



SEDAR 64 Interim Analysis:
Southeastern U.S. Yellowtail Snapper
GMFMC Reef Fish Advisory Panel
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Outline

- Quota history
- Model results and stock status
- Projection scenarios










S64 Interim Analysis: Yellowtail Snapper

Quota History



Quota History

Date	Total ACL
1/30/2012 – 11/2012	2,898,875 lbs. (1,315 mt)
9/3/2013 – present	3,938,625 lbs. (1,787 mt) 

South Atlantic (75%)		Date	ACL
Commercial		Apr 2012 – Nov 2012	1,142,589 lbs.
		Nov 2012 – Current	1,596,510 lbs. 
Commercial Closures		10/31/2015 – 12/31/2015	
		6/3/2017 – 7/31/2017	
		6/5/2018 – 7/31/2018	
		6/7/2019 – 7/31/2019	
Recreational (CHTS)		Apr 2012 – Sept 2013	1,031,286 lbs.
		Sept 2013 – Current	1,440,990 lbs. 
Gulf of Mexico (25%)		Date	ACL
Commercial and Recreational (CHTS)		Jan 2012 – Sept 2013	725,000 lbs.
		Sept 2013 – Current	901,125 lbs. 

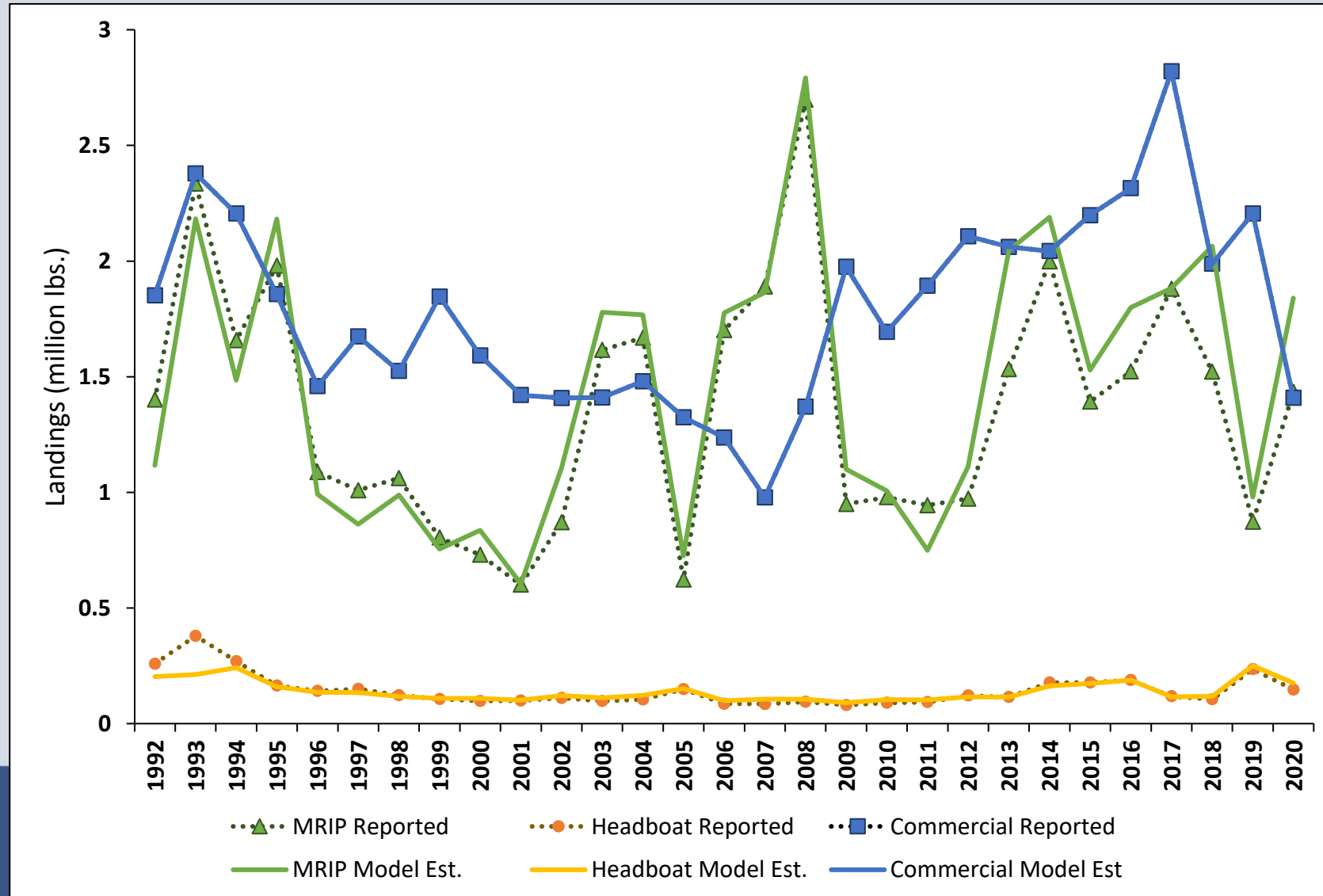


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Interim Base Model Results



Reported vs Model Estimated Landings (lbs.)



