Tab B, No. 9(b)

Summary of Vermilion Snapper Stock Assessment

SEDAR 67 Gulf of Mexico Vermilion Snapper Stock Assessment: Assessment Review

SSC Meeting June 1, 2020

Based on Presentation by Sustainable Fisheries Division, SEFSC

Vermilion Snapper Status

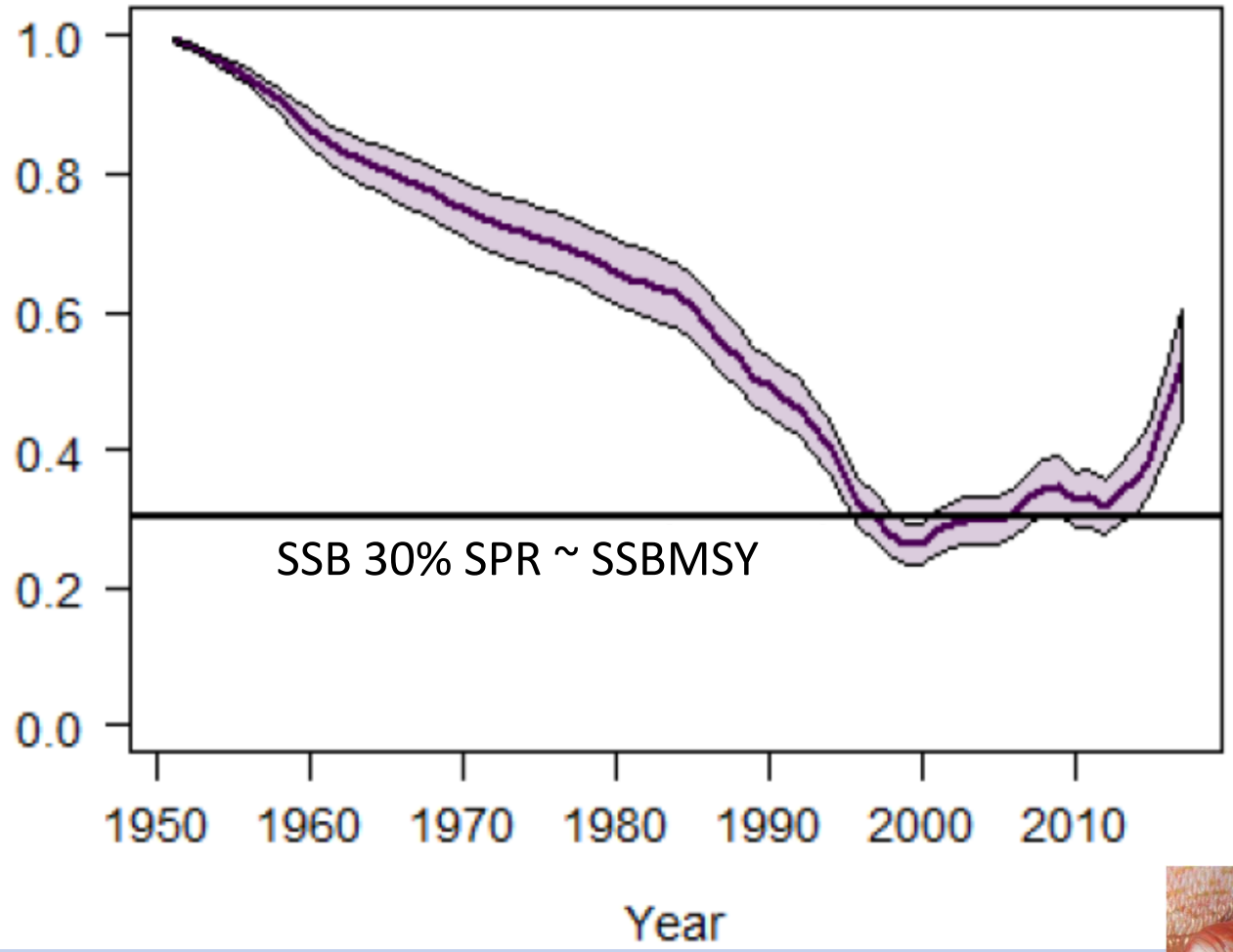
Results:

