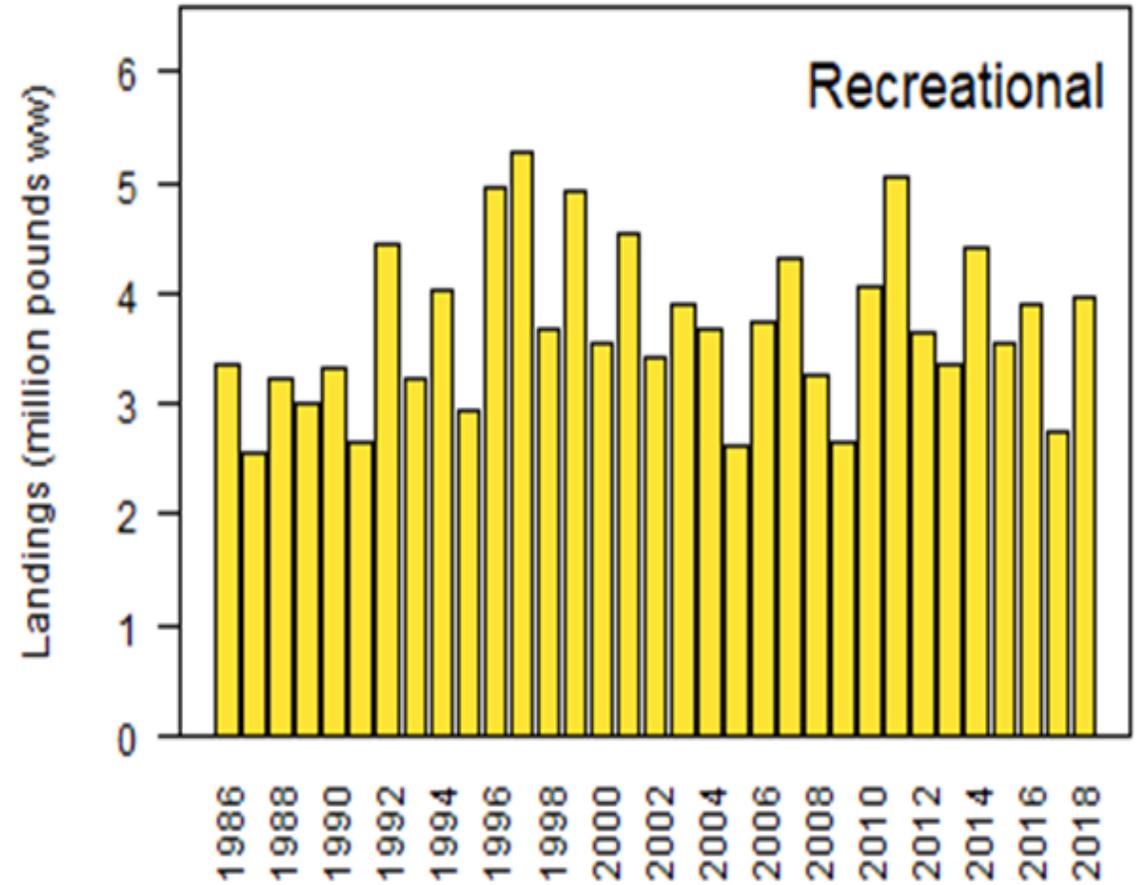
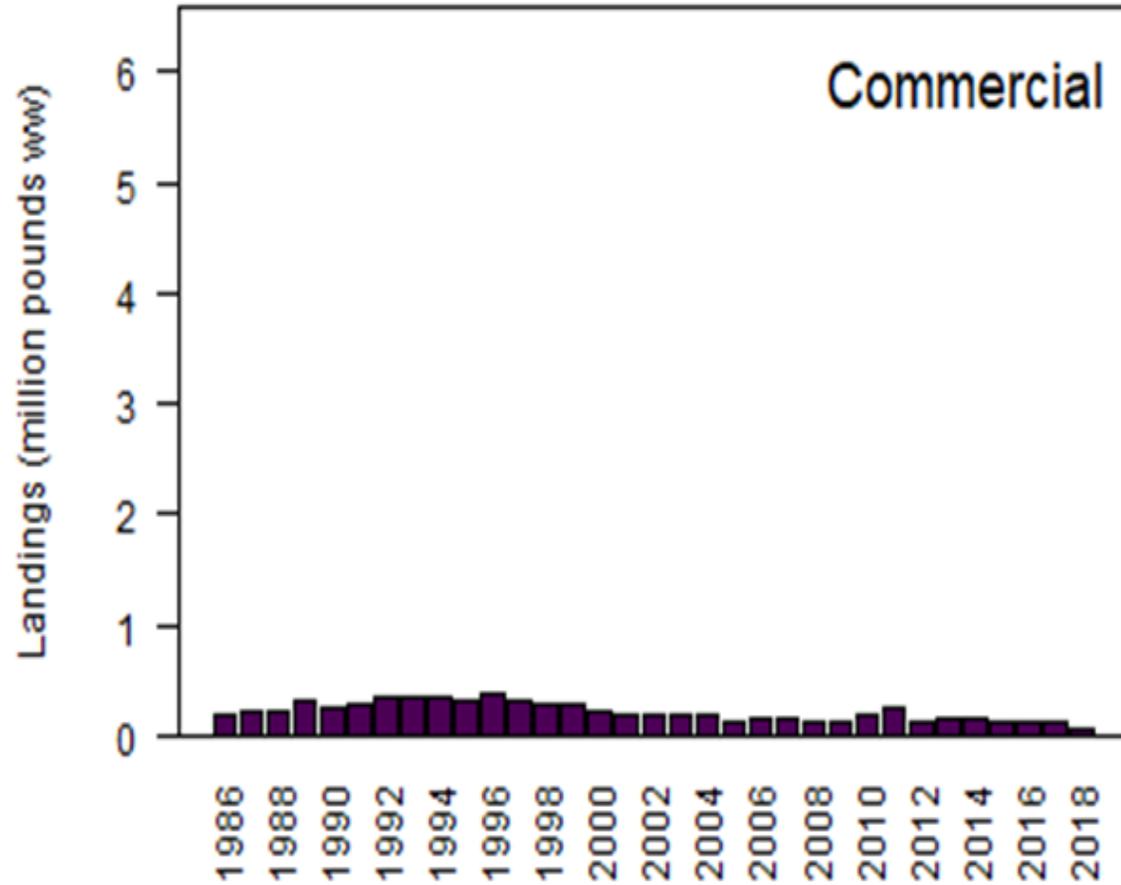