Discards

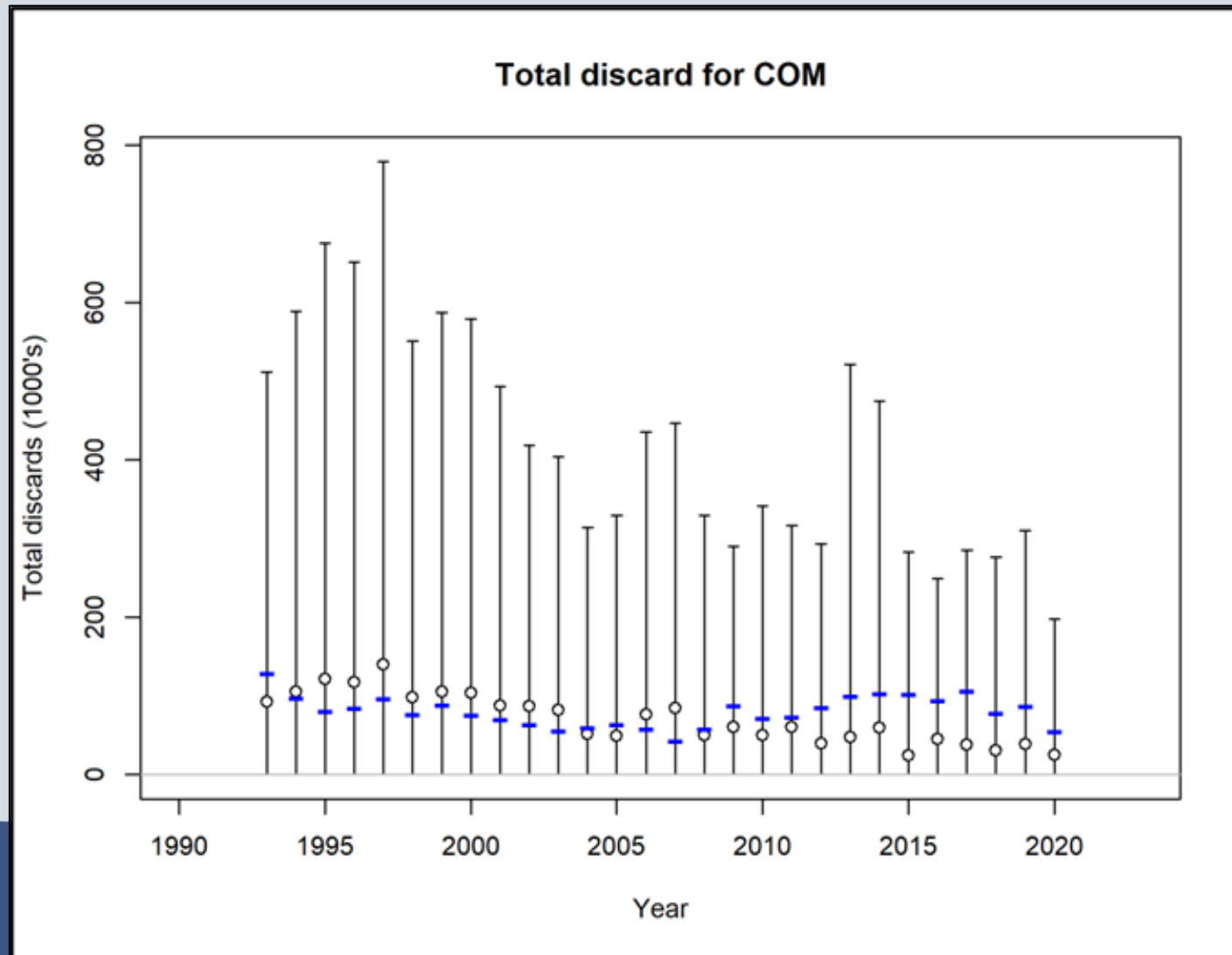


Figure 4

Discards

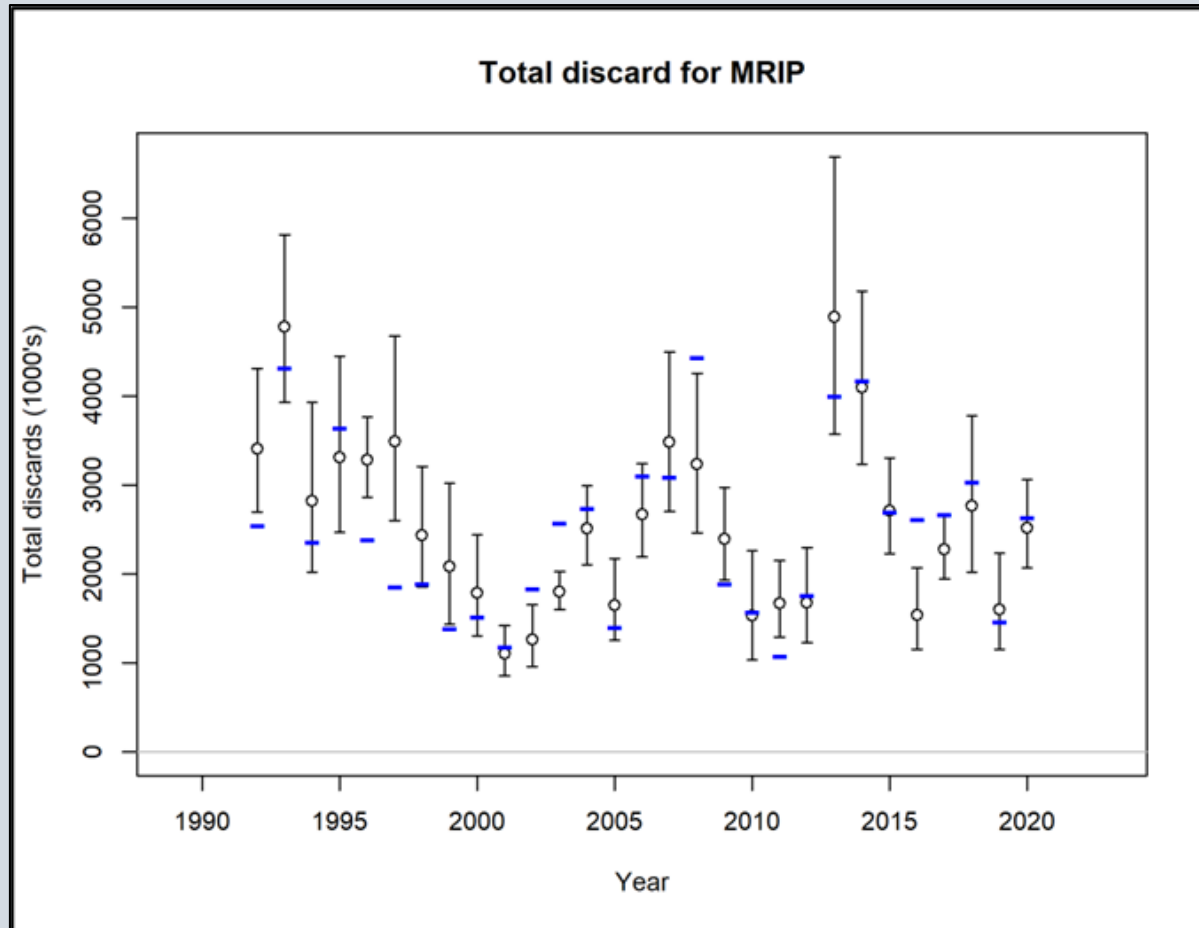


Figure 5

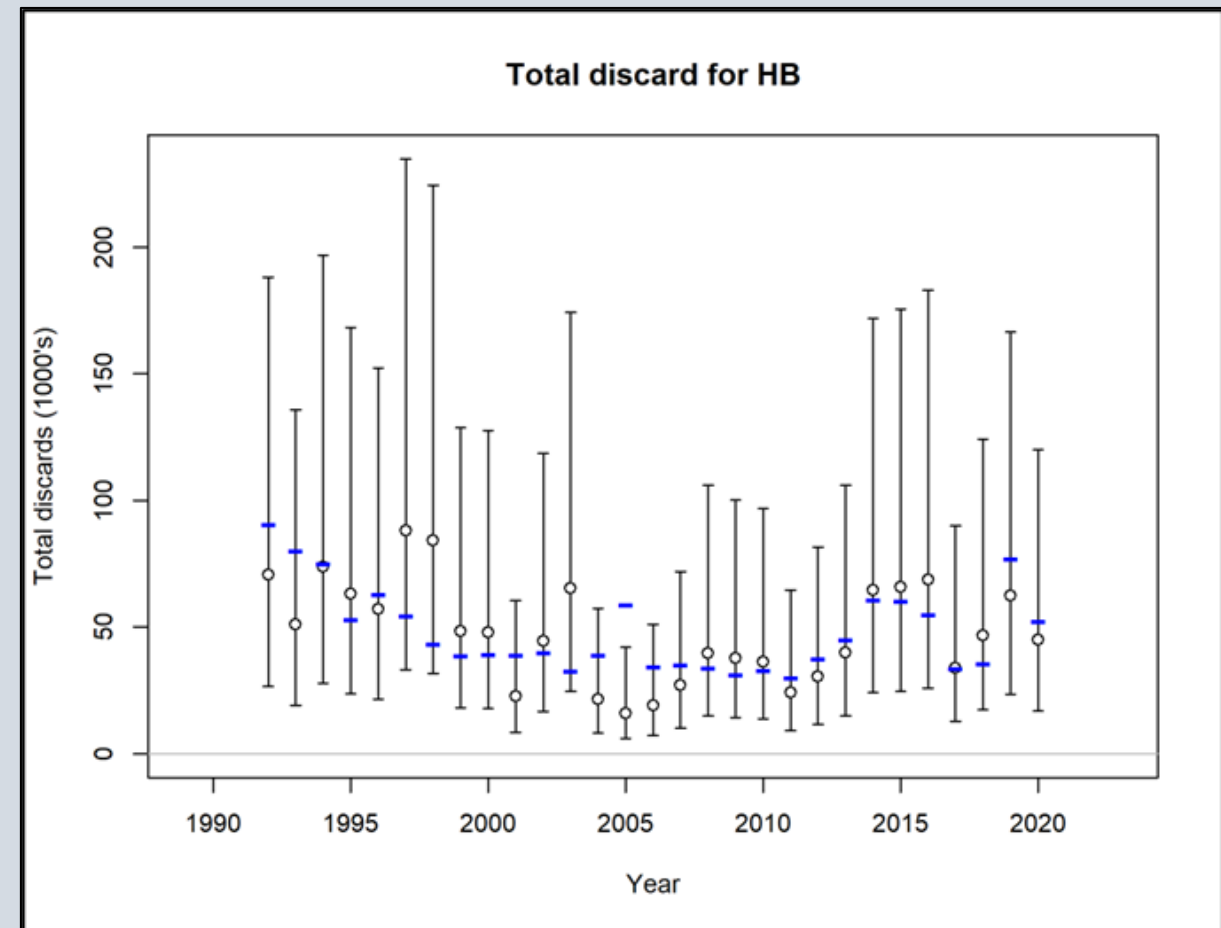


Figure 6



Estimated Recruitment

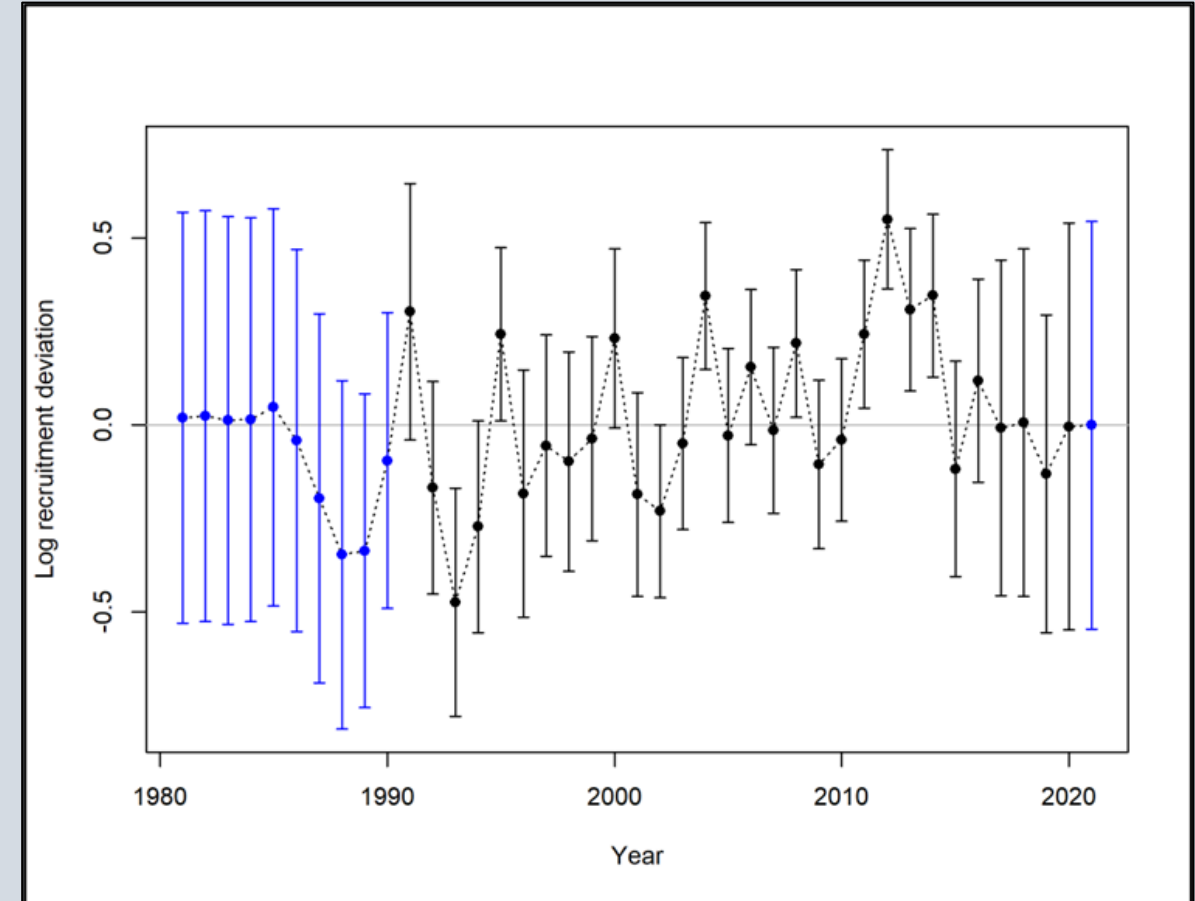
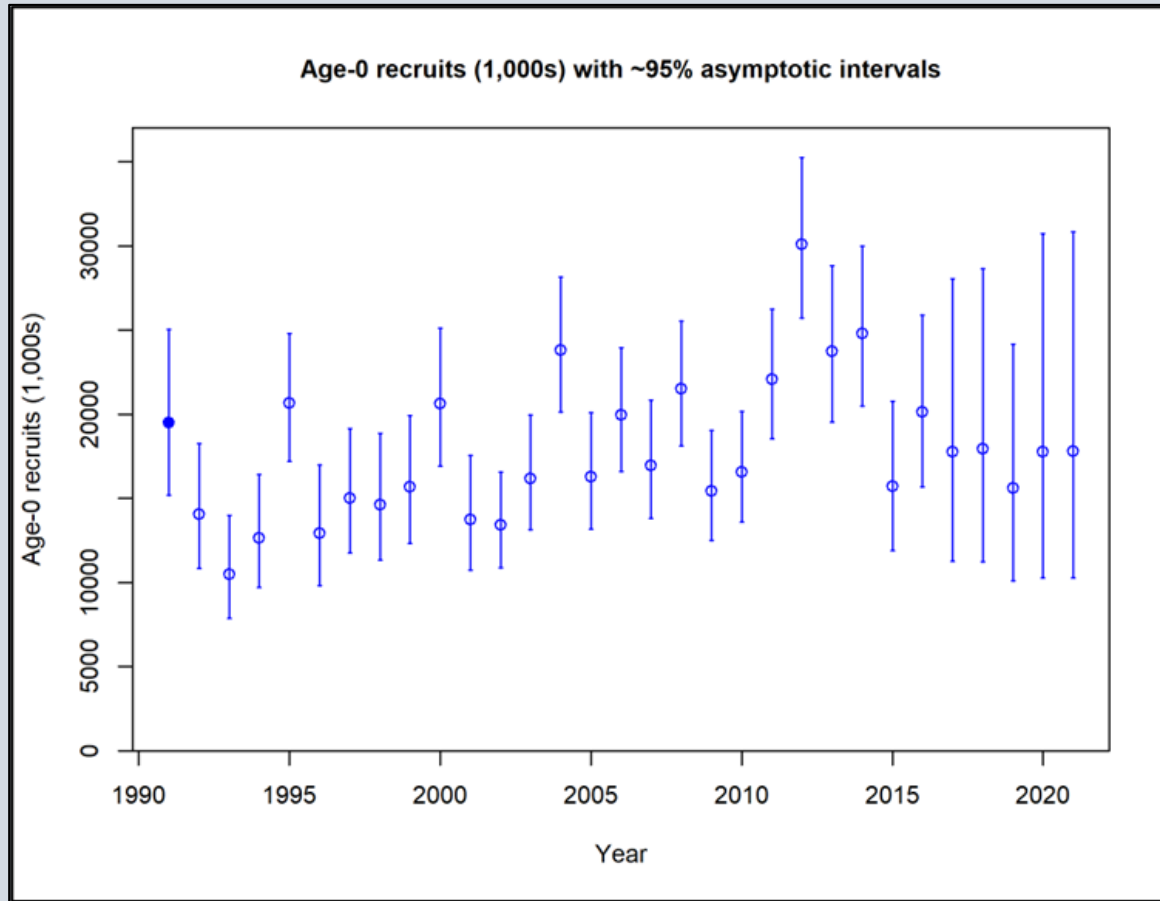