Not Overfished

Not Undergoing Overfishing

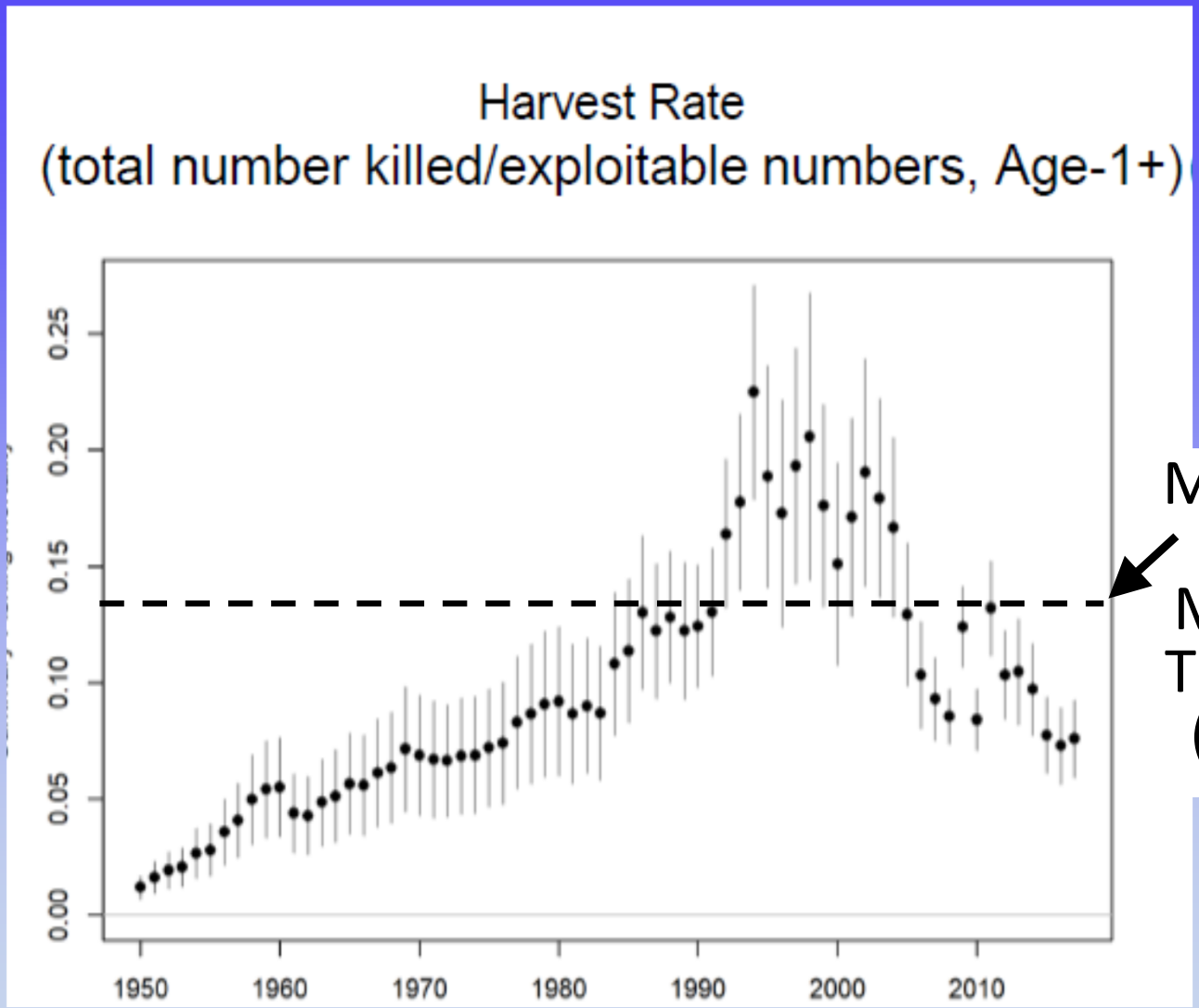
From Sustainable Fisheries Division, SEFSC

