C3 Joint Groundfish November 2023 Plan Team Report

Steve Barbeaux, Sara Cleaver, Jim Ianelli, Chris Lunsford,
Kalei Shotwell, Diana Stram, Cindy Tribuzio

NOAA FISHERIES

December 2023, Presentation to the Council

GF Plan Team Meetings, November 13-17th, 2023

Joint Meeting of the Groundfish Plan Teams

Plan Team Report

November 13, 2023

BSAI Groundfish Plan Team Members:

Steve Barbeaux	AFSC REFM (co-chair)	Kirstin Holsman	AFSC REFM
Kalei Shotwell	AFSC REFM (co-chair)	Phil Joy	ADF&G
Cindy Tribuzio	AFSC ABL (vice chair)	Andy Kingham	AFSC FMA
Diana Stram	NPFMC (coordinator)	Beth Matta	AFSC REFM
Lukas DeFilippo	AFSC ABL	Andrew Seitz	UAF
Allan Hicks	IPHC	Jane Sullivan	AFSC ABL
Lisa Hillier	WDFW	Steven Whitney	NMFS AKRO

GOA Groundfish Plan Team Members:

Jim Ianelli	AFSC REFM (co-chair)	Abby Jahn	NMFS AKRO
Chris Lunsford	AFSC ABL (co-chair)	Sandra Lowe	AFSC REFM
Sara Cleaver	NPFMC (coordinator)	Nat Nichols	ADF&G
Kristan Blackhart	NMFS OS&T	Cecilia O'Leary	AFSC RACE
Craig Faunce	AFSC FMA	Jan Rumble	ADF&G
Lisa Hillier	WDFW	Paul Spencer	AFSC REFM
Pete Hulson	AFSC ABL	Ben Williams	AFSC ABL

Joint Plan Team Meeting overview and agenda

Overview
Date: November 13th
Place: Seattle and online

Agenda for Joint Teams
Sablefish (+ESP)
Economic update
Sculpins

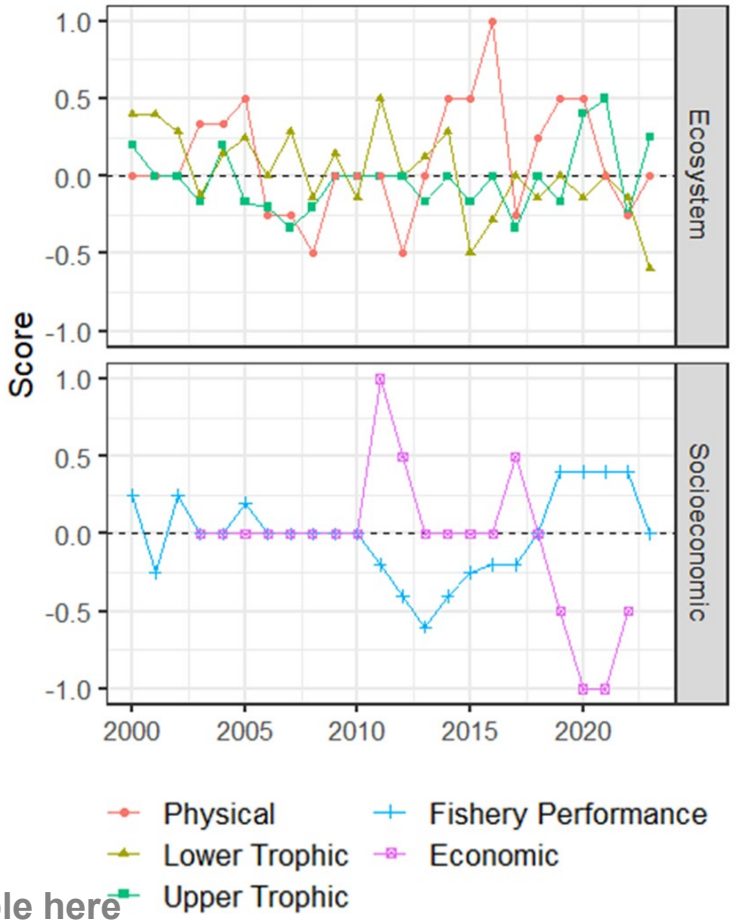
Joint Plan Team General recommendation
partial (harvest projection) assessment reviewed in Sept/Oct

The Team recommended the *AFSC consider the feasibility of producing harvest projection assessments* in time for the **September Plan Team** meeting

- to alleviate review time in November and
- allow for additional work on stock assessments that are operational updates or full assessments in October.
- The SSC would still review December with the minutes from this review appended to the November Plan Team report.

Ecosystem & Socioeconomic Profile (ESP) Highlights - Sablefish

- Management Summary:
  - Surface temps cool or average overall and bottom temp cooler but still above average in GOA, plankton lowest in time series and delayed peak, YOY growth average, but mean length very low
  - Nearshore juveniles decreased but still above average, bottom trawl survey juveniles above average, condition low for 2018 year class, female adult condition also low in 2022, but average (fishery) to high (survey) in 2023
  - Incidental catch sablefish in arrowtooth fishery average (competition overlap measure), overall fisheries low in GOA and remains high in BSAI
  - Fishery CPUE indicators time-series high, bycatch decreasing in GOA, stable and high in BSAI, ex-vessel value increased to average, price remains low in 2022
- Modeling Summary:
  - Two potential covariates for recruitment, CPUE from large mesh ADF&G survey, spring surface temperature in SEBS, 1996-2019 year class
  - Importance methods comparison project that includes nonstationarity, causal models (sablefish case study), recruitment index project to inform projections

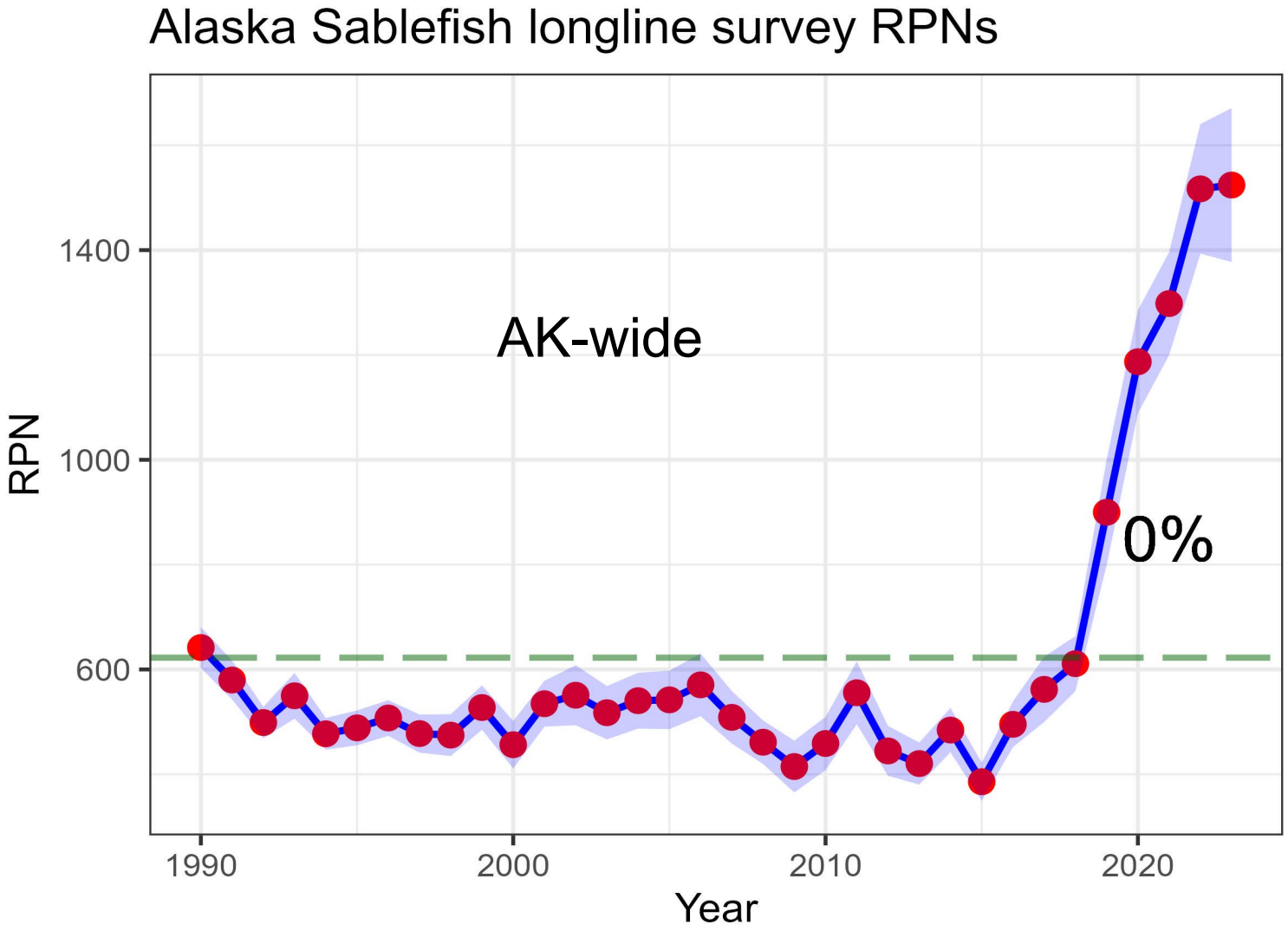


Kalei Shotwell presented the report card for the sablefish ESP provided as an appendix available here