Figure 7

Total and Spawning Stock Biomass

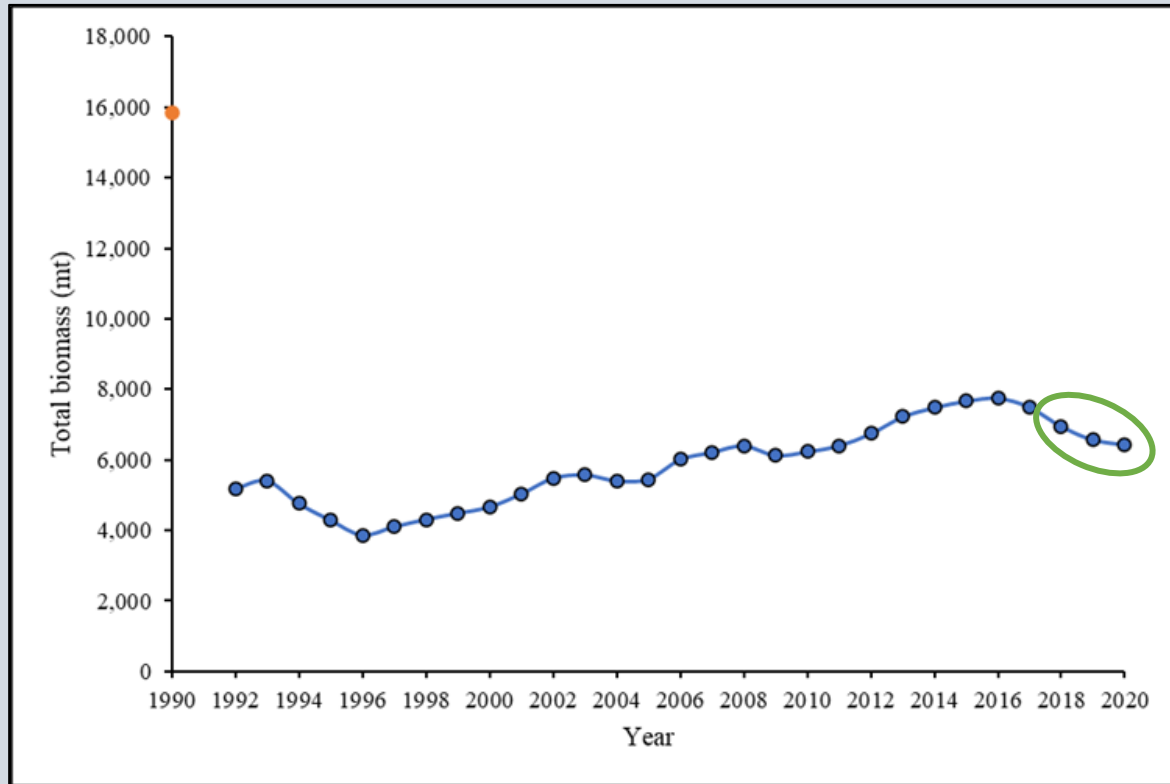


Figure 8

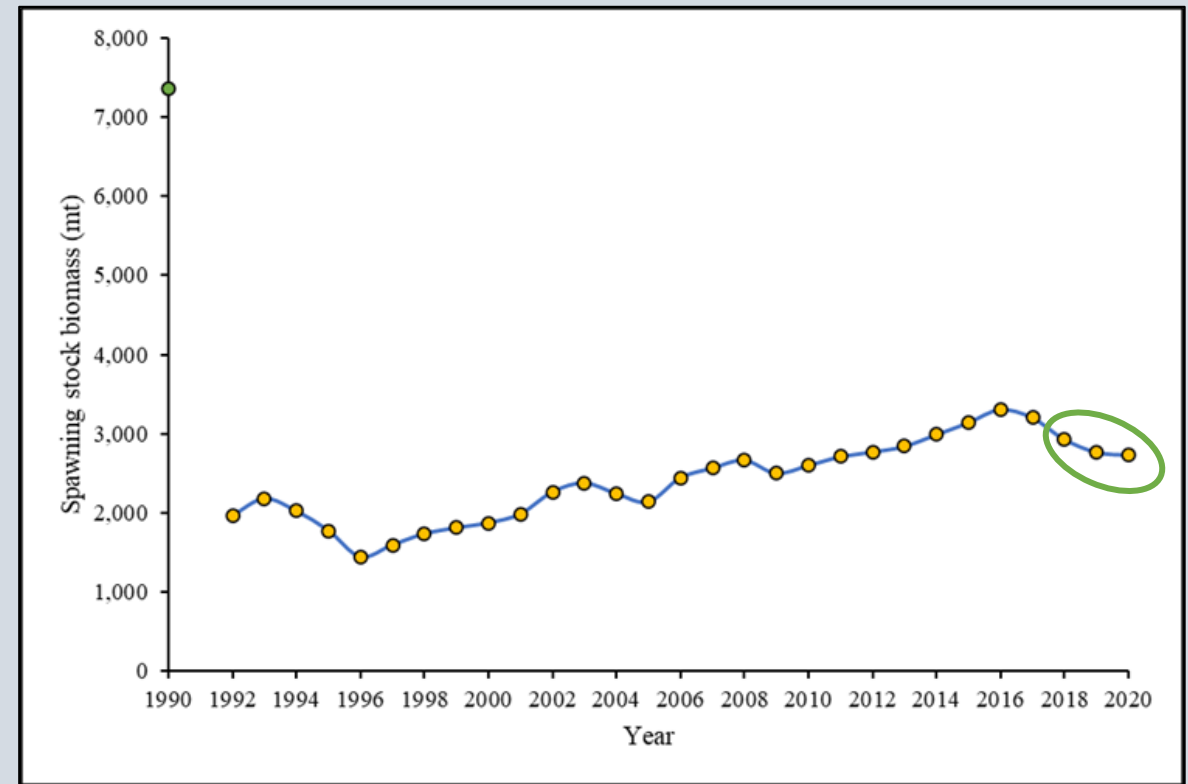
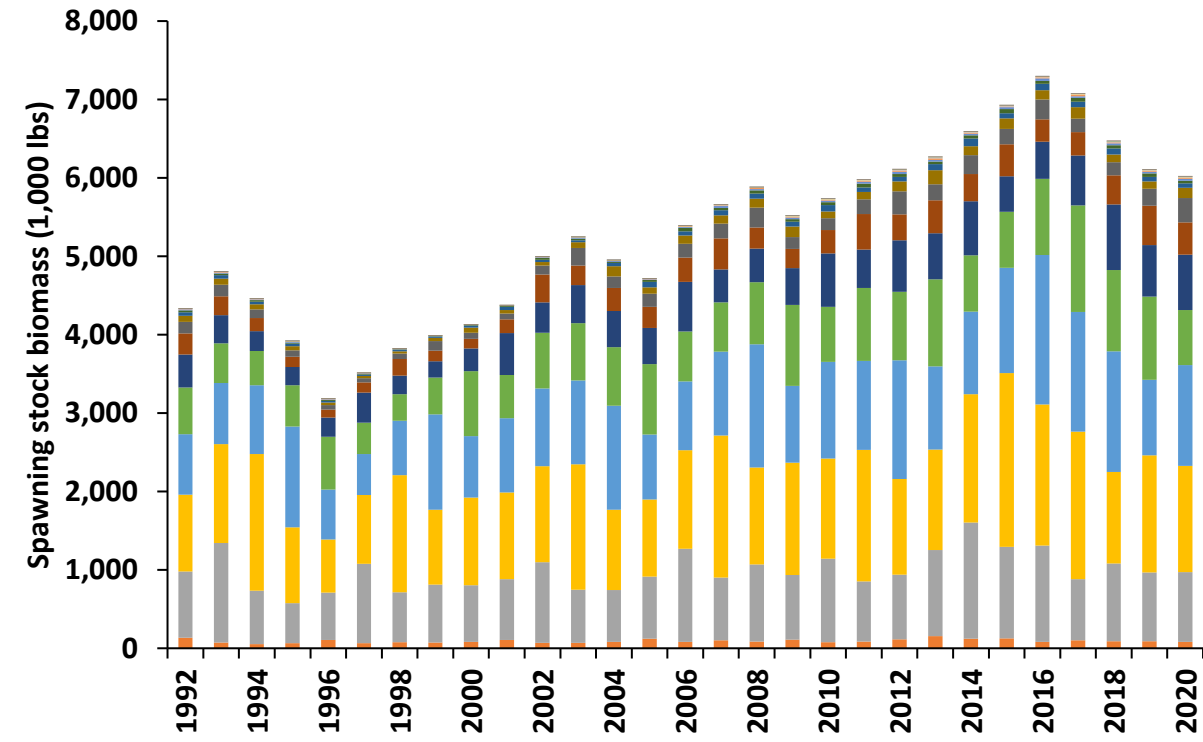
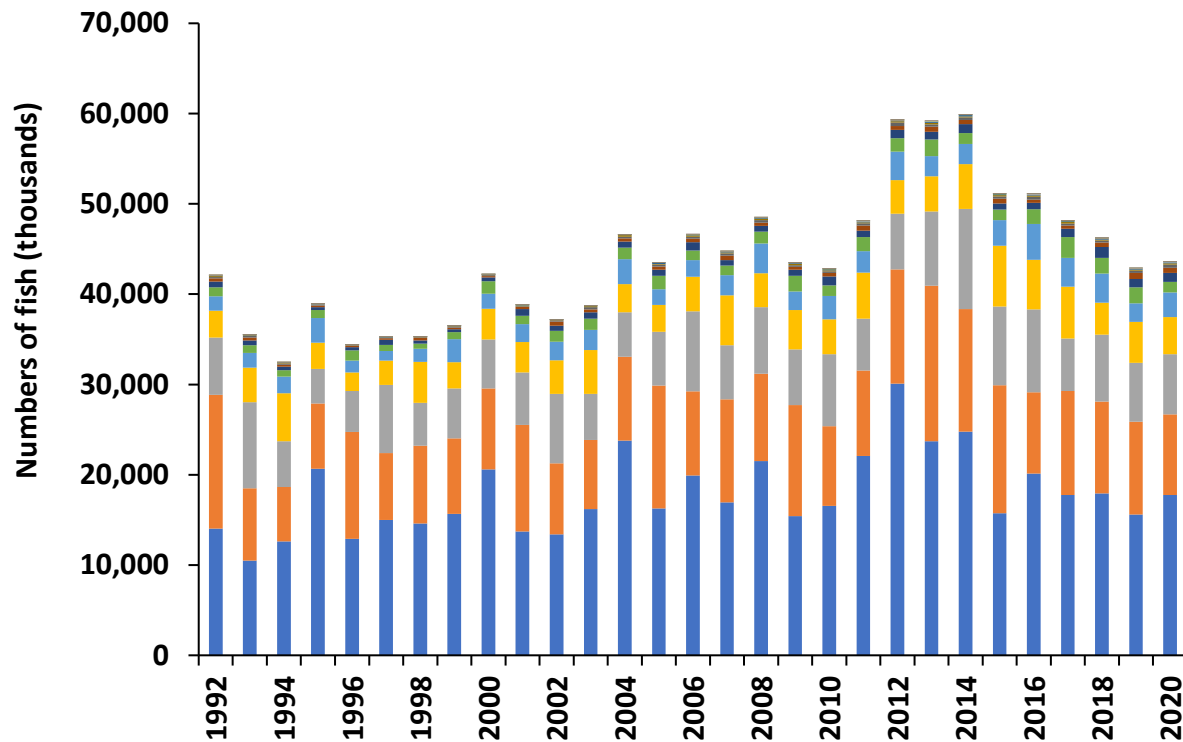