“Update” stock assessment

- The approved SEDAR 28 Gulf of Mexico cobia base model was updated with data through 2018
- Where practicable, the SEDAR 28 update base model used the same data sets as the SEDAR 28 base model with an updated time series
- Key changes from SEDAR 28 include incorporating the Fishing Effort Survey (FES) adjustments to the recreational catch and no longer estimating growth or shrimp selectivity in the assessment

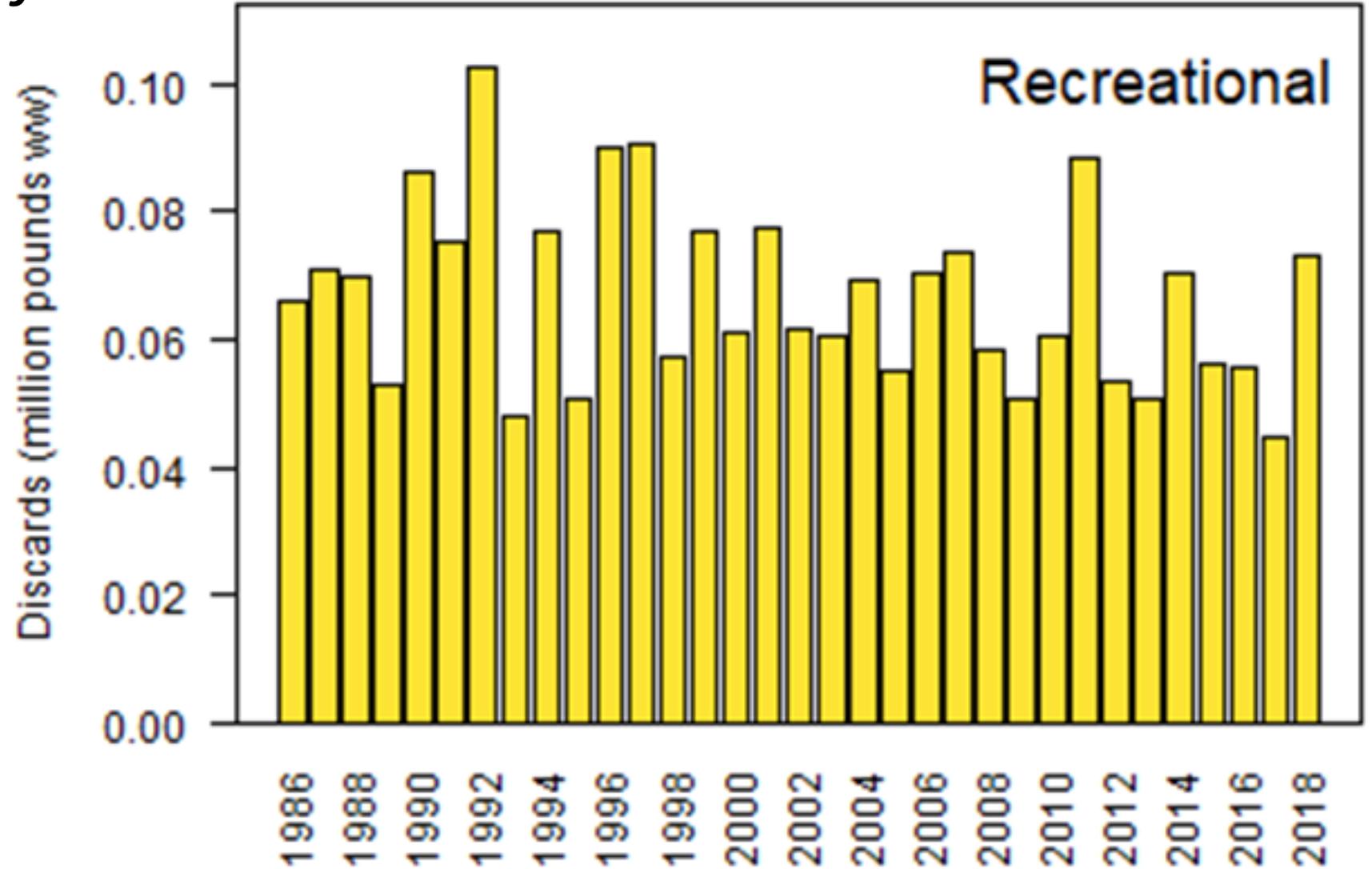
SSC Review of Gulf Cobia

Landings



SSC Review of Gulf Cobia

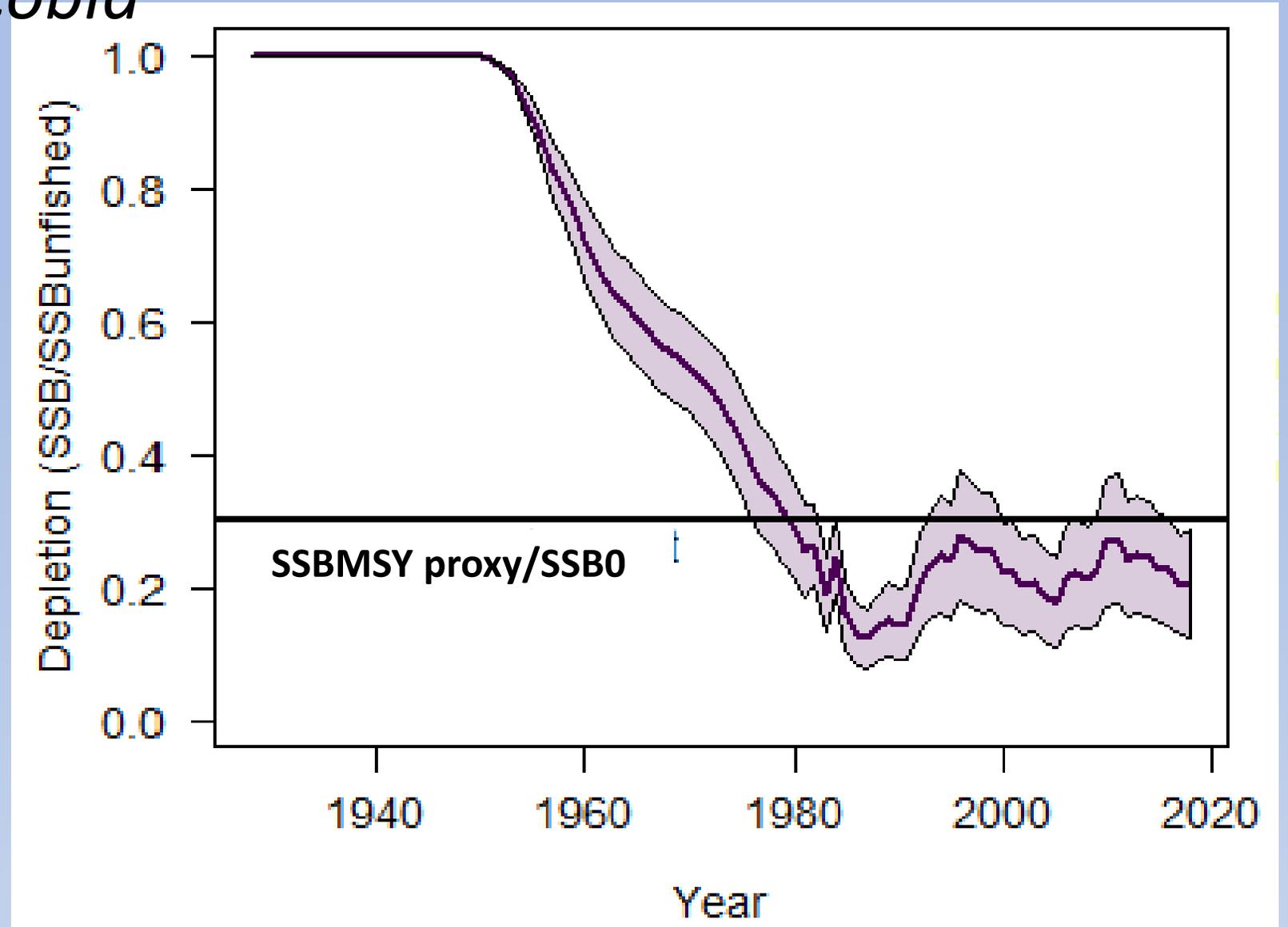
Discards
(commercial
discards not
shown here,
but were
negligible)