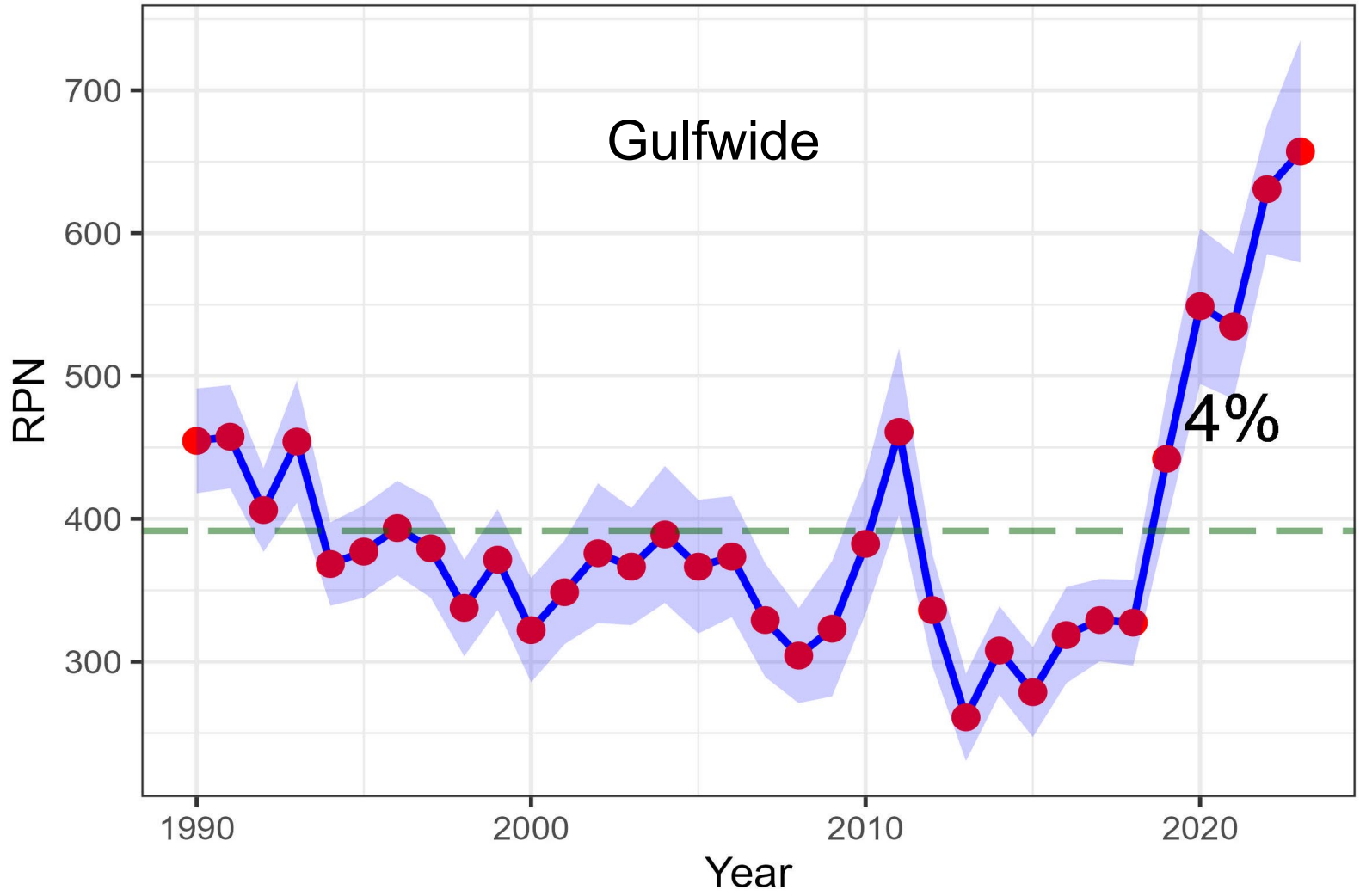
Sablefish ESP: Plan Team comments

- The Teams discussed the need for additional socioeconomic indicators, including
  - Economics (e.g., size grade data) fine-tuned and broken out by sector for the sablefish ESP
- The Teams noted fishery changes(i.e., gear changes, increase in production in BSAI, recruitment events)
- Highlighted the need to be further evaluated from a socioeconomic standpoint.
- Noted that sablefish in EBS bottom trawl survey appear to differ from sablefish in fisheries in the EBS

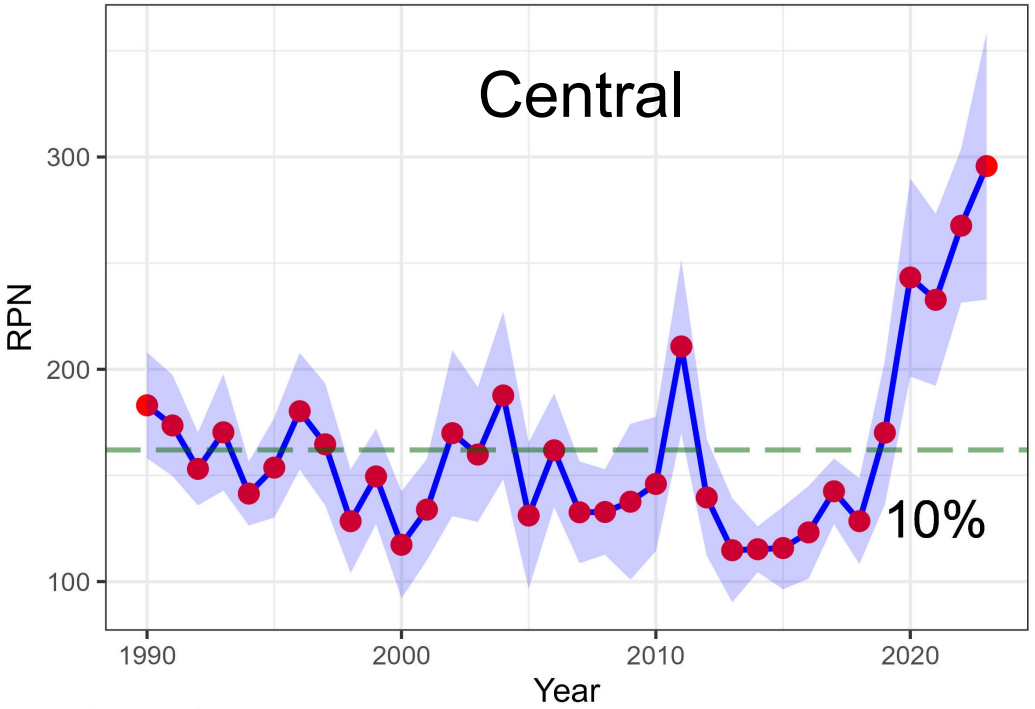
Sablefish (update)