Figure 9



Numbers and spawning stock biomass at age



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



Fishing Mortality

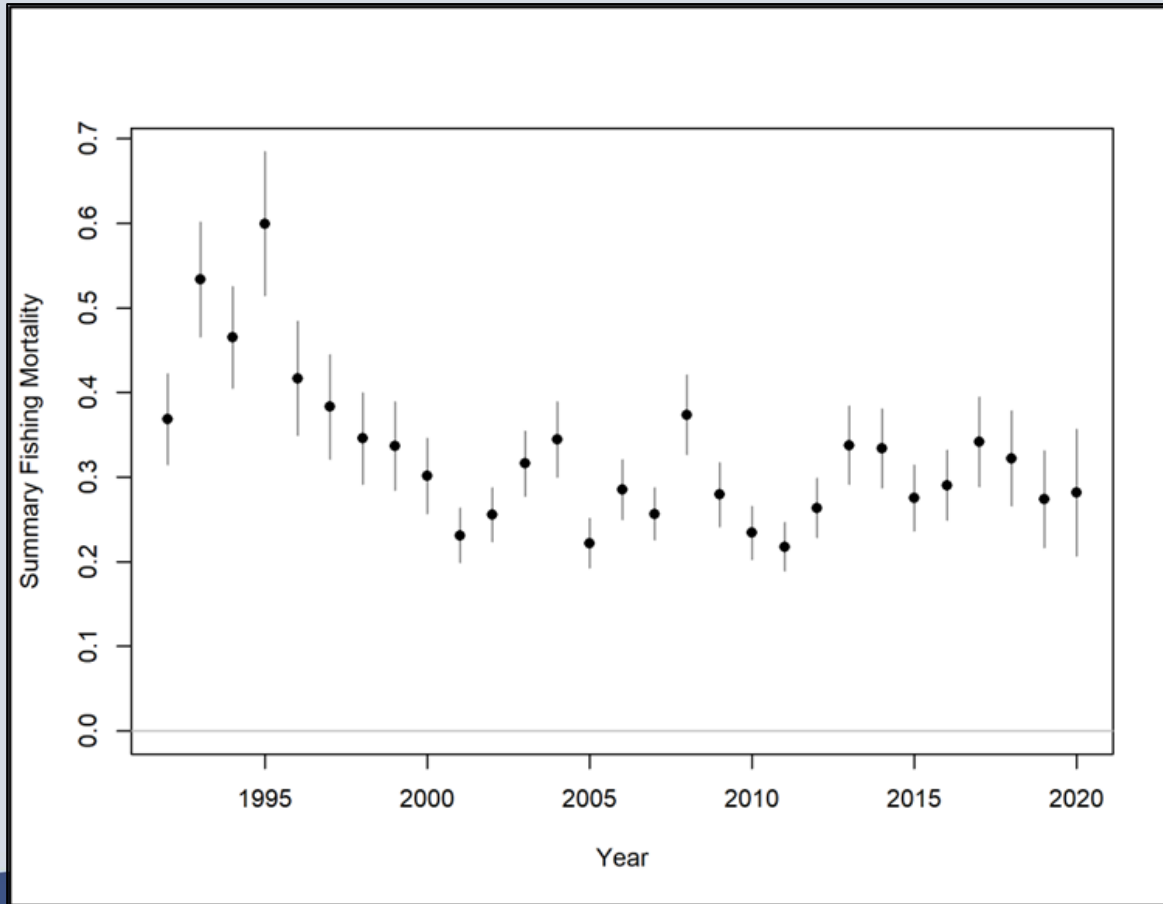


Figure 10

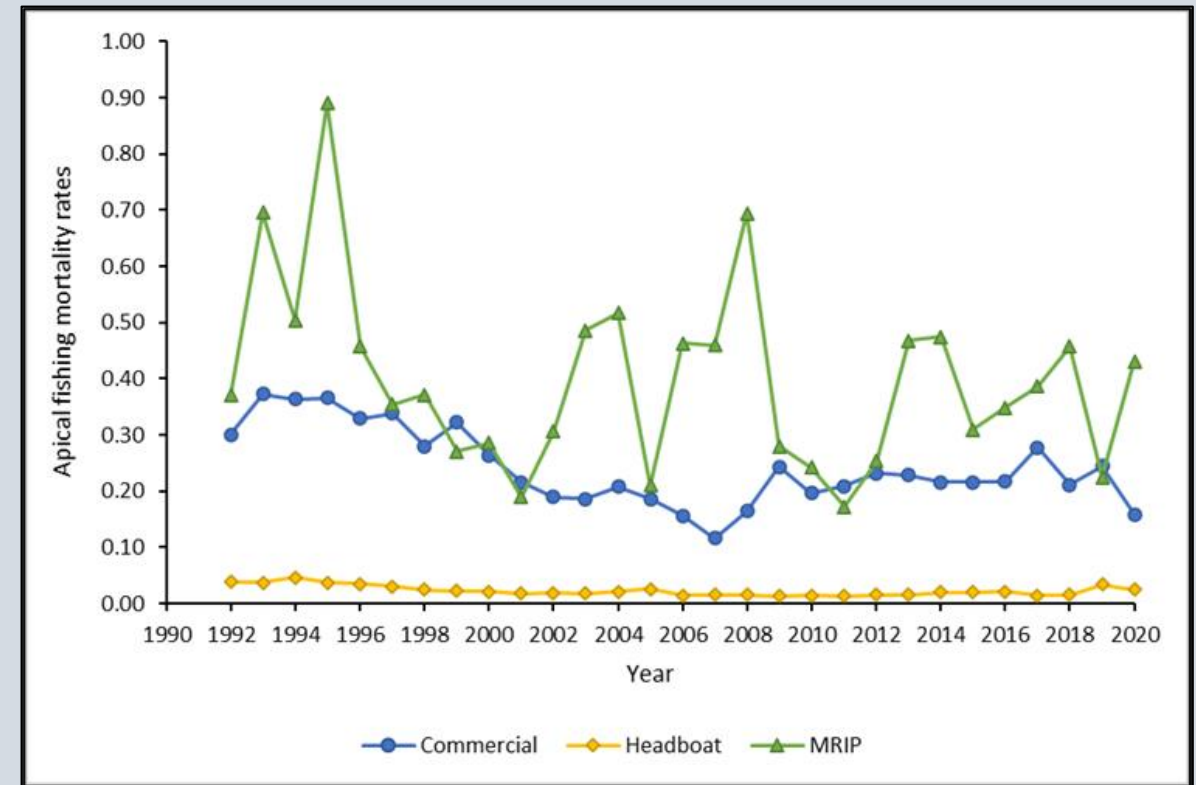


Figure 11



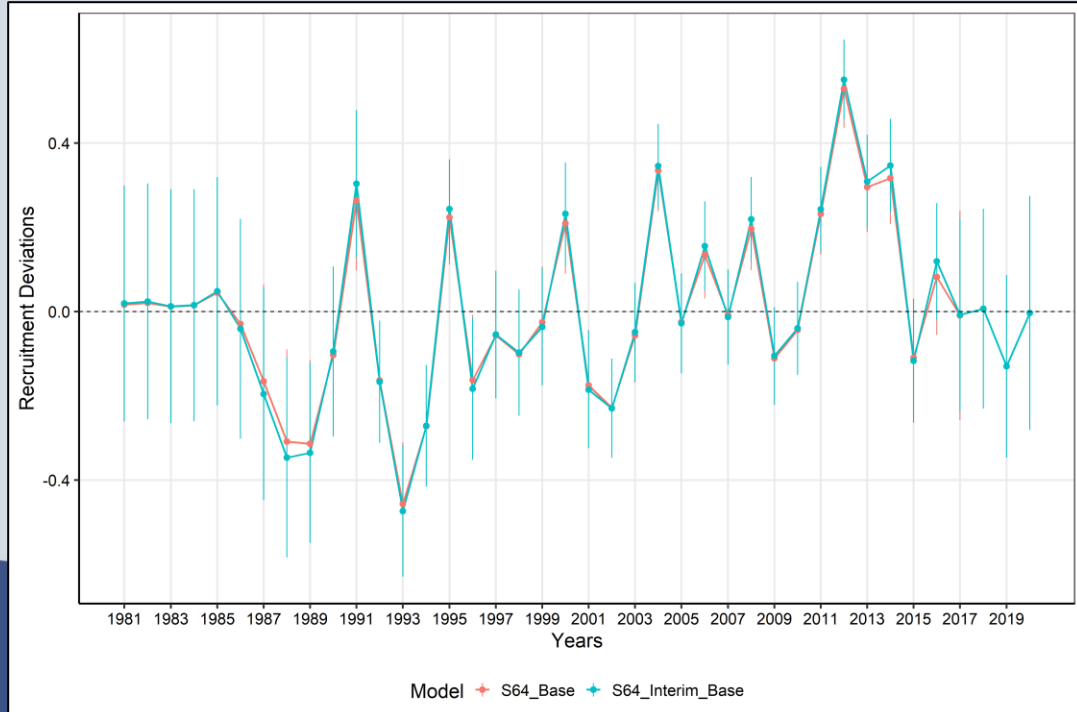