Spawning Stock Biomass (SSB) relative to SSB before fishing



From Sustainable Fisheries Division, SEFSC

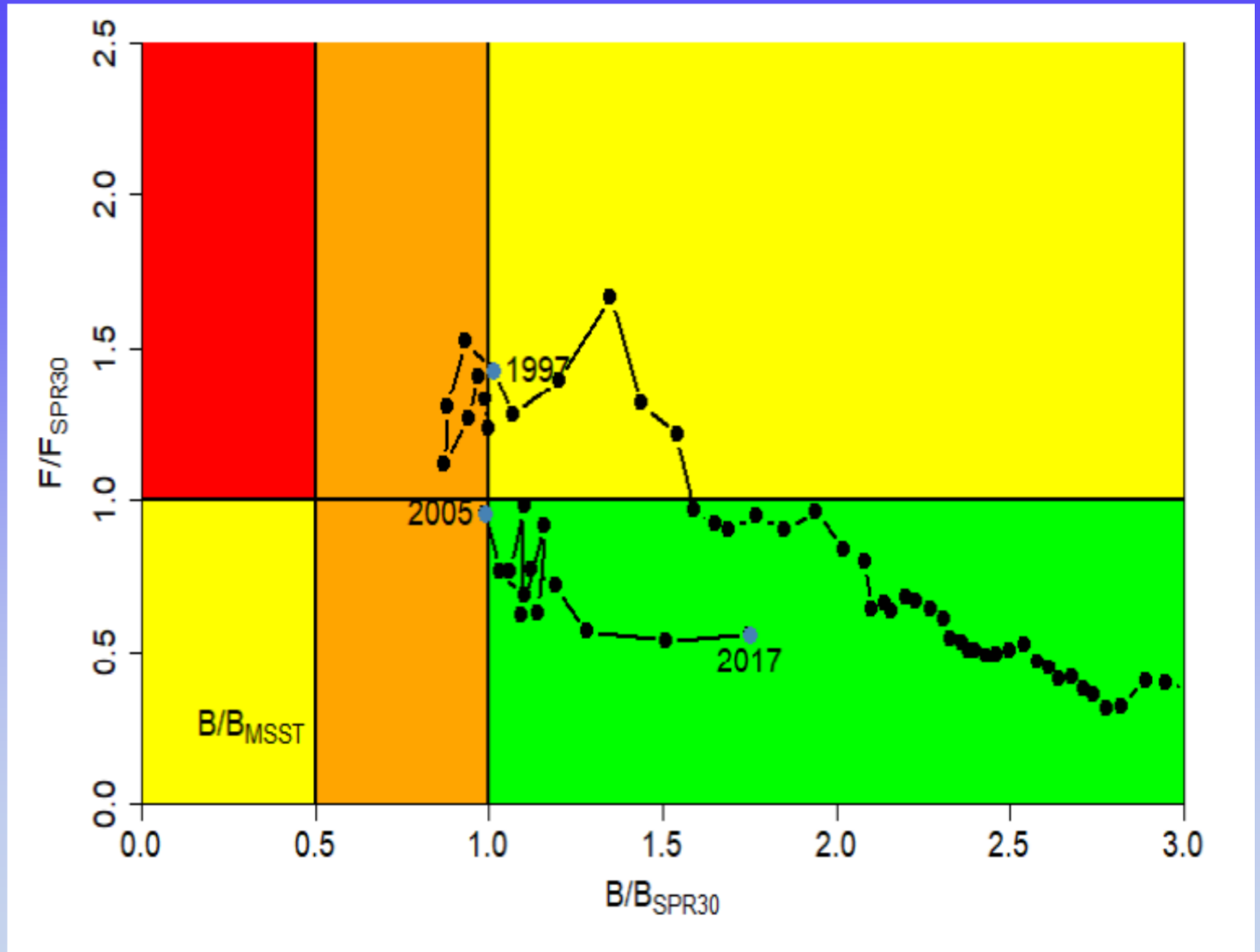
Fishing Mortality Rate



Maximum Fishing Mortality Threshold (MFMT)