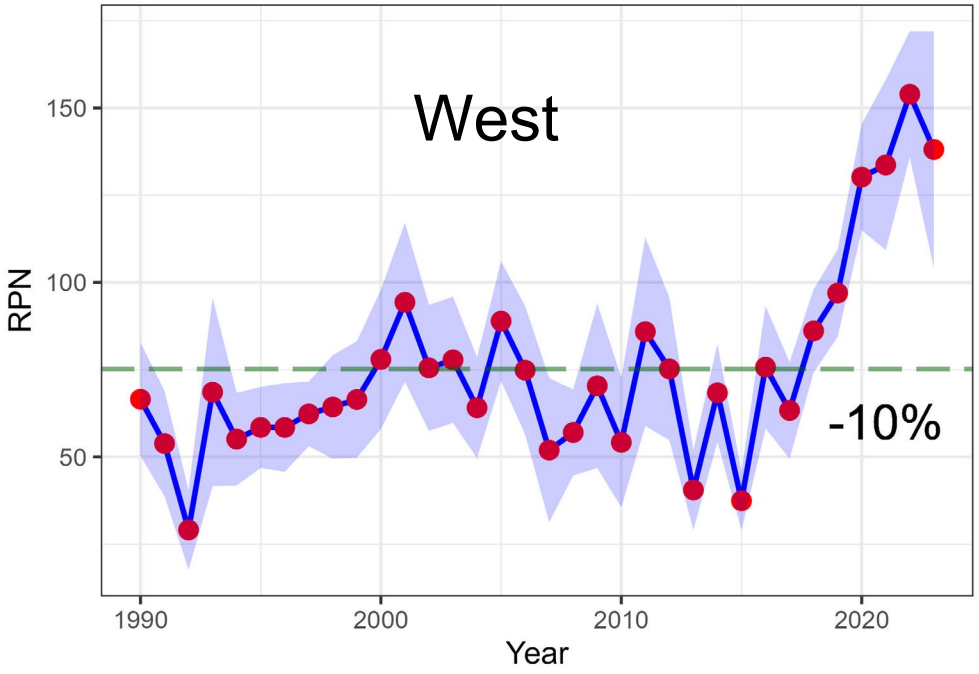


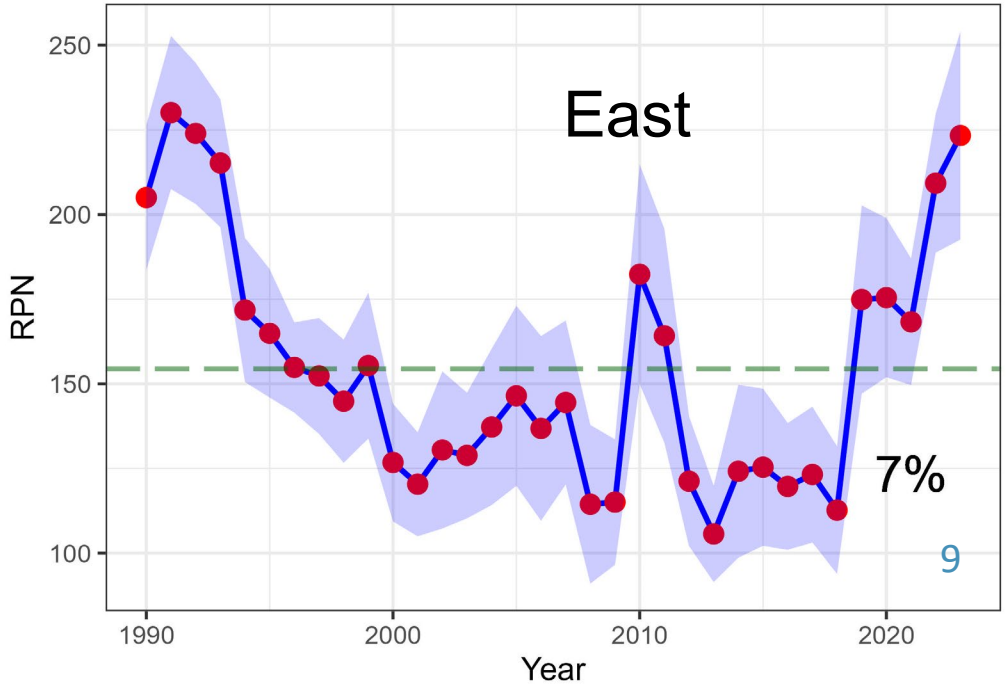
Sablefish: GOA



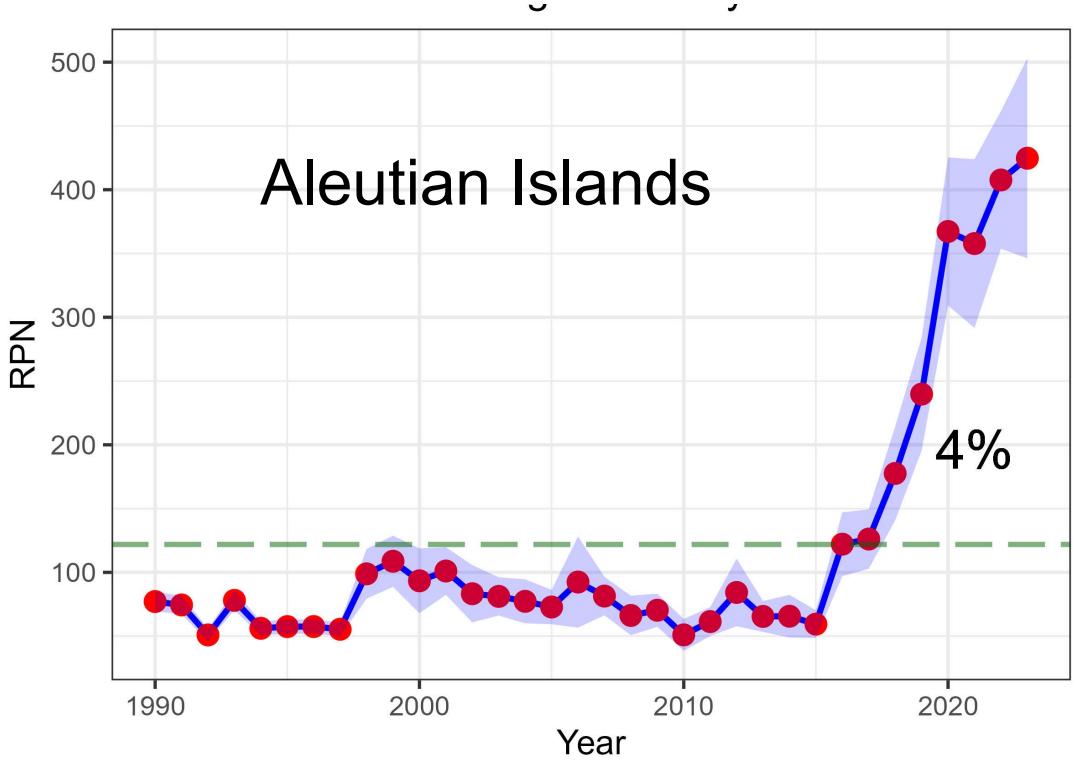
Sablefish: GOA

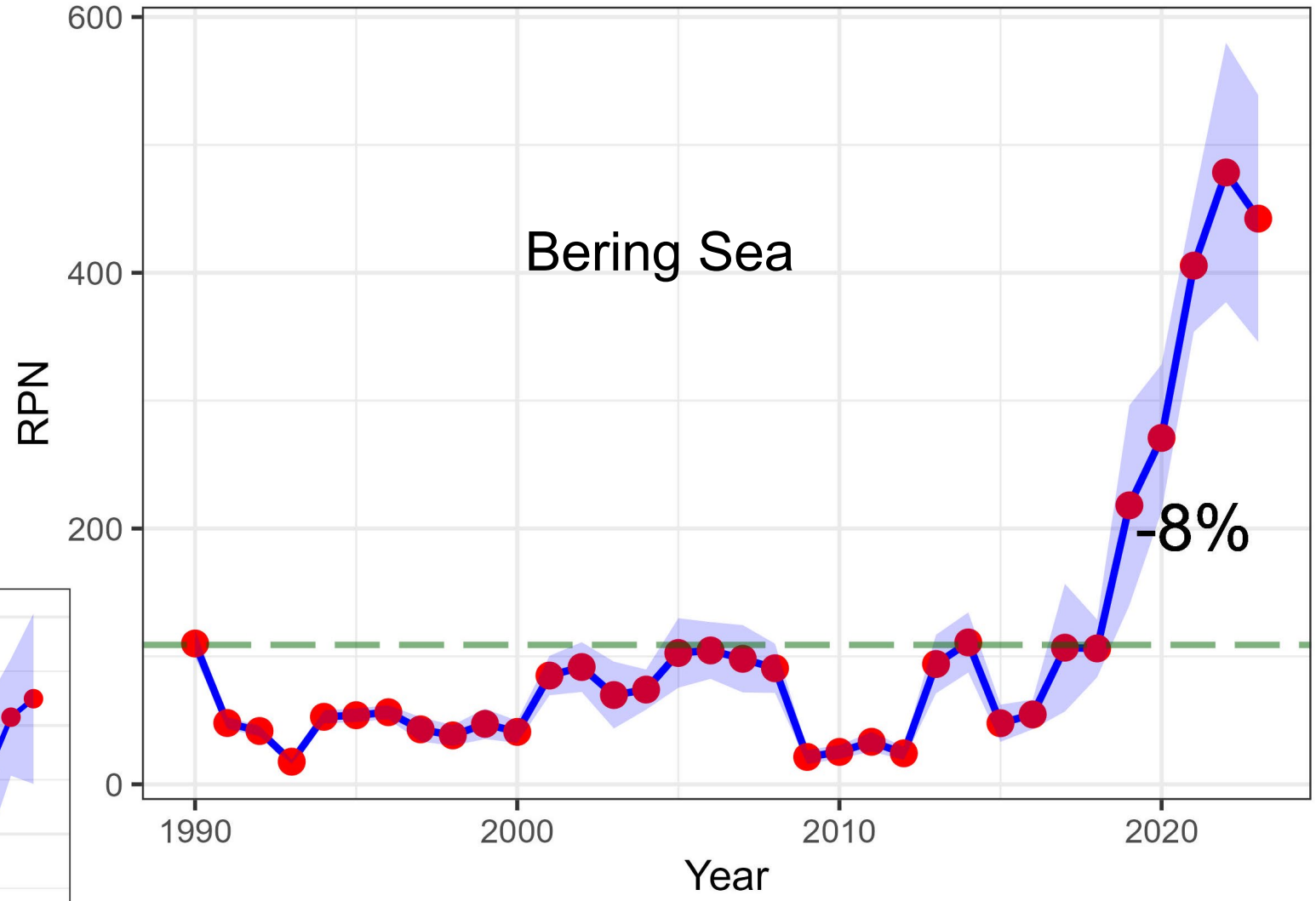






Sablefish: BSAI





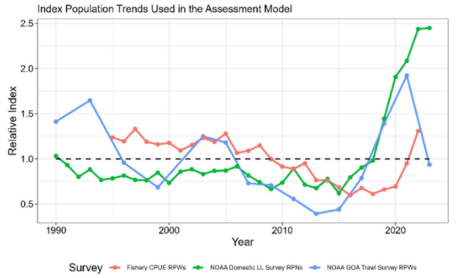
Sablefish Summary

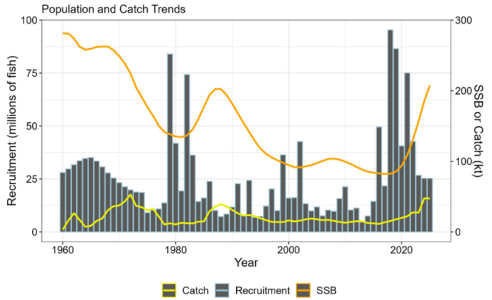
- Rapid transition to pot gear (> 85% of fixed gear catch)
- Influx of small fish
  - Decreasing economic value and flooded markets
  - NPFMC small sablefish release amendment ongoing
  - A maximum catch strategy will likely maintain long-term downward SSB trend,
    - *If* recruitment reverts to average conditions
  - 2024 SSB
    - 75% Made up of 2014-2020 year-classes

2023 Alaskan Sablefish SAFE (*Anoplopoma fimbria*)

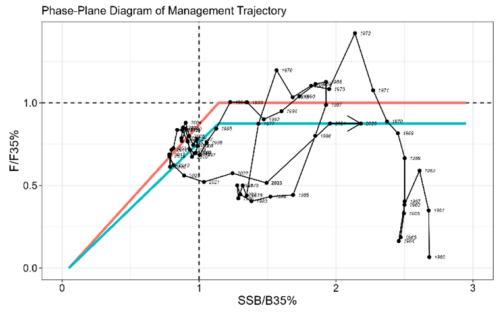
Data and Stock Assessment Model

- Following steady increases in abundance and biomass indices since 2015, the 2023 NOAA longline survey abundance was stable matching the 2022 value, the NOAA Gulf of Alaska trawl survey declined precipitously, and the fixed gear fishery CPUE continued to increase.
- The author proposed model (*23.5*) integrated minor data refinements and parametrization updates, but the main structure was consistent with the previously accepted model (*21.12*).
- The biomass and SSB continue to increase, while recruitment has been at or above the mean since 2014.





Stock Status and ABC Recommendations



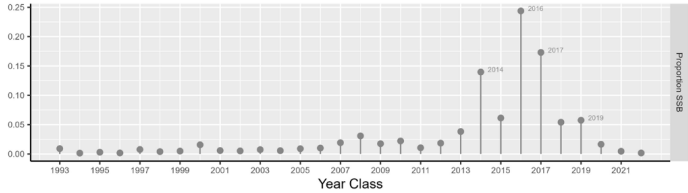
Quantity	2022 SAFE (Projections for 2023)	2023 SAFE (Projections for 2024)
$B_{100\%}$	305,595	299,901