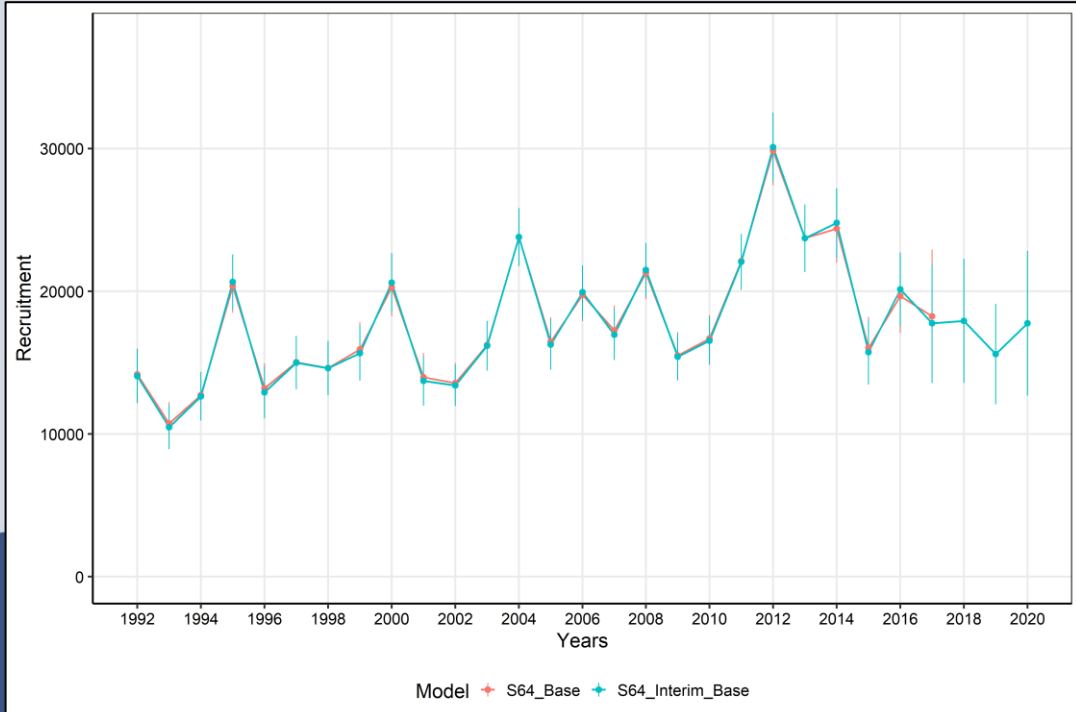
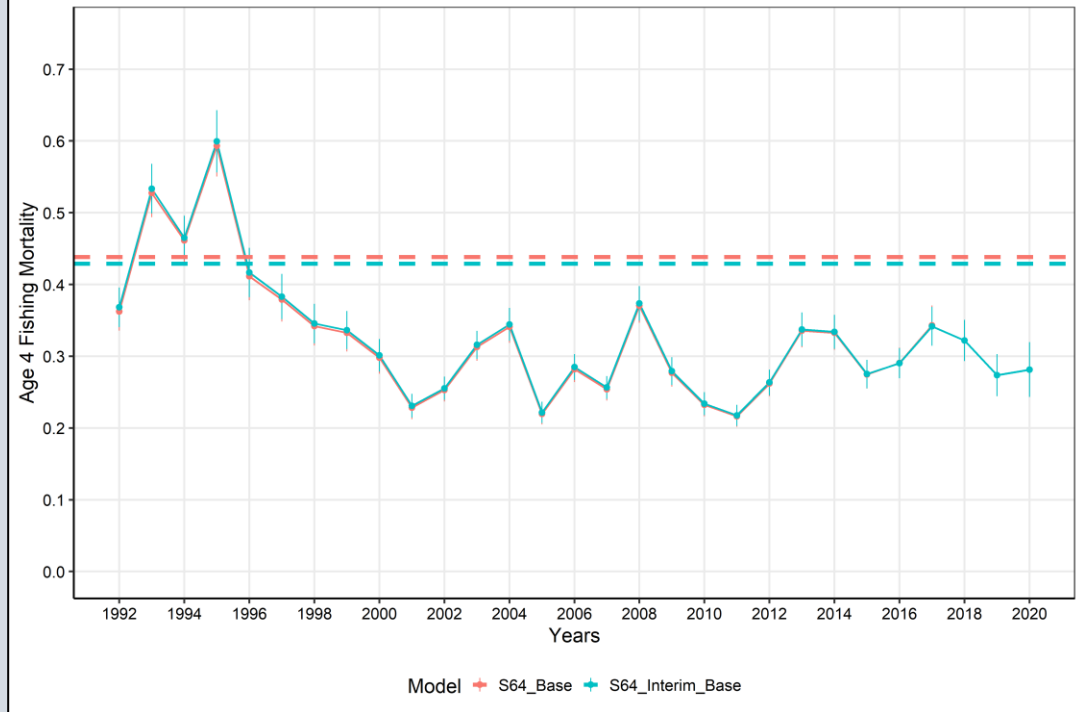
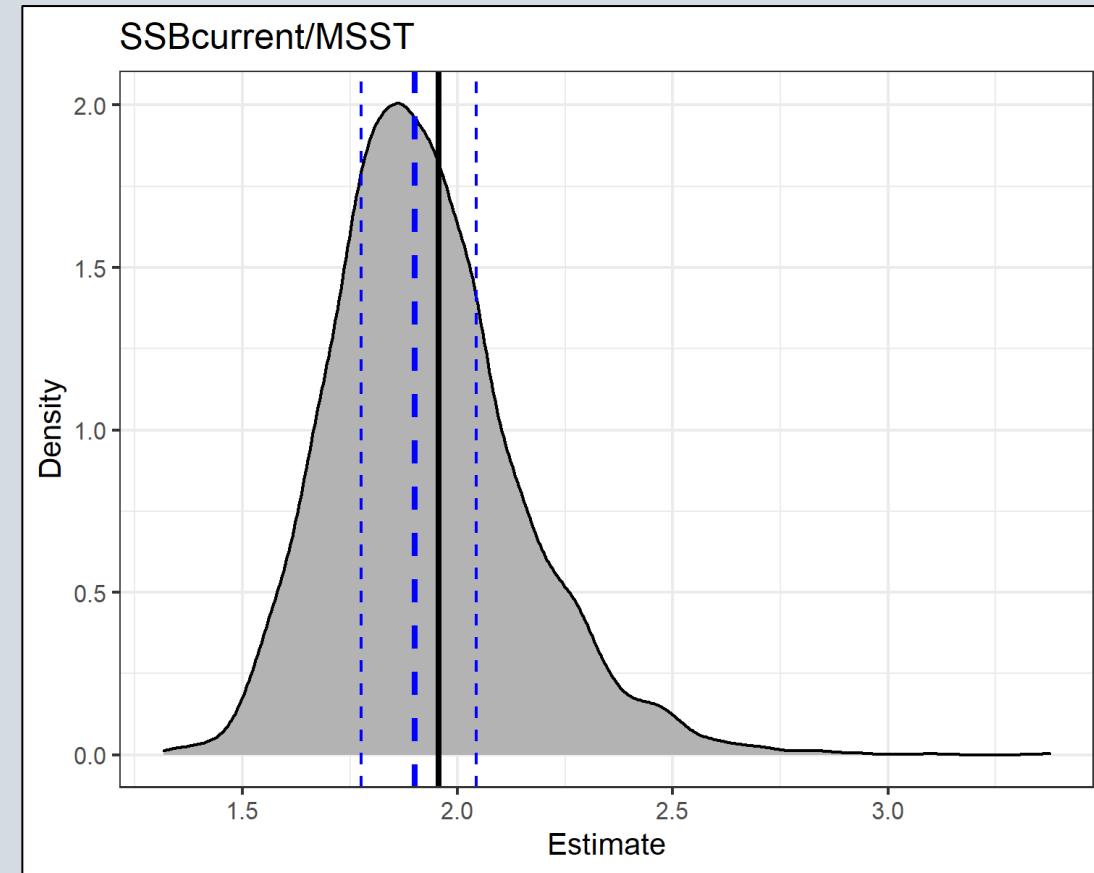
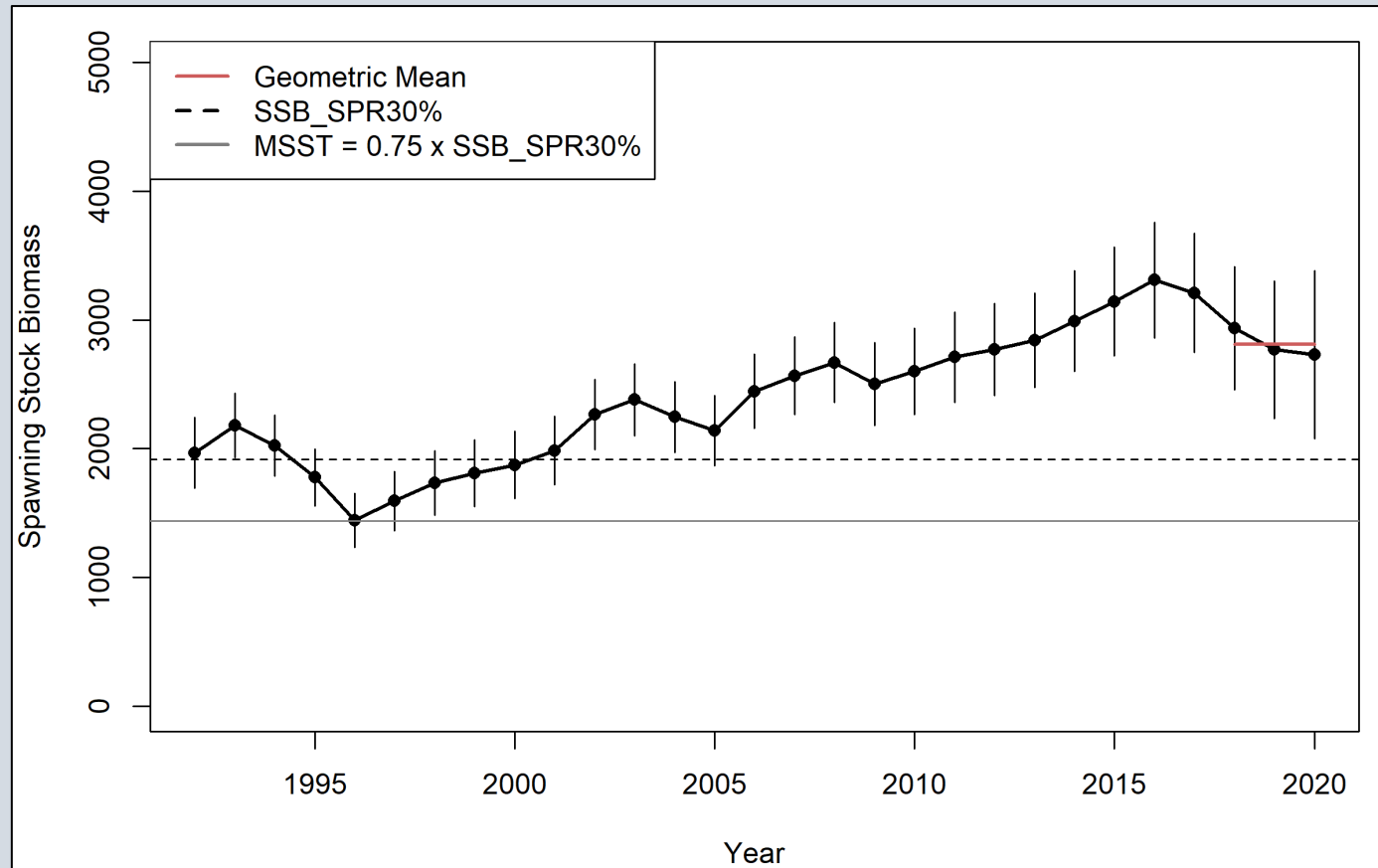
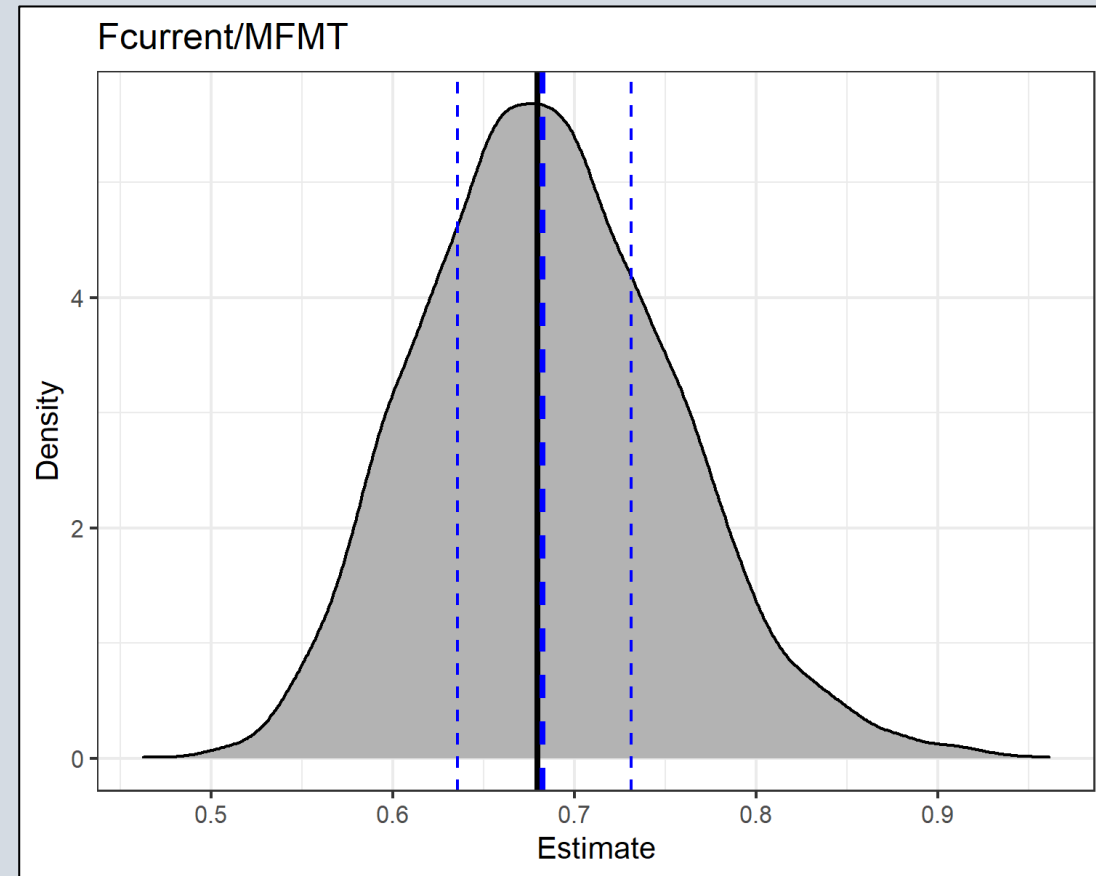
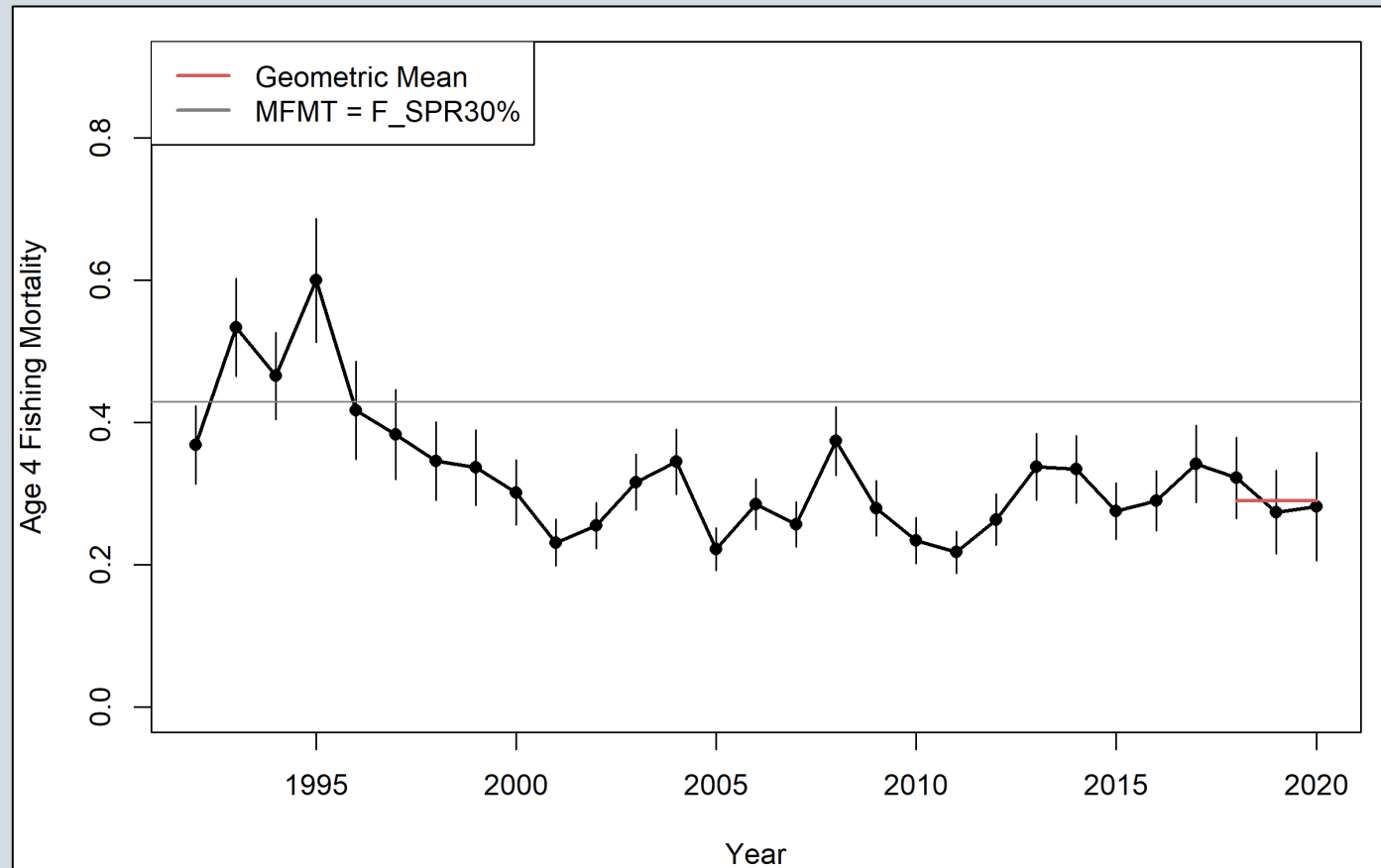