From Sustainable Fisheries Division, SEFSC

Historical transition of status (Kobe plot)



From Sustainable Fisheries Division, SEFSC

What's Changed?

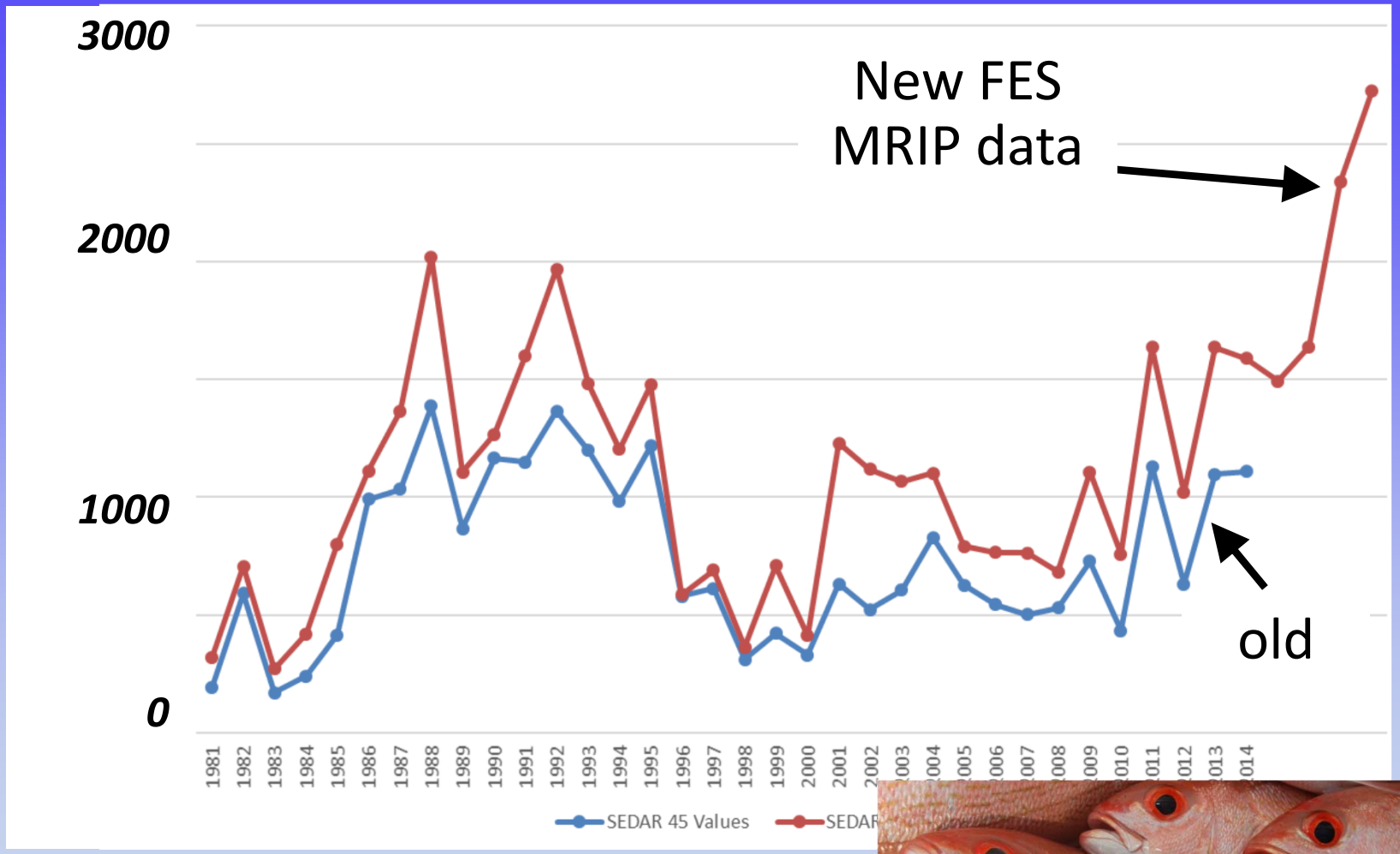
Last Assessment included data through 2014