SSC Review of Gulf Cobia

Assessment Results

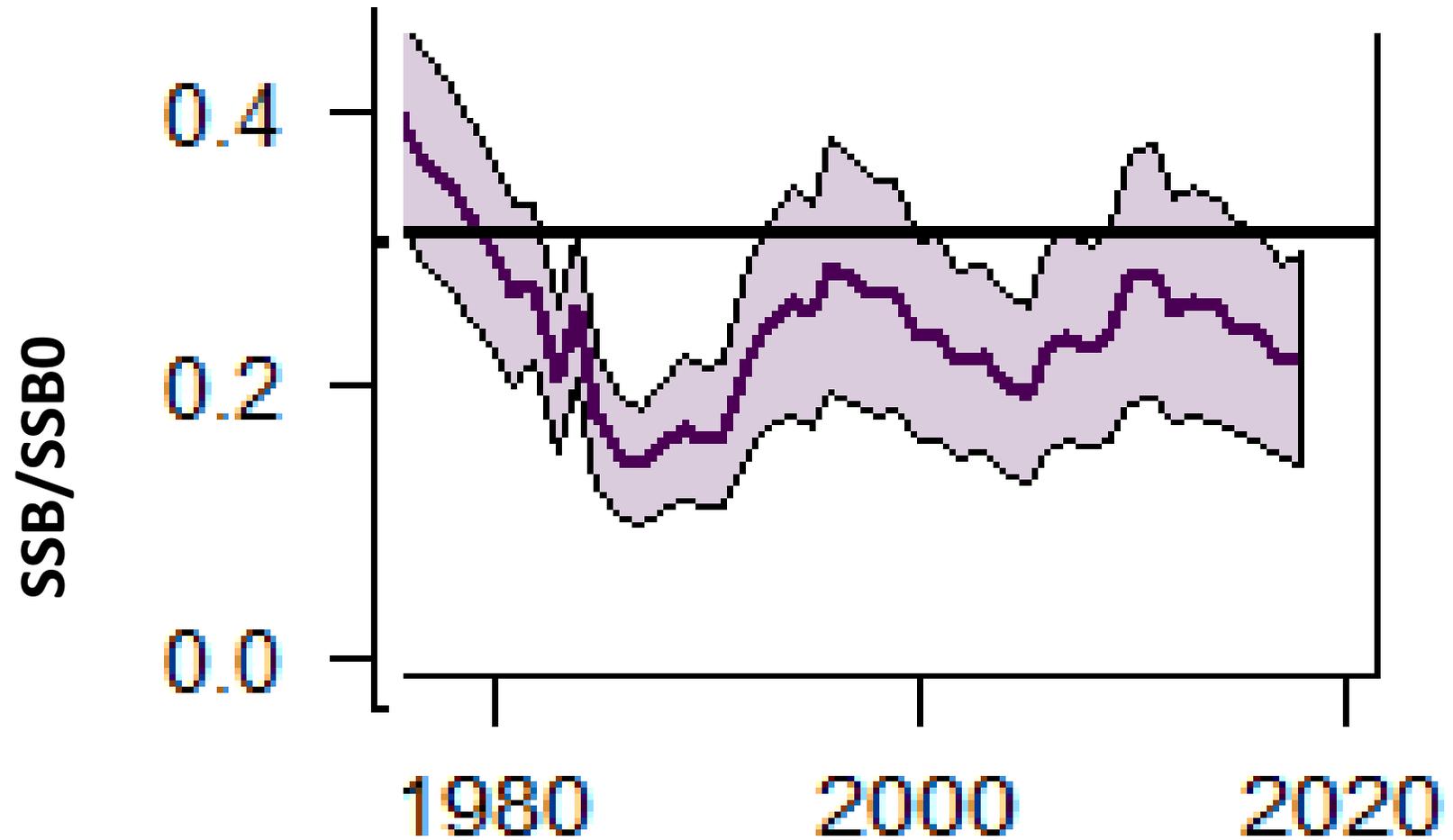
Spawning Biomass

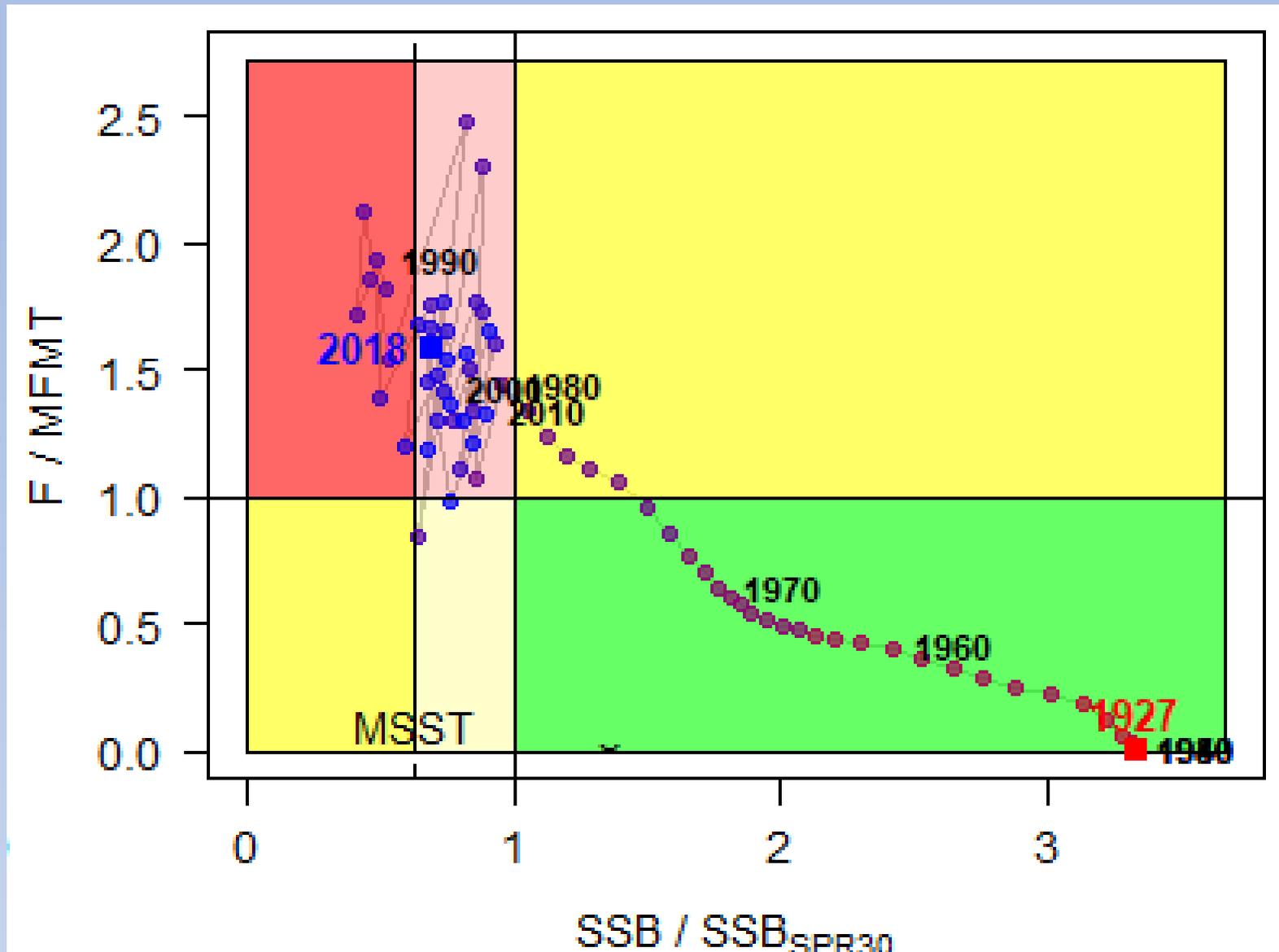


SSC Review of Gulf Cobia

Assessment
Results

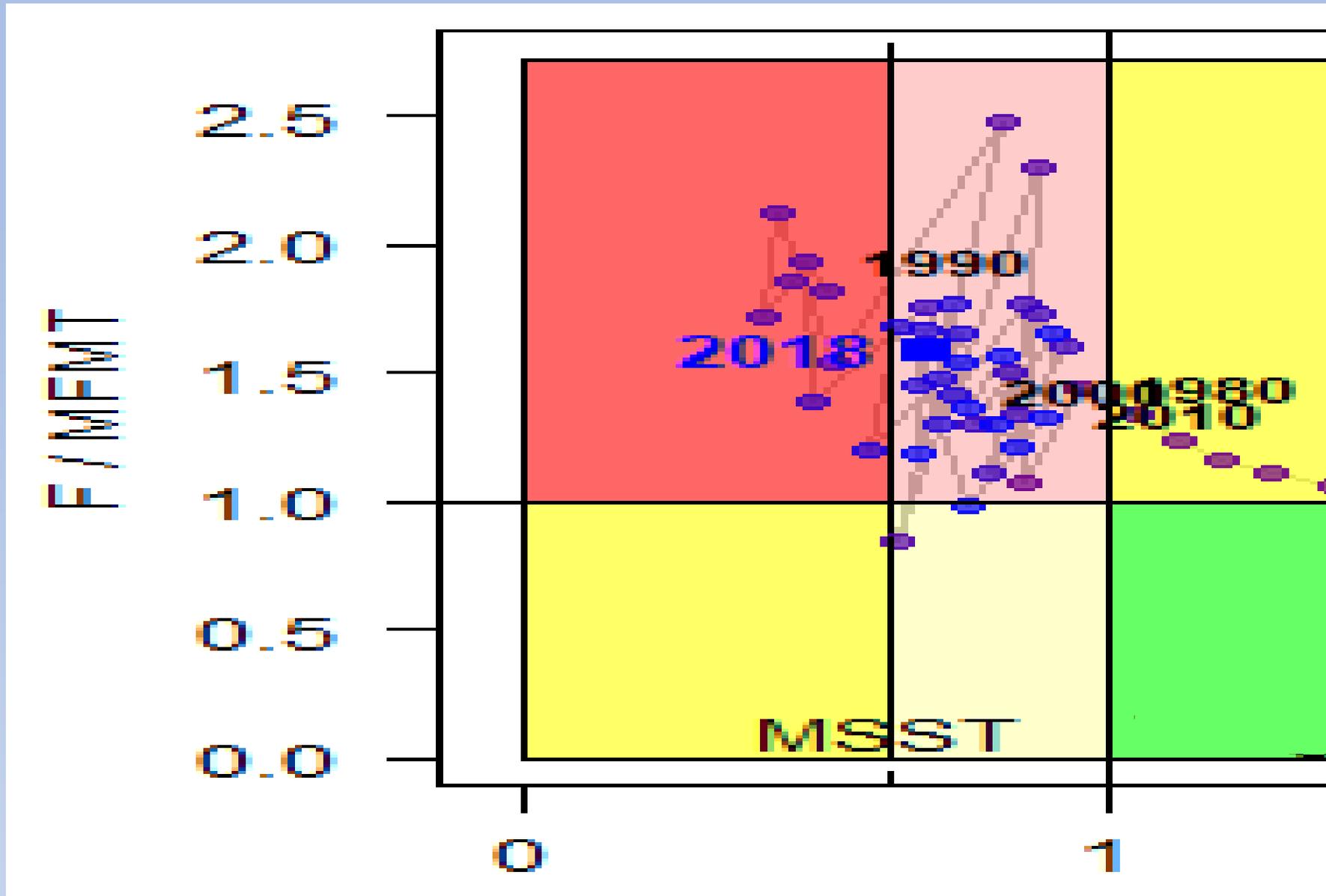
Spawning
Biomass