Figure 23 a-d.







S64 Interim Analysis: Yellowtail Snapper Projections



Projections

Deterministic projections were run to estimate SSB and yield under multiple constant F and constant catch scenarios (TOR #2 sub-point).

- An iterative method (provided by the SEFSC) specifies fishing mortality rates for each fleet per year (2021 – 2121). Fleet allocations are kept constant each year according to those in the SA (52.56% commercial and 47.44% recreational).
- Structure and parameters of the projection model same as assessment model.
- Recruitment for first year of projection based on S-R relationship as estimated by the IBM (17.792 million fish)



SSC Recommendations

Joint SSC meeting August 4th, 2022

- The SSCs recommended using the calculated P^* value of 0.375 to produce ABCs using the South Atlantic Council's ABC Control Rule.
- Recommended that the Council consider adjusting the ACL or ACT for management uncertainty (e.g., $0.75 * F_{30\%SPR}$)

https://safmc.net/documents/2022/07/ssc_aug2022_overview_final.pdf





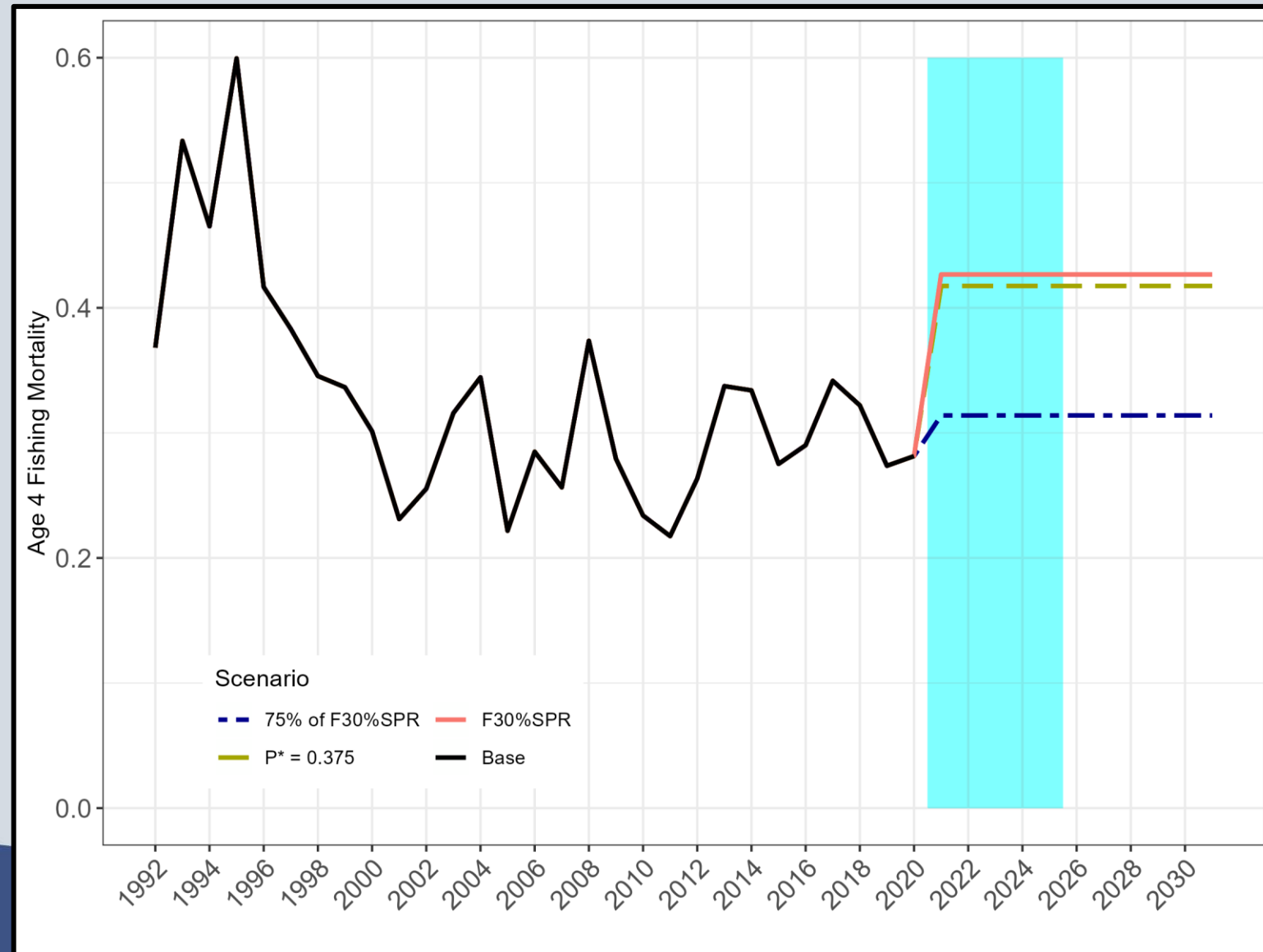
S64 Interim Analysis: Yellowtail Snapper