Current Assessment includes data through 2017

- ***Updated Commercial catches through 2018***
- ***New Recreational Catch estimates (transition to the new FES MRIP estimates) This affects the historical catch estimates, the estimates since the last assessment and the associated size distributions…result was increased estimates of SSB, recruitment and improved estimates of status***
- ***Discards included***
- ***Included combined video index which affected recent recruitment estimates***
- ***Updated CPUE with commercial CPUE truncated to account for effort behavior relative to ITQ***

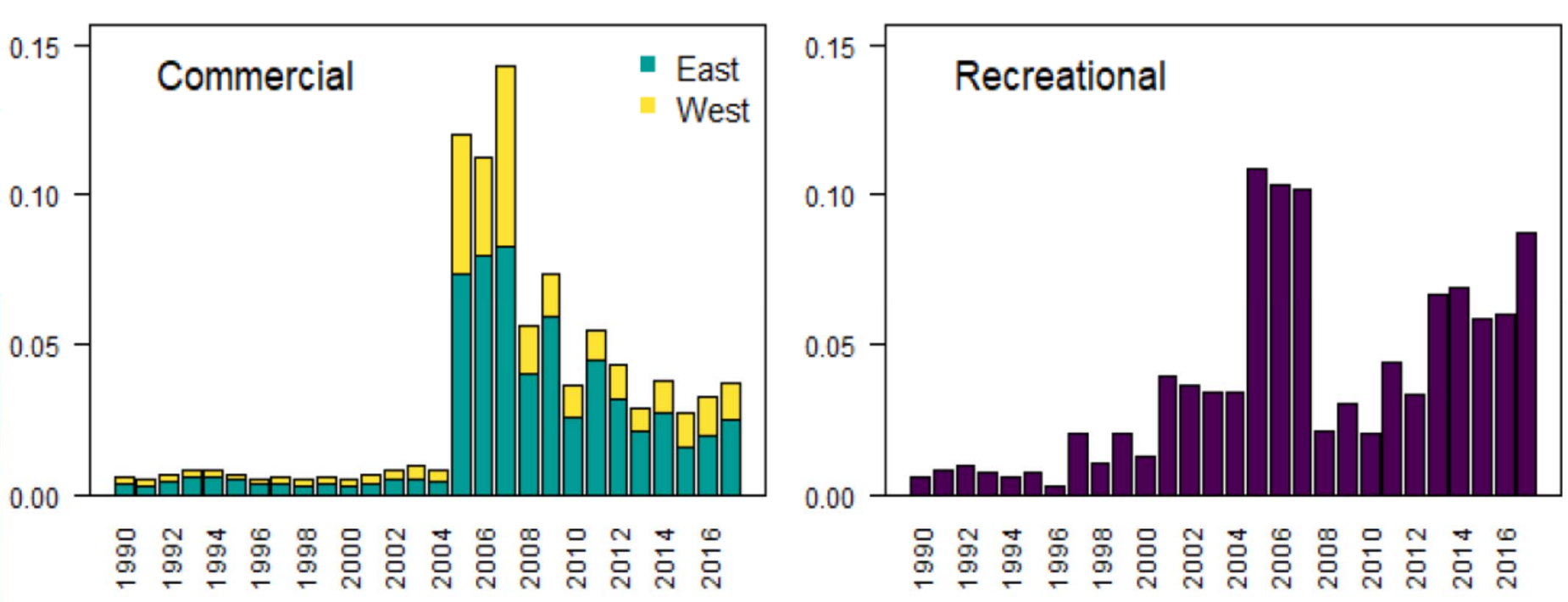
From Sustainable Fisheries Division, SEFSC