$B_{40\%}$	122,238	119,960
$SSB_{(Terminal\_Yr+1)}$	159,788	185,079
$SSB_{(Terminal\_Yr+1)}/B_{100\%}$	52%	62%
$F_{ABC(Terminal\_Yr+1)}$	0.081	0.086
$ABC_{w(Terminal\_Yr+1)}$	40,502	47,146
$OFL_{w(Terminal\_Yr+1)}$	47,390	55,084

*SSB projections are based on specified catch for the terminal year. ABC_w and OFL_w are the recommended values after whale depredation has been taken into account.

- The resource is *not overfished* and *overfishing is not occurring*.
- Recent ABCs have not been fully utilized with catch averaging ~70% of the ABC over the last 3 years.
- The ABC increased by 16% due to continued maturation and growth (in weight) of the population.

Other Considerations

- The population age-structure remains contracted relative to historic levels.
- 2014 – 2020 year classes comprise > 75% of projected 2024 SSB.



Sablefish

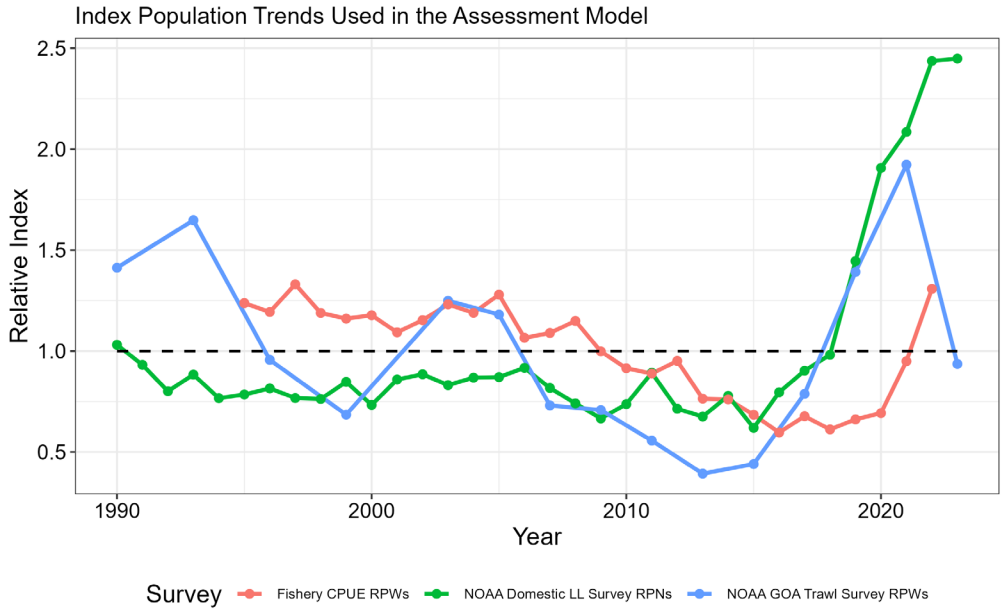
Appendices

Last operational full assessment for sablefish was in 2021, described here:
https://www.fisheries.noaa.gov/resource/data/2021-assessment-sablefish-stock-alaska

Appendix 3C. Ecosystem and Socioeconomic Profile (ESP): Available here
Appendix 3D. Sablefish bycatch in the Eastern Bering Sea: Available here
Appendix 3E. Catch rates and fixed gear fleet observations: Available here
Appendix 3F. Observer coverage and sablefish sampling: Available here

Sablefish data

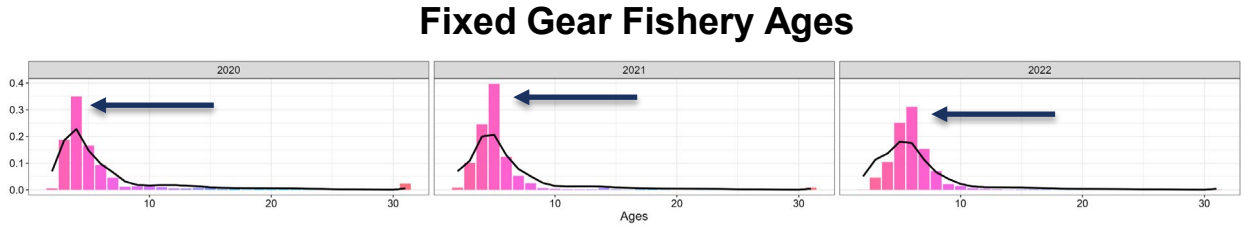
- Indices indicate stock trend leveling off
- BSAI constitutes > 50% of survey numbers again in 2023
- 2016 year-class continues to dominate the composition data