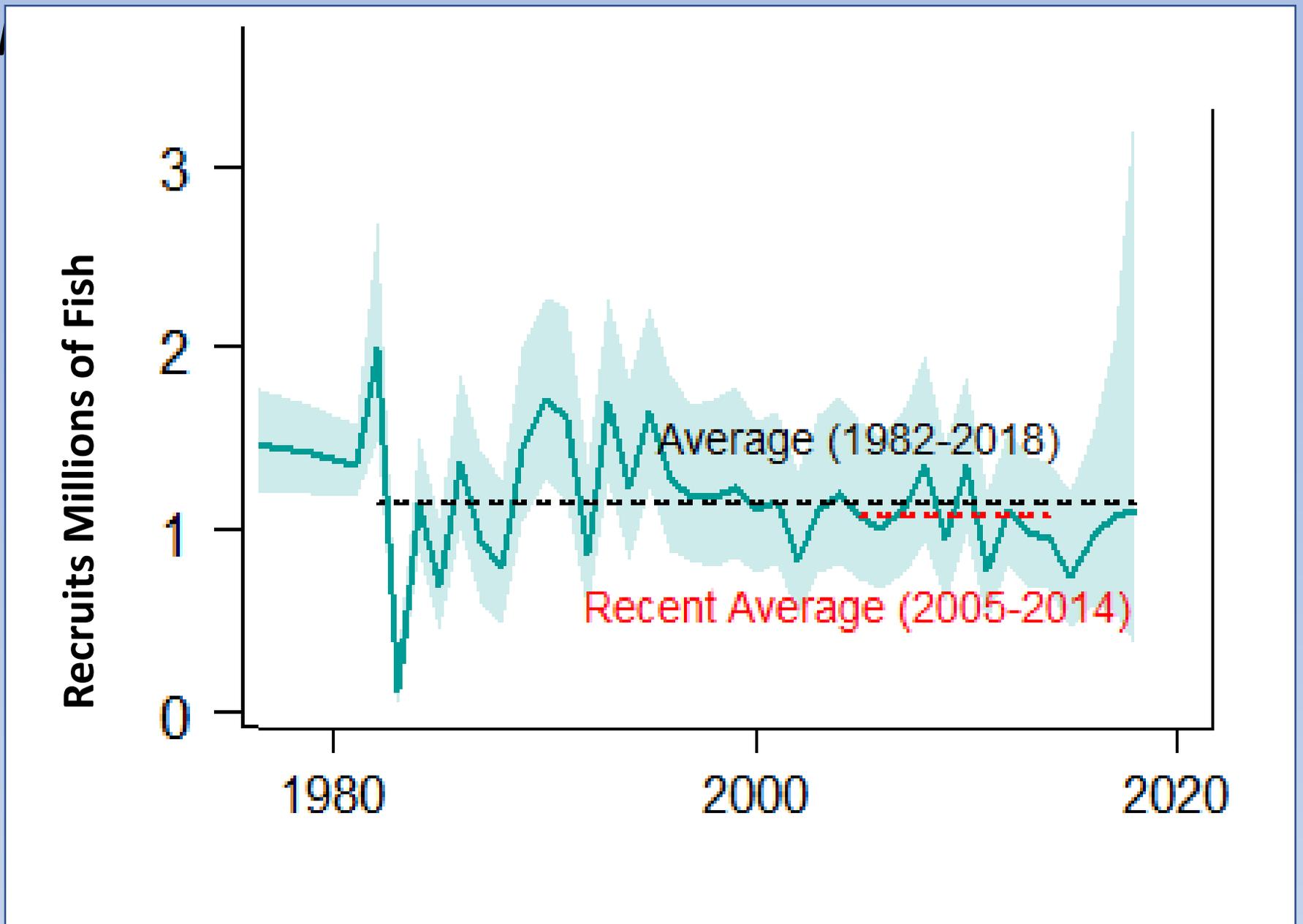
SSC Gulf Cobia

Assessment Results



SSC Gulf Cob
Assessment
Results

Recruitment



SSC Review of Gulf Cobia

Reference Point Criteria

SSB0 (Unfished)	18,016 mt
SSBSPR30%	5,409 mt
MSST	3,352 mt

Current Benchmarks

SSBCurrent (2018)	3,725 mt