Projections: Constant F

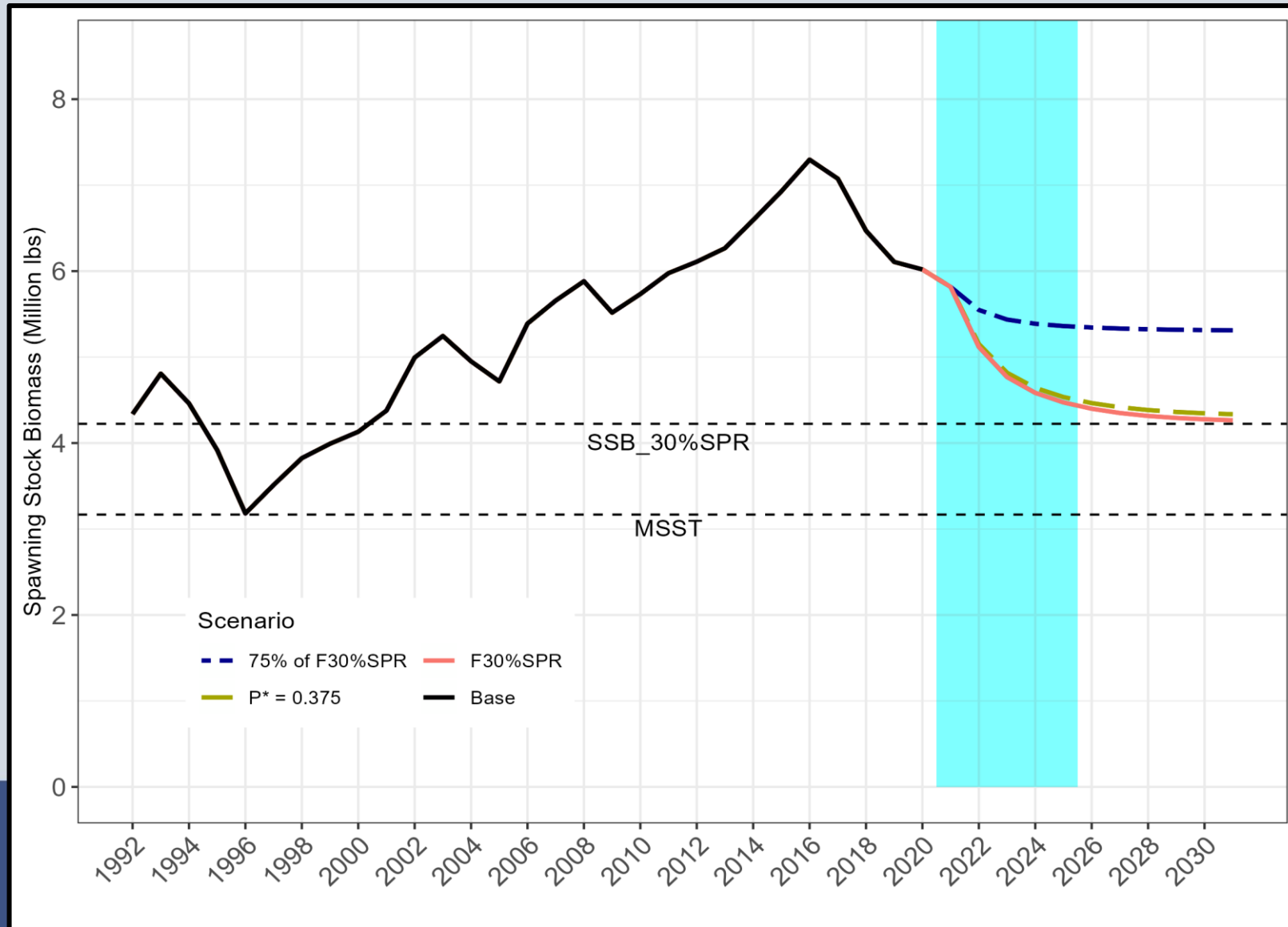


Constant F Projection Scenarios

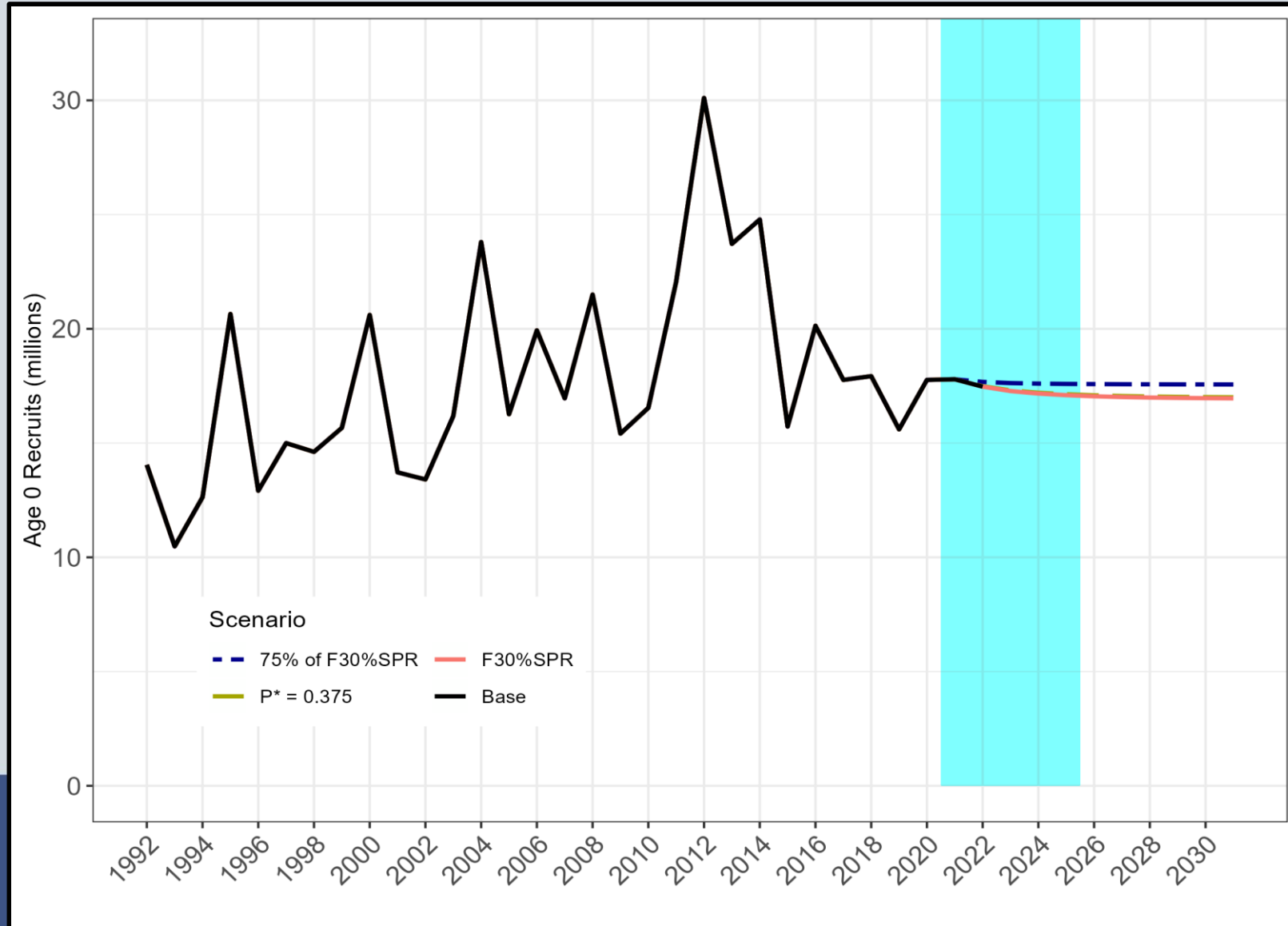
1. $F_{30\%SPR} = 0.429$
2. $F_{P^* = 0.375} = 0.418$
3. $75\%F_{30\%SPR} = 0.314$



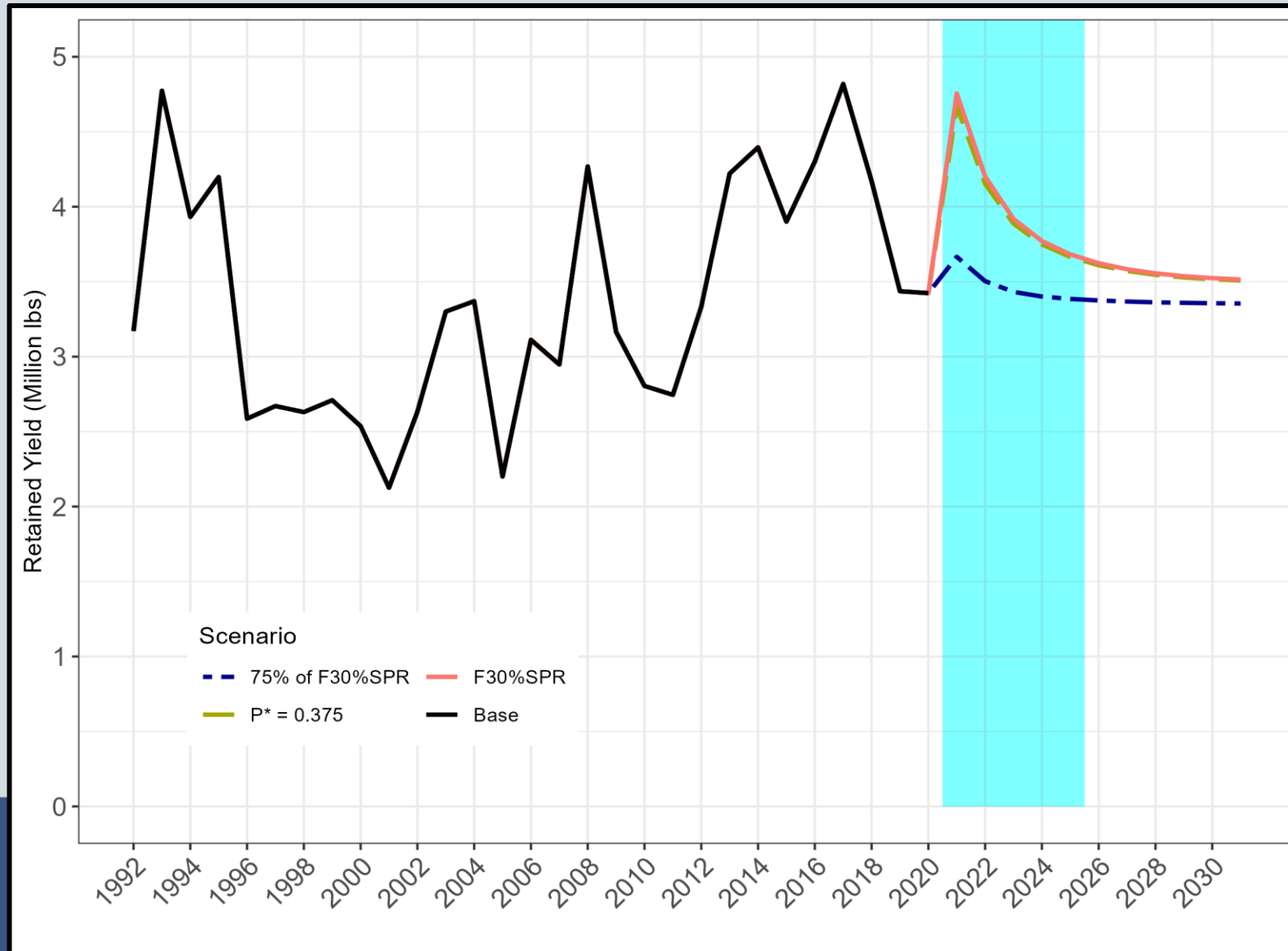
Constant F Projections: SSB (million lbs)



Constant F Projections: Recruitment (millions)



Constant F Scenarios: Retained Yield (million lbs)



Constant F Scenarios: Projected Retained Yield (lbs)

Year	$F_{30\%SPR}$ (OFL)	$P^* = 0.375$ (ABC)	$75\%F_{30\%SPR}$
2021	4,765,705	4,670,681	3,665,668
2022	4,207,390	4,152,787	3,503,435
2023	3,922,267	3,887,251	3,431,880
2024	3,773,583	3,748,639	3,400,873
2025	3,684,061	3,664,980	3,384,921
2026	3,624,751	3,609,528	3,374,999
2027	3,584,330	3,571,596	3,367,497
2028	3,556,683	3,545,663	3,362,246
2029	3,537,757	3,527,977	3,358,933
2030	3,524,780	3,515,691	3,356,297
2031	3,515,862	3,507,371	3,354,276
3 yr Avg CC	4,298,454	4,236,906	
5 yr Avg CC	4,070,601	4,024,868	
Equil Catch	3,468,661		