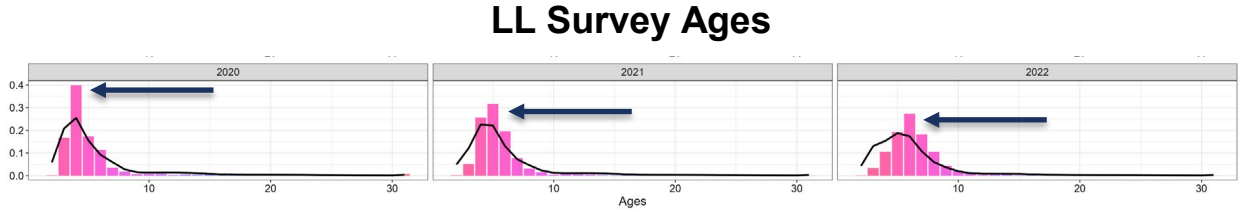


LL Survey: No Change

CPUE Index: 27% Increase

Trawl Survey: 50% Decline





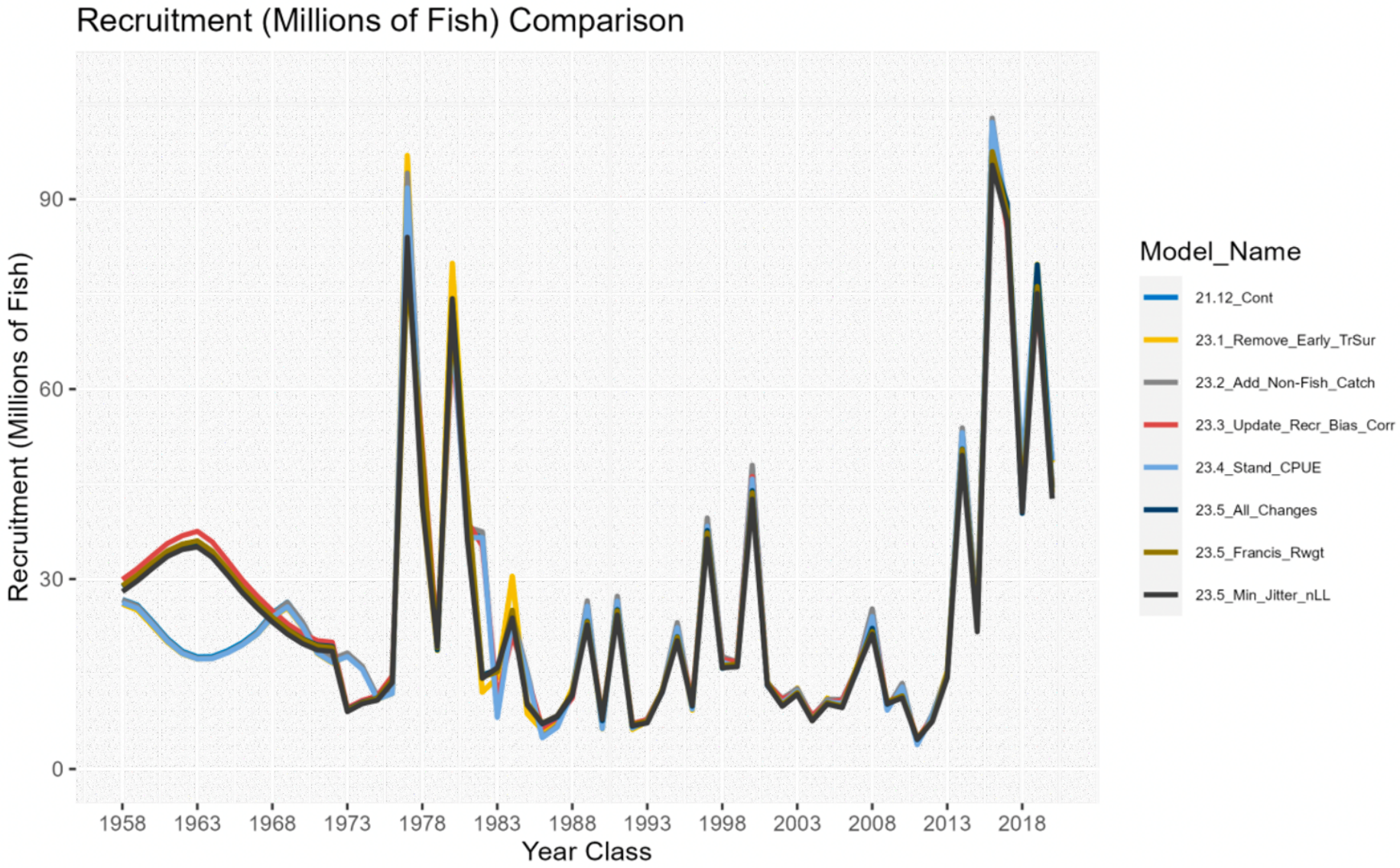
Sablefish models

Update assessment(+) with minor changes to data and parametrization compared to *21.12*:

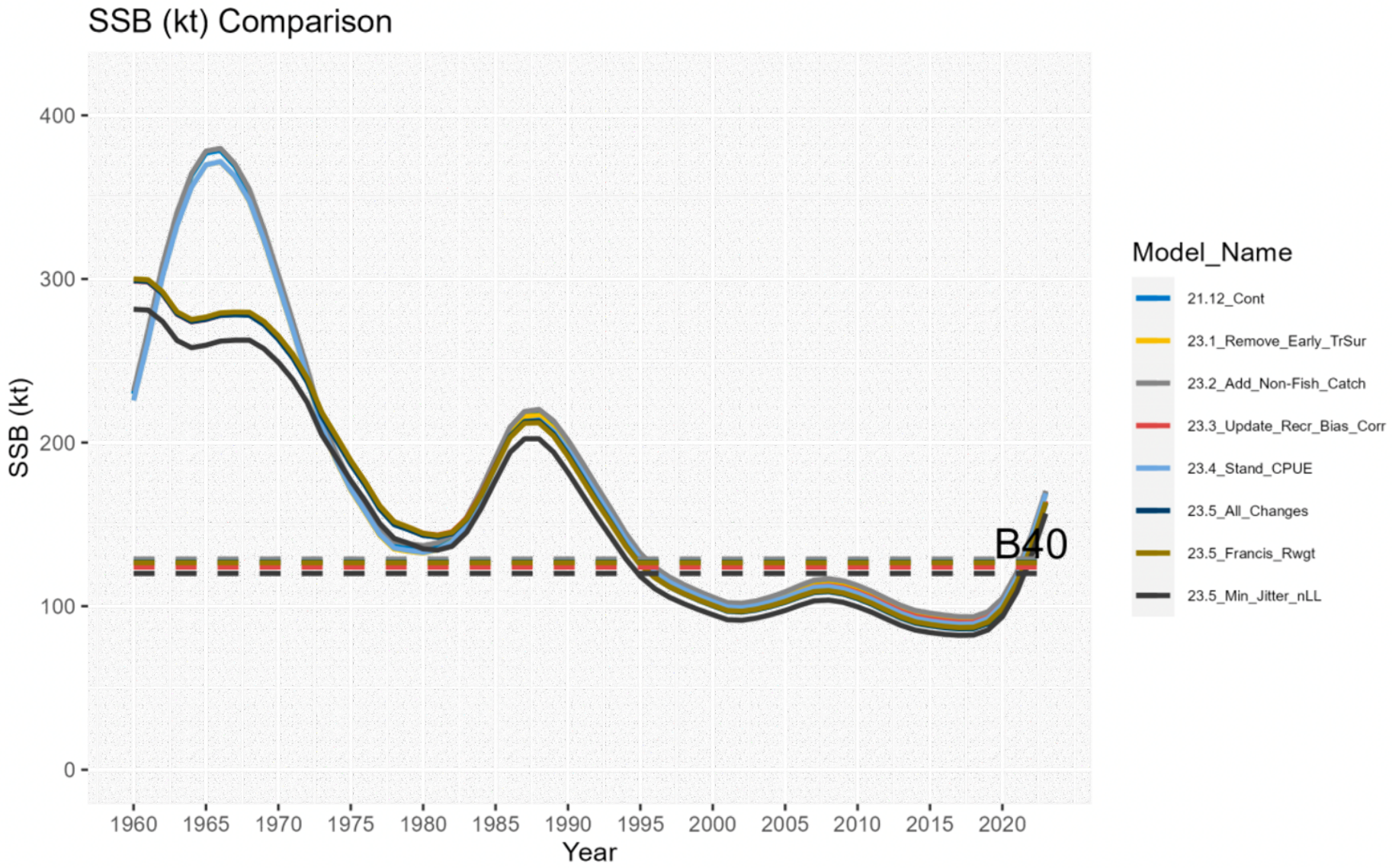
- *Model 23.1*: removed the 1984 and 1987 trawl survey data
- *Model 23.2*: incorporated non-commercial catch (SSC)
- *Model 23.3*: minor parametrization updates including:
  - Implemented Methot and Taylor (2011) bias correction
  - Allowed further selectivity parameter sharing to improve stability
  - Removed unnecessarily estimated fishing mortality parameters
- *Model 23.4*: implemented the combined gear, standardized CPUE index (Cheng et al., 2023)
- ***Model 23.5* (recommended)**: included updates, applied Francis reweighting, jitter analysis