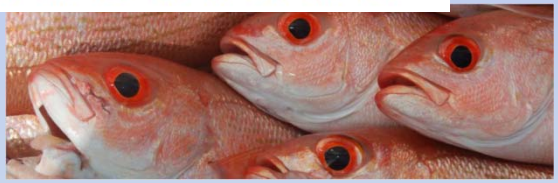
Recreational Landings in Thousands of Fish



From Sustainable Fisheries Division, SEFSC

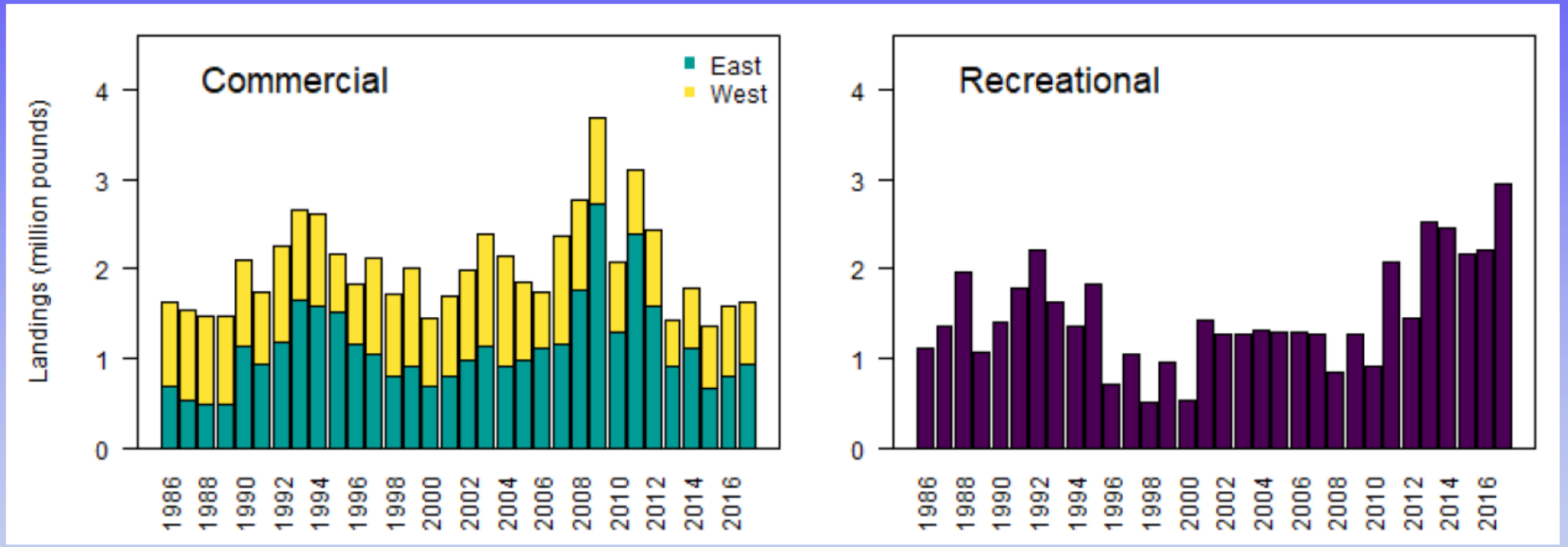
Discards in Millions of Lbs





From Sustainable Fisheries Division, SEFSC

Landings in Millions of Lbs



From Sustainable Fisheries Division, SEFSC

SSB is in billions of eggs, whereas F is a harvest rate (total numbers killed / total exploitable numbers [age 1+]).