SSBCurrent / MSST	1.11
SSBCurrent / SSBSPR30%	0.69
--MSST Overfished?	No

FMSY Not Estimable

MFMT 0.231

FOY = FSPR40% 0.18

FCurrent (Geometric mean: 2015-2017) 0.332

FCurrent / MFMT 1.44

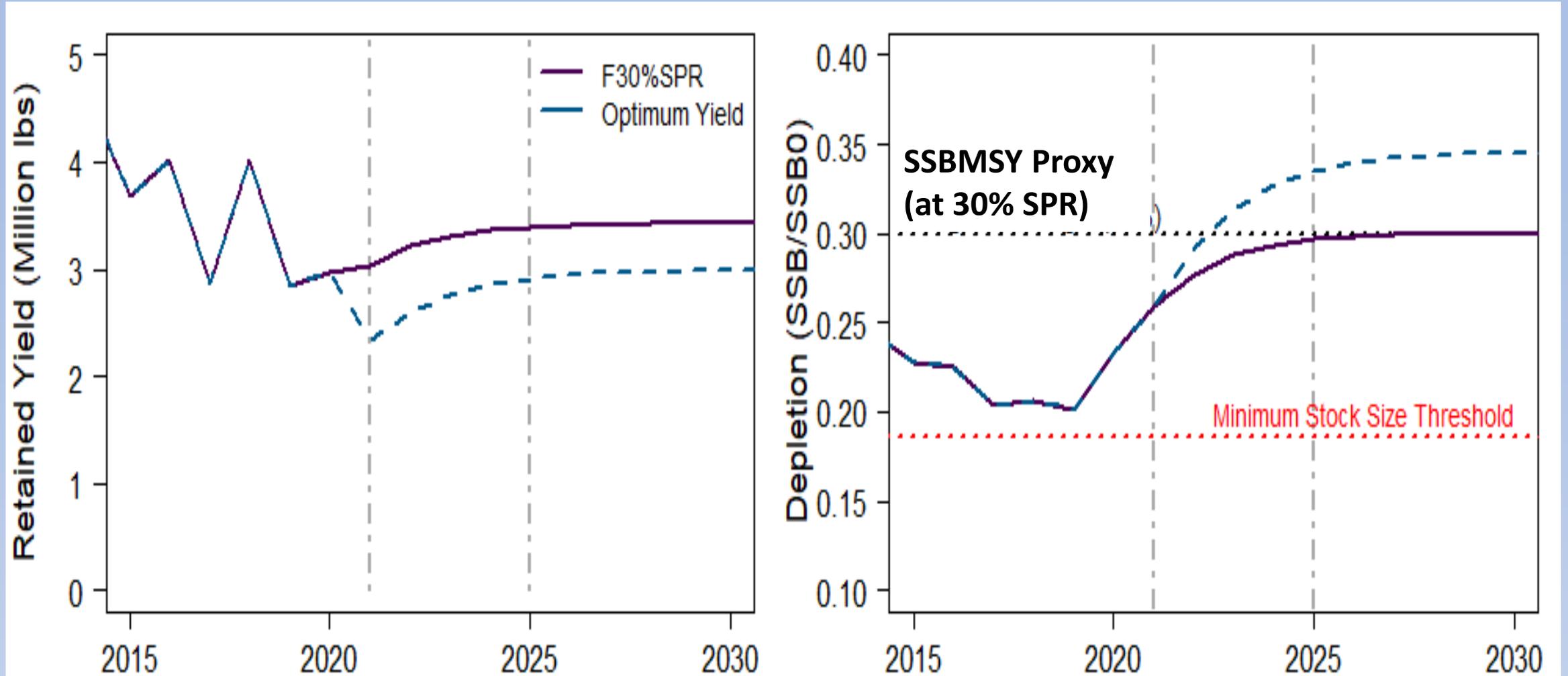
--Overfishing? Yes

Motion: The SSC determined that the SEDAR 28 Update assessment of Gulf Migratory Group Cobia represents the best scientific information available on the stock and based on the assessment results the stock is not overfished, but is undergoing overfishing.

Motion carried without opposition.