No major impacts or changes in data fits

Sablefish models



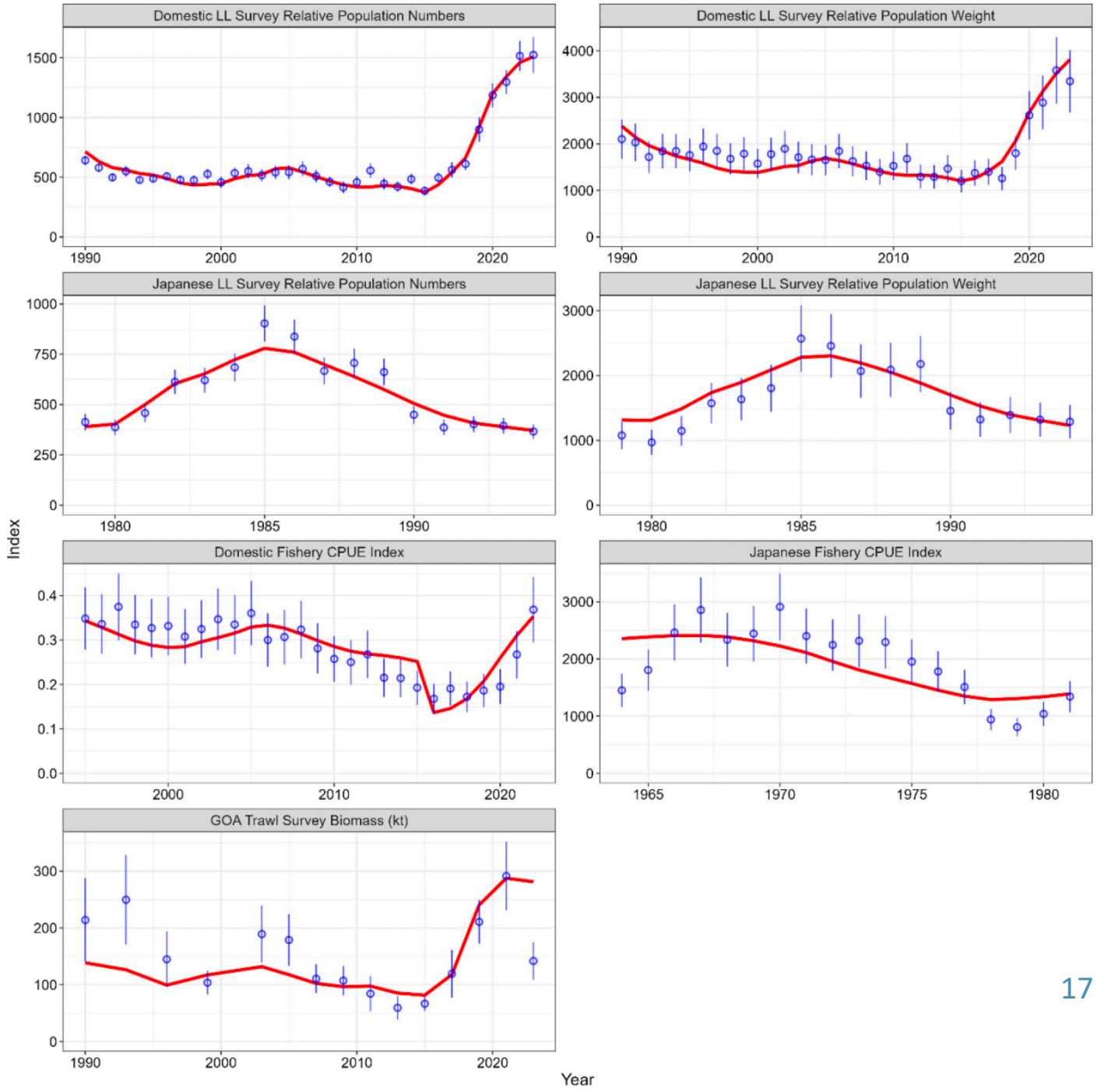
Sablefish models



Sablefish fit to indices

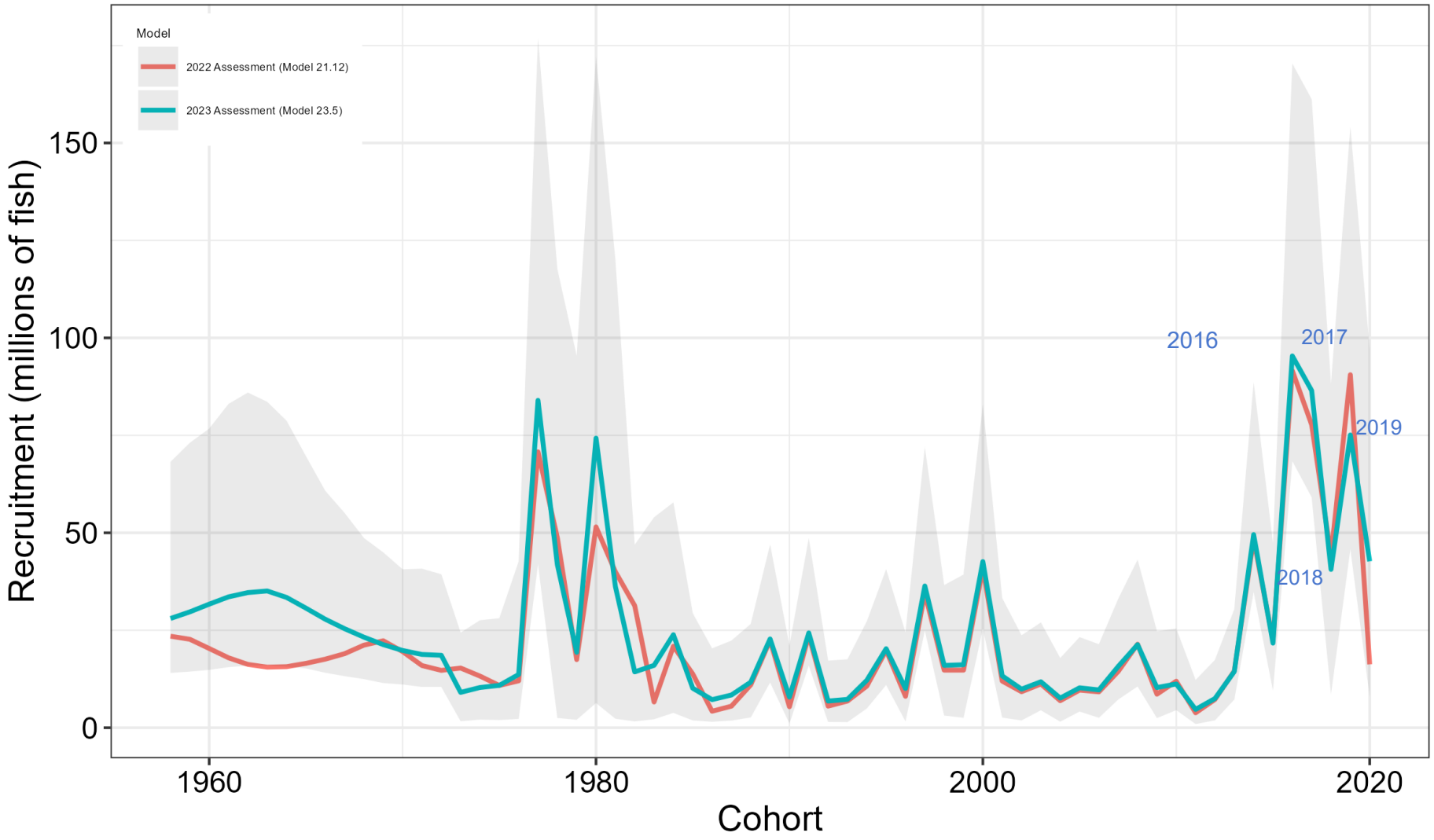
- Fits to indices

- **Note:** Fixed gear fishery catch-per-unit effort approach (Cheng et al., 2023) combined data from both hook-and-line and pot gear