Reference Point Criteria	
SSB0 (unfished)	672,597
SSB(SPR30%)~SSBMSY proxy	201,747
MSST=0.5*SSB(SPR30%)	100,874
MFMT = FSPR30%~FMSY proxy	0.135
FOY (F at optimum yield)=0.75* MFMT	0.115

Where we were in 2017 at end of assessment time series?

Current Benchmarks	
SSB2017	352,682
Fcurrent (geom. mean: 2015 – 2017)	0.075
SSB2017 / SSB0 (SPR2017)	0.52
SSB2017 / SSBSPR30	1.75
SSB2017 / MSST	3.35
–MSST Overfished?	No
Fcurrent / MFMT	0.56
–MSST Overfishing?	No

From Sustainable Fisheries Division, SEFSC

Projection of status 2021-2035

First project from end of assessment 2017 through current time 2020 based on actual catches

Then project from 2021 through 2035 using the OverFishing Limit (OFL, F30%SPR) or alternatively using the Optimum Yield criterion (OY, 0.75*F30%SPR)

From Sustainable Fisheries Division, SEFSC

Interim Projection Period

2018 Landings 4,840,039 lbs. WW Finalized landings (SEFSC)

2019 Landings 4,366,021 lbs. WW Three year (2016-2018) avg.

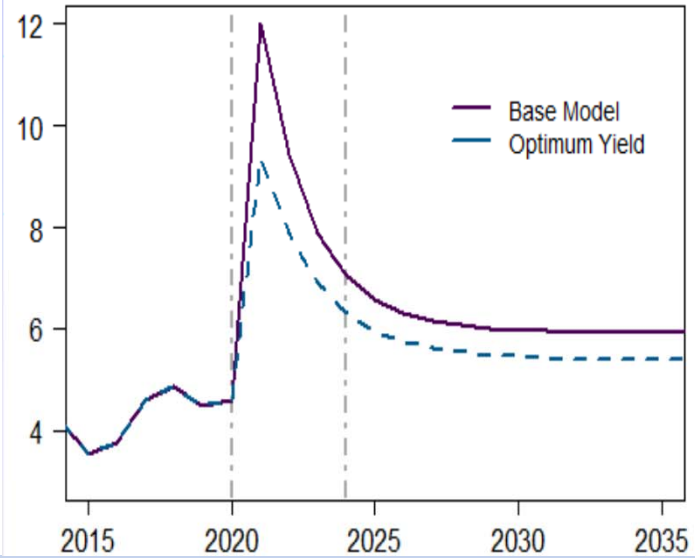
2020 Landings 4,366,021 lbs. WW Three year (2016-2018) avg

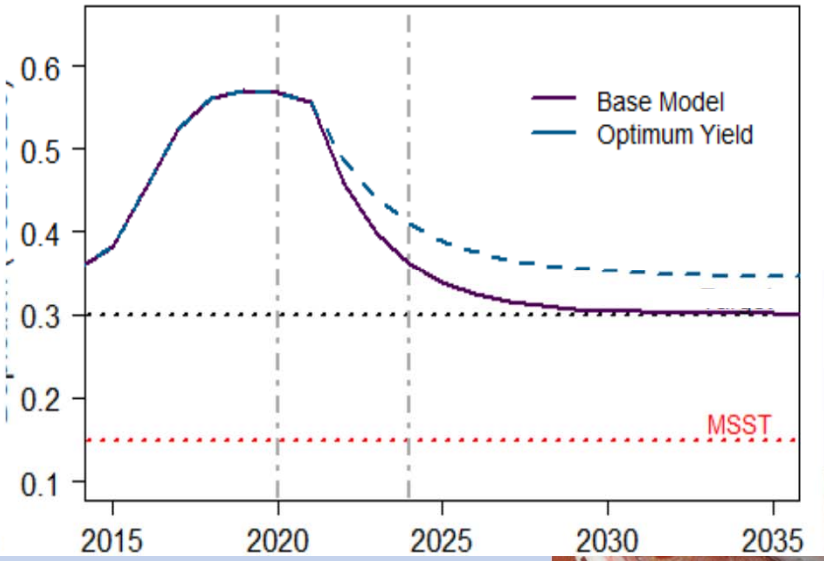
Then projection at F30%SPR or 0.75*F30%SPR 2021-2036