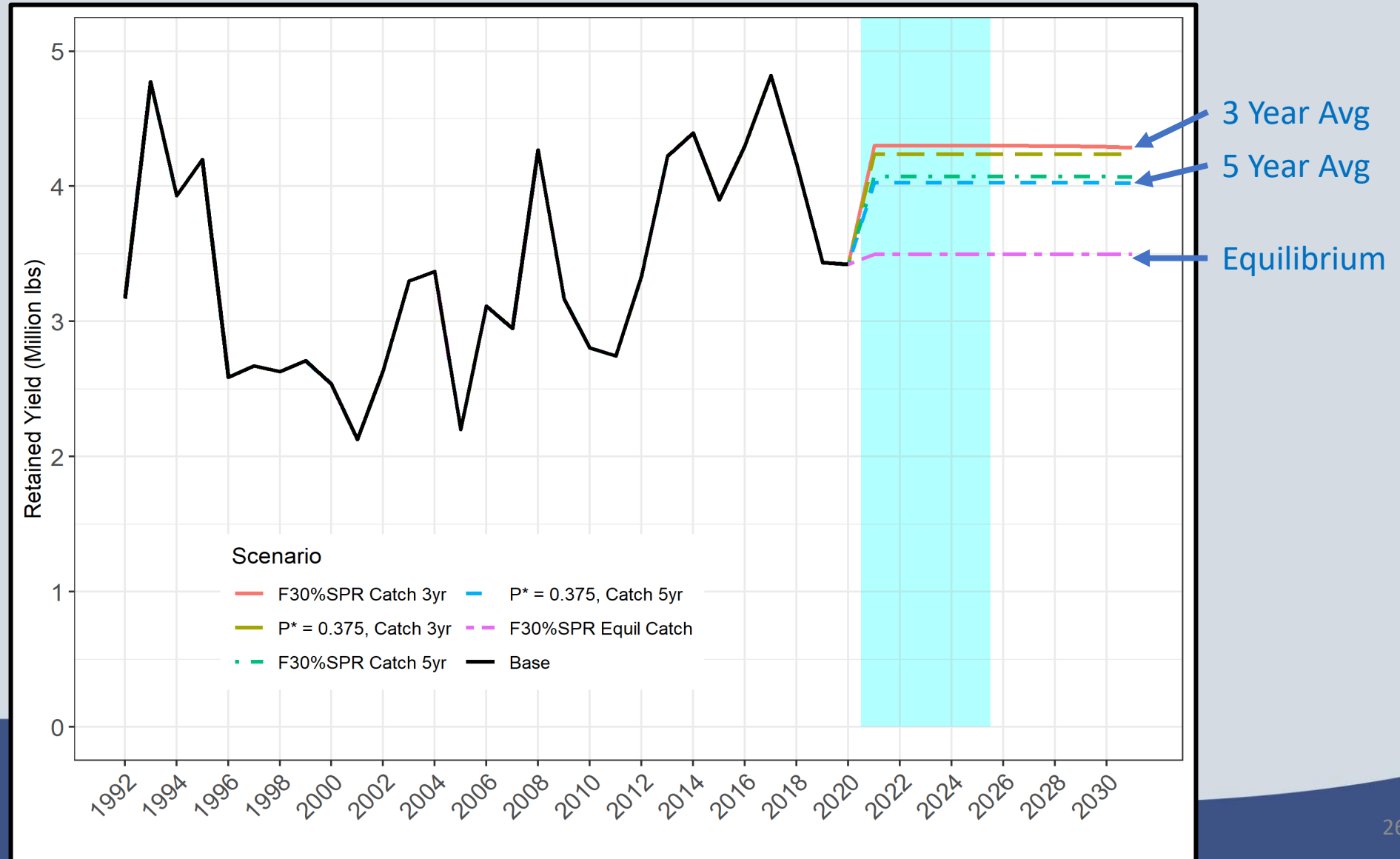


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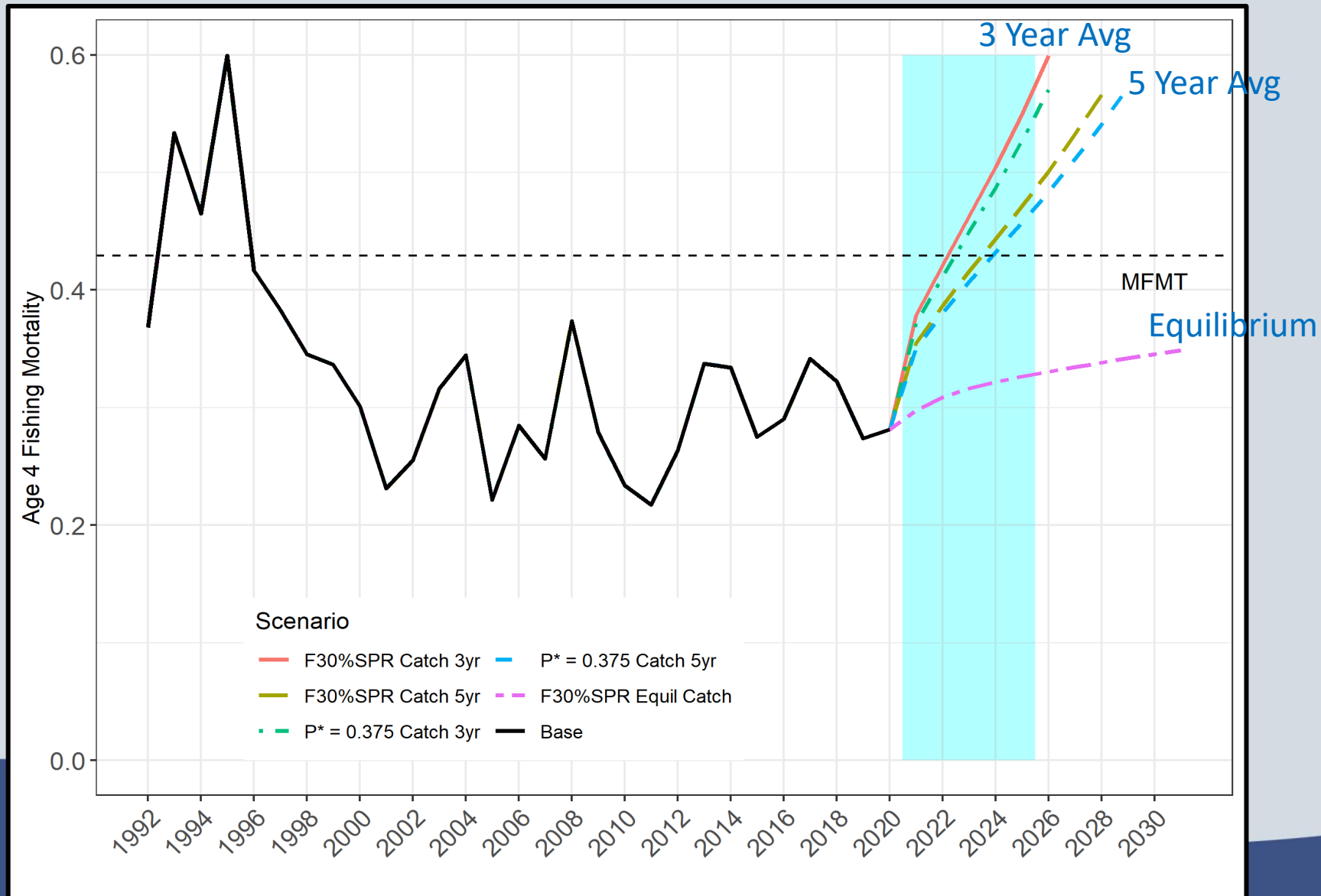
Projections: Constant Catch



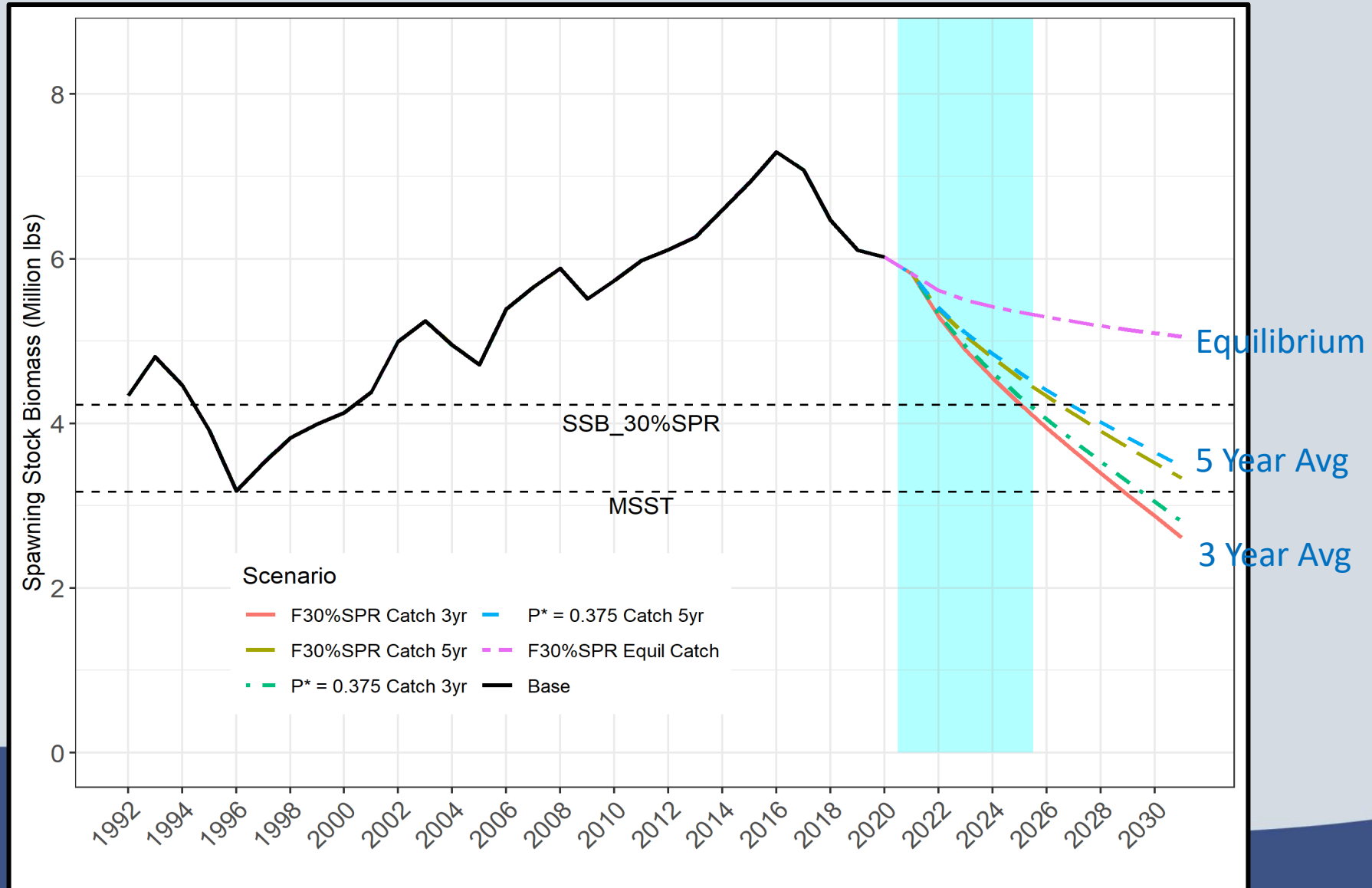
Constant Catch Scenarios: Retained Yield (million lbs)



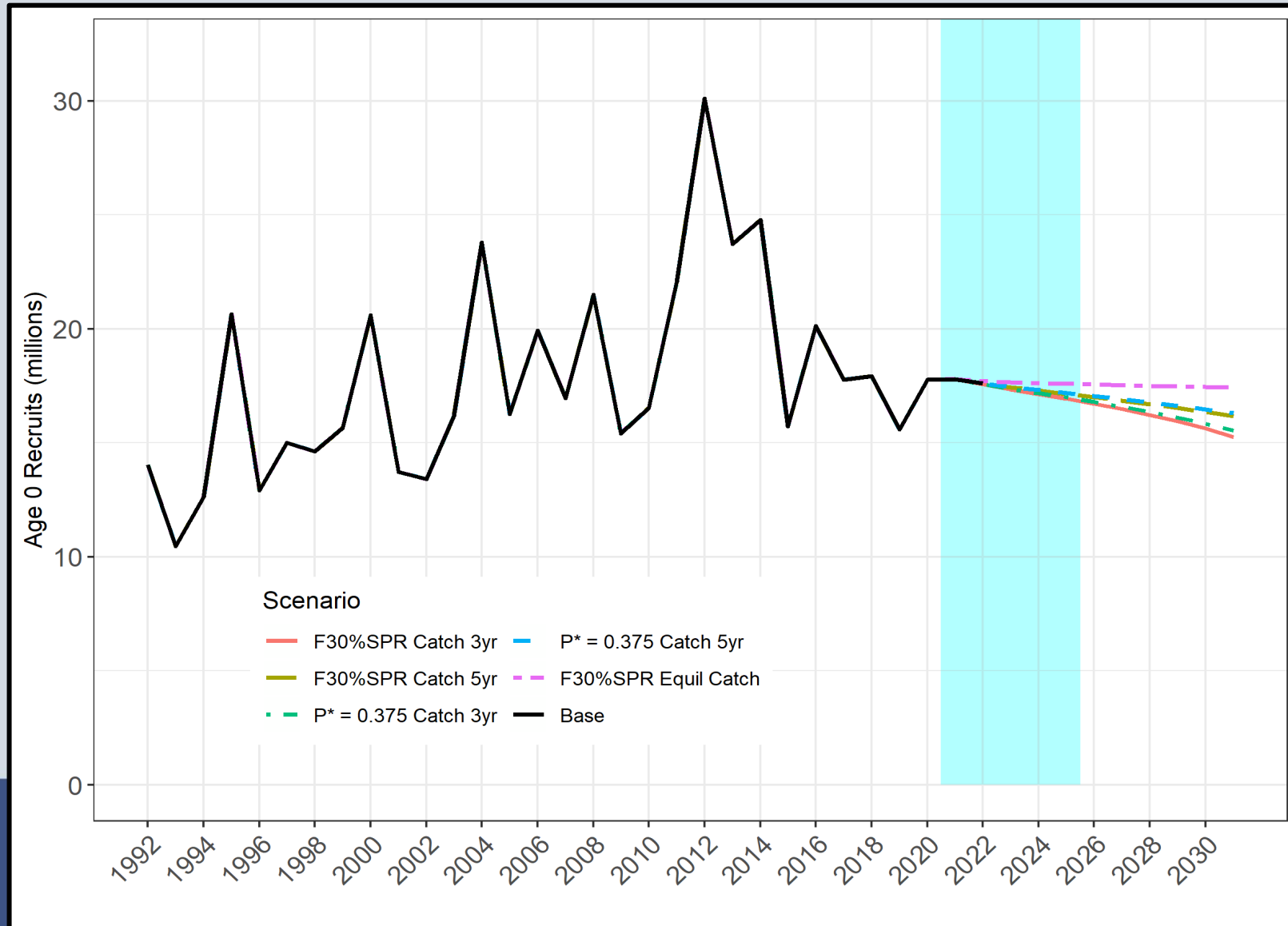
Constant Catch Scenarios: Fishing Mortality Rates



Constant Catch Scenarios: SSB (million lbs)



Constant Catch Scenarios: Recruitment (millions)





<https://reefguide.org/keys/pixhtml/yellowtailsnapper2.html>