Sablefish

Model 23.5 Recruitment Compared to Previous SAFE



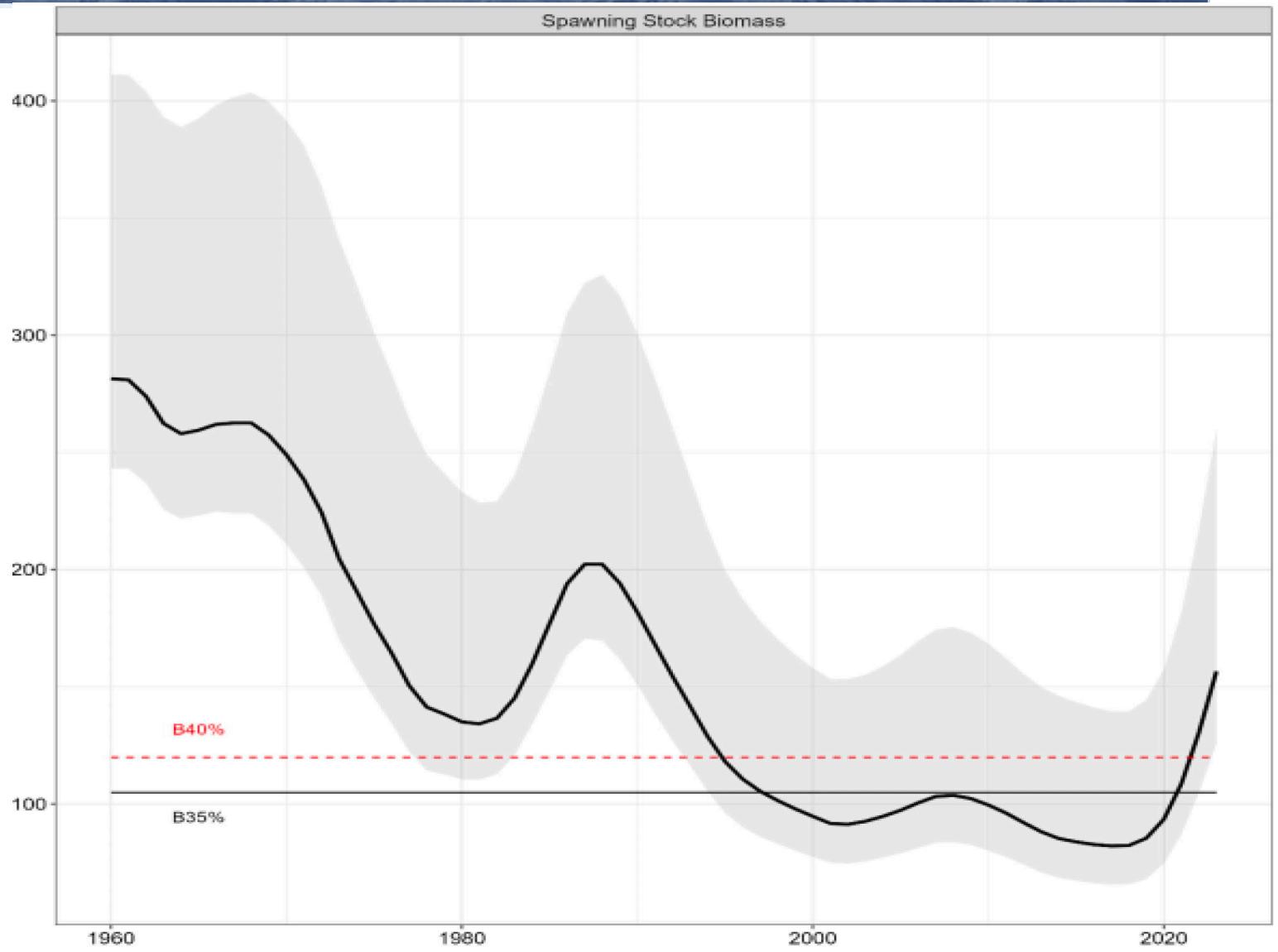
Recruitment

Fishing mortality remains at low levels (< FABC)

2016, 2017, and 2019 year classes are 3 of the largest on record

Sablefish

- Spawning biomass
  - At B52% in 2023
  - Projected to be at B62% by 2024



Sablefish OFL and ABCs

- **Max ABC = 47,146 t** (+7,000 t from 2023 ABC)
  - Only ~70% utilization in recent years
- Apportionment based on 5-year average survey biomass proportions by area **(no stair step)**

Year	**2023**				**2024**		**2025**	
Region	OFL_w	ABC_w	TAC	Catch*	OFL_w	ABC_w**	OFL_w	ABC_w**
BS	--	8,417	7,996	4,851	--	11,450	--	11,499
AI	--	8,884	8,440	1,924	--	13,100	--	13,156
GOA	--	23,201	23,201	13,581	--	22,596	--	22,695
WGOA	--	4,473	4,473	2,357	--	4,699	--	4,719
CGOA	--	9,921	9,921	5,547	--	9,651	--	9,693
**WYAK	--	3,205	3,205	2,068	--	2,926	--	2,940
**EY/SEO	--	5,602	5,602	3,610	--	5,320	--	5,343
Total	47,390	40,502	39,637	20,357	55,084	47,146	55,317	47,350

*As of October 10, 2023 **After 95:5 trawl split and whale depredation

Plan Team discussion on sablefish

The 2023 assessment recommends large increases in ABC in the AI and in the BS.

Past concerns with adequate monitoring of the sablefish fishery in these areas. The Teams benefited from the inclusion of Appendix F: Observer Coverage and Sampling of the Sablefish Stock and appreciate the work on that front.

To that end, the Teams:

- **Recommended continued collaboration between assessment scientists and the FMA Division of the AFSC to further expand on these issues to ensure quality data for this and other assessments.**
- **Agreed with the author's recommended model, Model 23.5, with no reduction from maxABC.**

Sculpins—ecosystem component

Combined presentation for BSAI and GOA

- 48 species with diverse life histories

Ecosystem Report of the Sculpin Stock Complex in the Gulf of Alaska, Eastern Bering Sea, and Aleutian Islands

Ingrid Spies

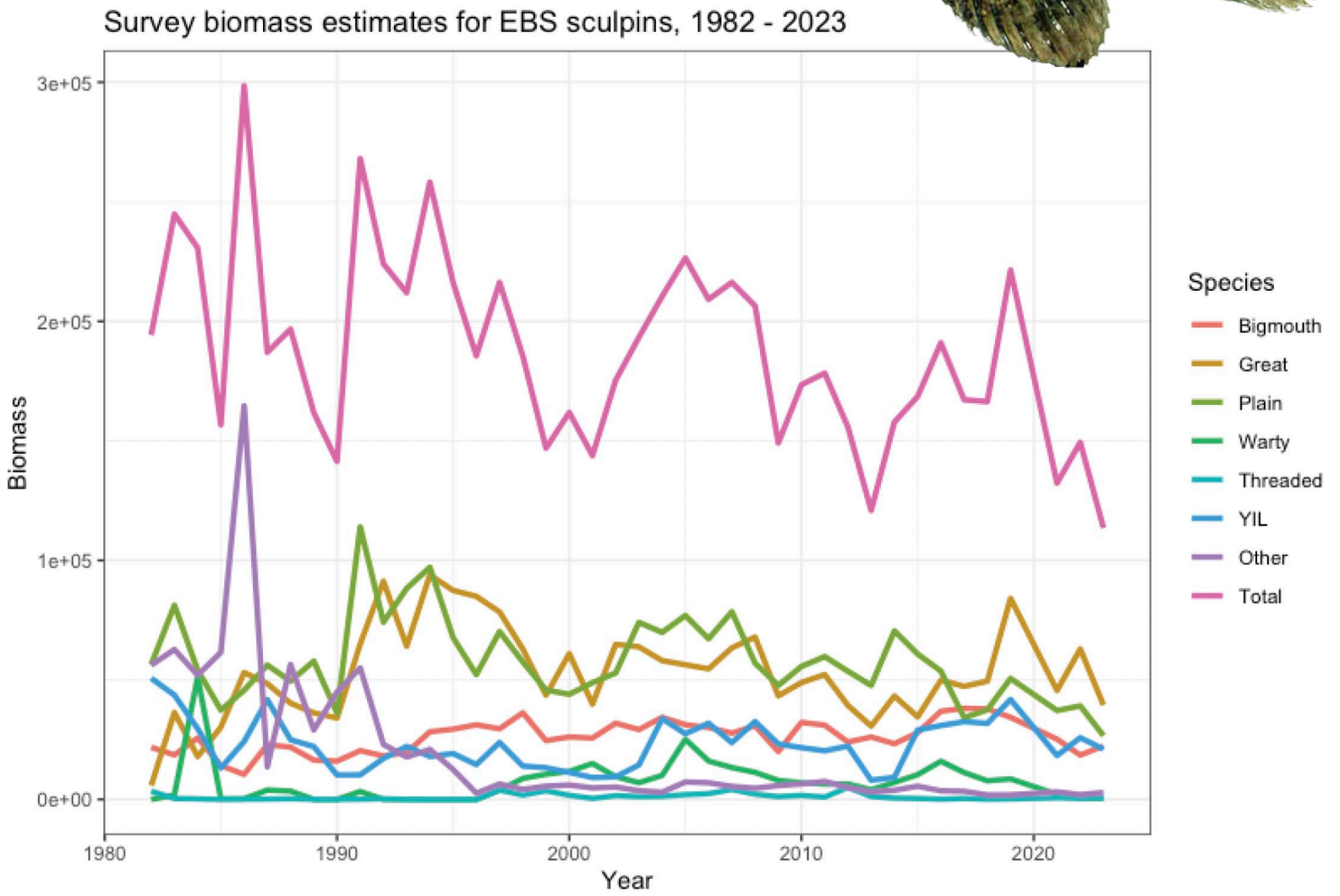
November 2023

Executive Summary

Sculpins are managed as non-target species in the BSAI and GOA, and are taken only as bycatch during directed fishing for other species. In 2020, a final rule was issued which reclassified sculpins as Ecosystem Component category, non-target species in the Bering Sea/Aleutian Islands (BSAI) (Amendment 121) and Gulf of Alaska (Amendment 110) Groundfish Fishery Management Plans (85 FR 06310, March 23, 2020 for the proposed rule, and 85 FR 41427, July 10, 2020 for the final rule). Prior to this rule the sculpin complexes were not in the FMPs (i.e. "nonspecified"). Under this rule, sculpins are not allowed to be targeted, and there is a Maximum Retainable Allowance (MRA) of 20% in the BSAI and GOA (Federal Register, Proposed Rules, Vol. 79, No. 93). This rule applies to all vessels processing groundfish harvested in the BSAI or GOA (50 CFR 679) and it prohibits directed fishing.