Yield in millions of lbs ***SSB/SSB0***

Base Model, Yield Projected at F30%SPR

Optimum Yield at 0.75 F30%SPR





From Sustainable Fisheries Division, SEFSC

Why the initial jump in yield and biomass in projections?

Yield has been less than the ABC that was estimated in the previous assessment

Revised recreational landings resulted in increase estimated biomass throughout series

Recent recruitment has been above average

Estimated status is better than previous assessment

Projection is at F30% SPR but recent F is 56% of F30% SPR,

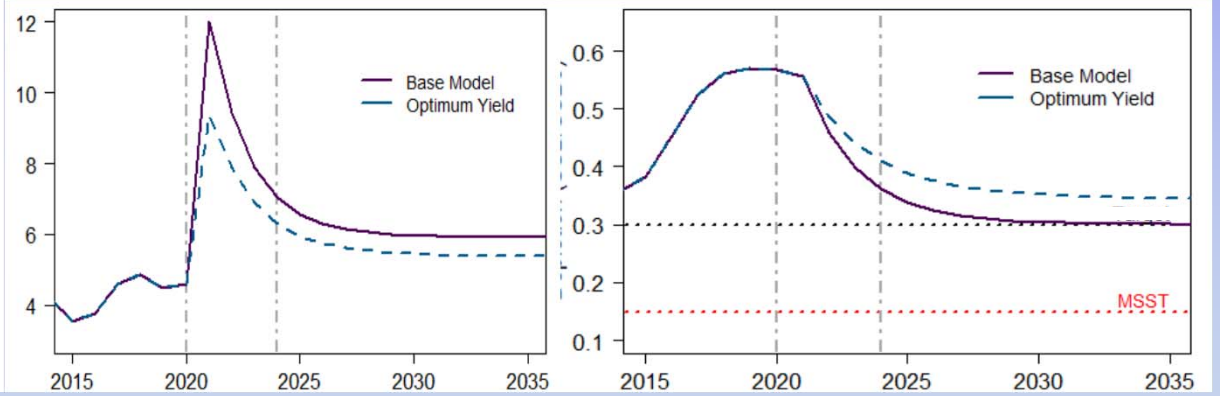
Surplus biomass will be "fished down", high catches are not expected to be sustained

After transitional period stock approaches F30% SPR equilibrium

Yield in millions of lbs ***SSB/SSB0***

Base Model, Yield Projected at F30%SPR

Optimum Yield at 0.75 F30%SPR



From Sustainable Fisheries Division, SEFSC

Given the uncertainty in assessment and recent recruitment and issues of the projections mentioned above, the SSC determined that catch recommendations should be based on the average of the projections over a specific time period.

Therefore, the SSC resolved that:

The OFL is the yield at $F_{30\%SPR}$ and the ABC=OY is the yield at 75% of $F_{30\%SPR}$. For constant catch for the years 2021-2025, the OFL and ABC in millions of pounds, whole weight are:

OFL: 8.6 MP ww

ABC: 7.27 mp ww

From Sustainable Fisheries Division, SEFSC

Questions?

From Sustainable Fisheries Division, SEFSC