SSC Review of Gulf Cobia

Projections



SSC Review of Gulf Cobia

ABC/OFL

1) ABC Control Rule Tier-1

P* re-examined based unevaluated environmental effects
(2010 *Deepwater Horizon* MC-252 oil spill and the 2018 West Florida
Red Tide) giving $P^*=0.398$ (i.e. probability of overfishing should not
exceed 38.9%)

2) SSC determined that this still did not adequately describe the uncertainty in
the projections fixed parameters

3) SSC agreed with SEFSC assessment that for this update yield at
 $0.75 * F_{SPR30\%}$ would more adequately describe uncertainty

Therefore.....

SSC Review of Gulf Cobia

Motion: The SSC estimates OFL to be 3.03, 3.21, and 3.31 million pounds ww for the Gulf Cobia stock during fishing years 2021-2023, respectively, based on results of the SEDAR 28 update assessment and assessment projections. The SSC sets ABC for the same years to be 2.34, 2.60, and 2.76 million pounds ww, respectively, with annual ABC being the projected yield at $0.75F_{SPR30\%}$.

Motion carried 18-3 with 4 absent.

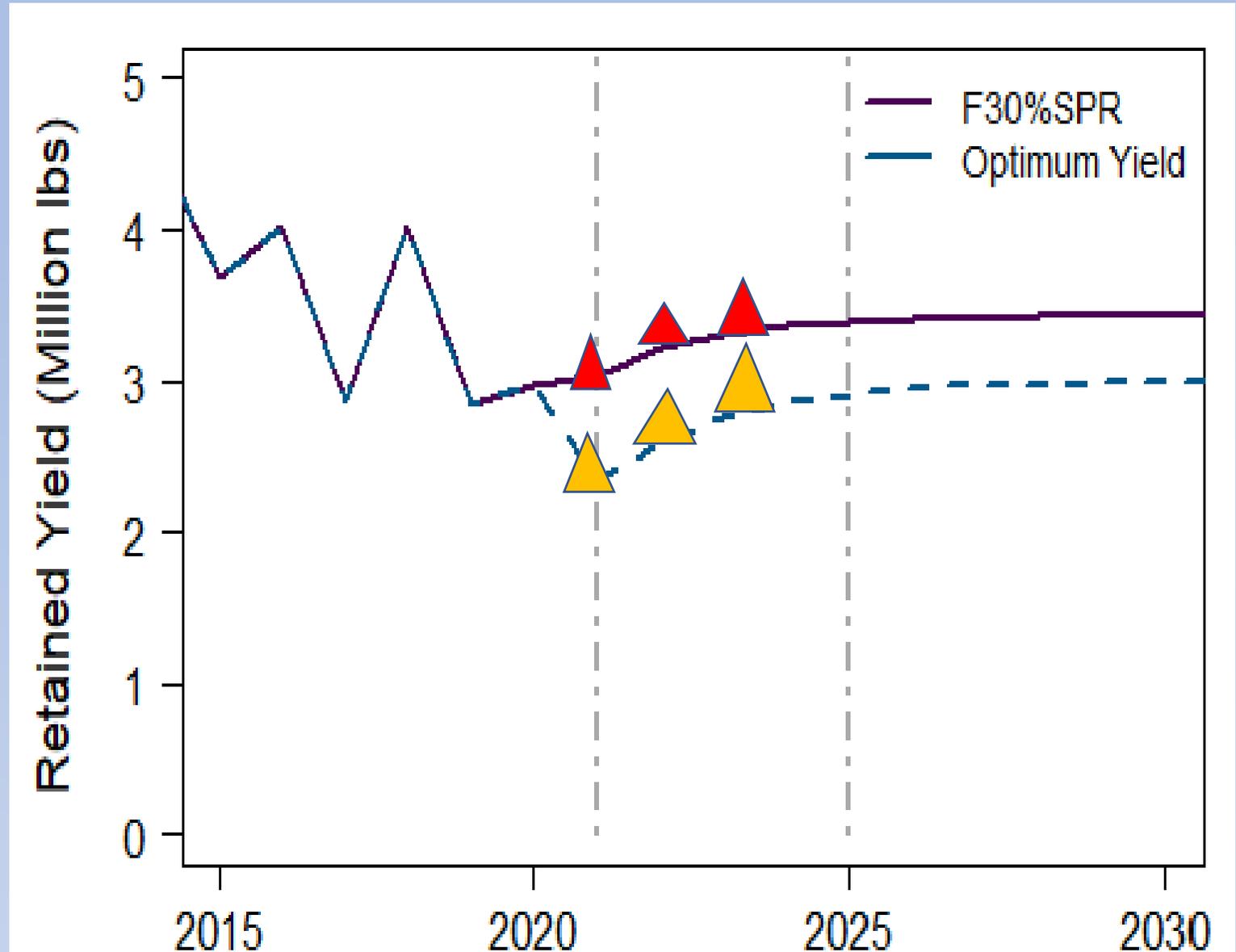
Year	OFL	ABC
2021	3.03	2.34
2022	3.21	2.60
2023	3.31	2.78

(millions of lbs whole weight)

SSC Review of Gulf Cobia

Year	OFL 	ABC 
2021	3.03	2.34
2022	3.21	2.60
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(millions of lbs whole weight)



SSC Review of Gulf Cobia

Questions?