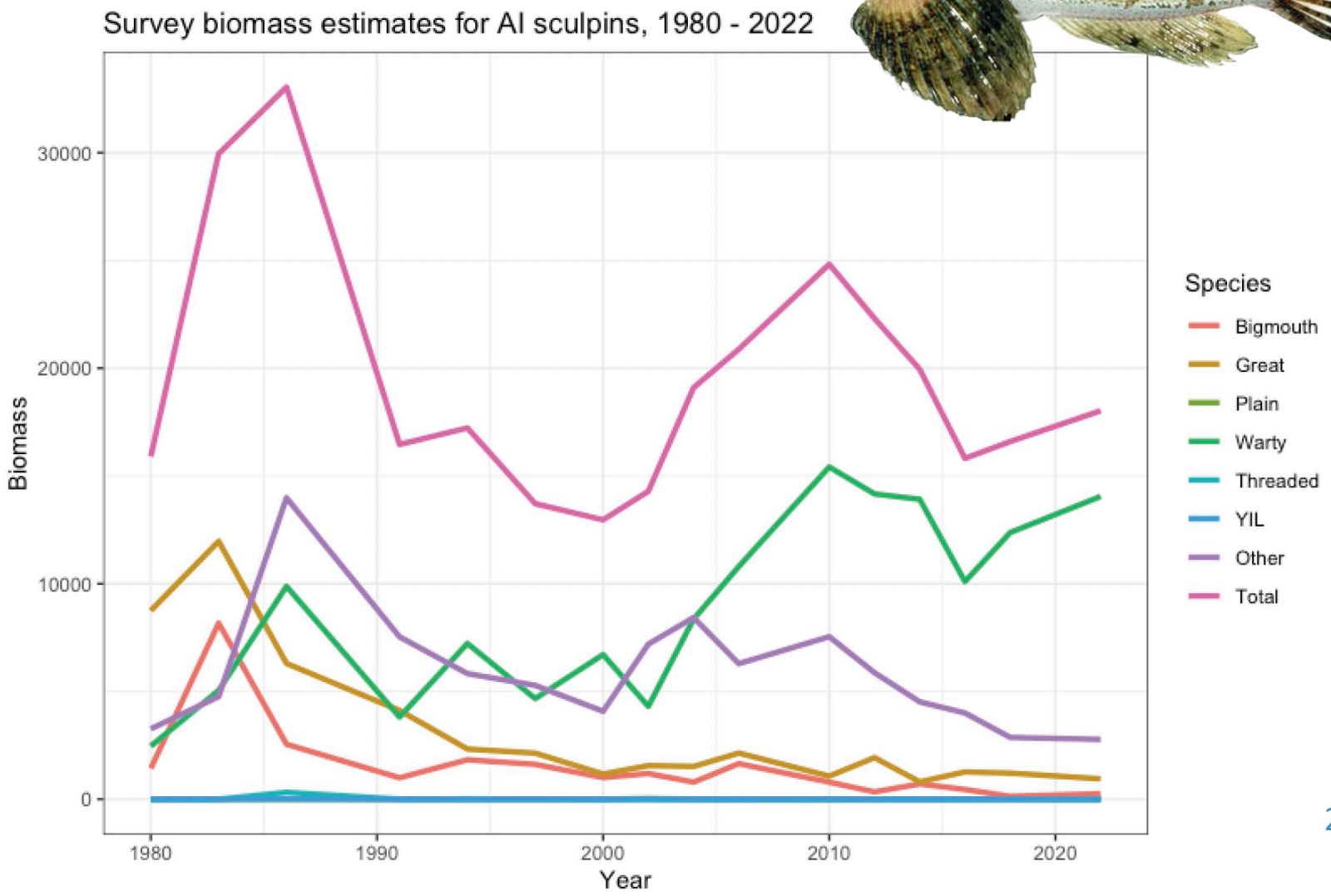
Sculpins—ecosystem component

Bering Sea: trending down (in aggregate)



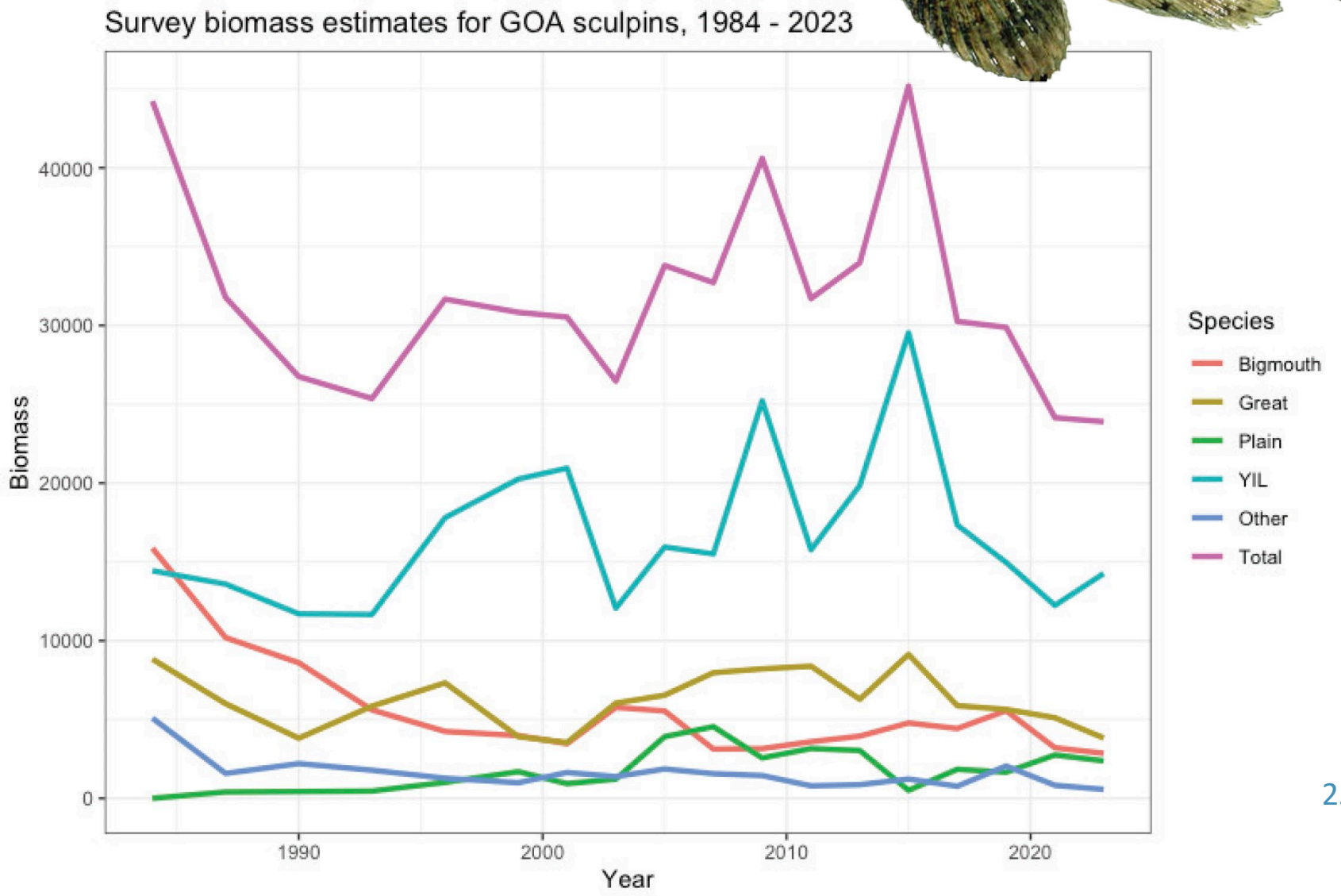
Sculpins—ecosystem component

Aleutian Islands: mixed trends



Sculpins—ecosystem component

Gulf of Alaska: mixed trends



Sculpins—ecosystem component

The Team appreciates having the information on the OFL (perhaps in a format that helps clarify that the numbers are for reference not management action).