Ecosystem & Socioeconomic Profile (ESP): Alaska Sablefish



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November 2026 Groundfish Plan Team

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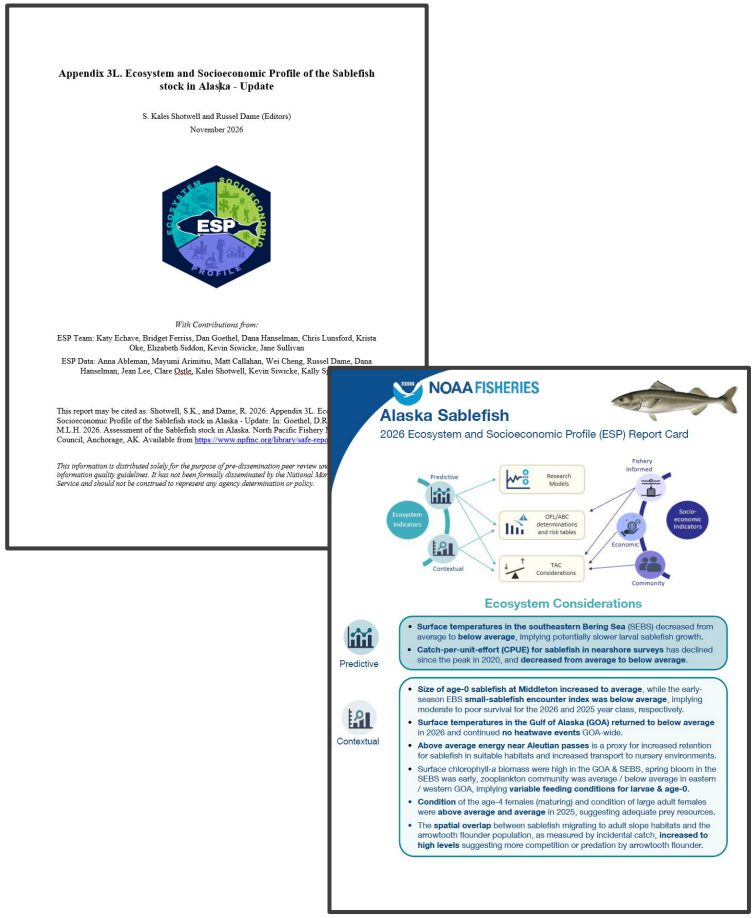
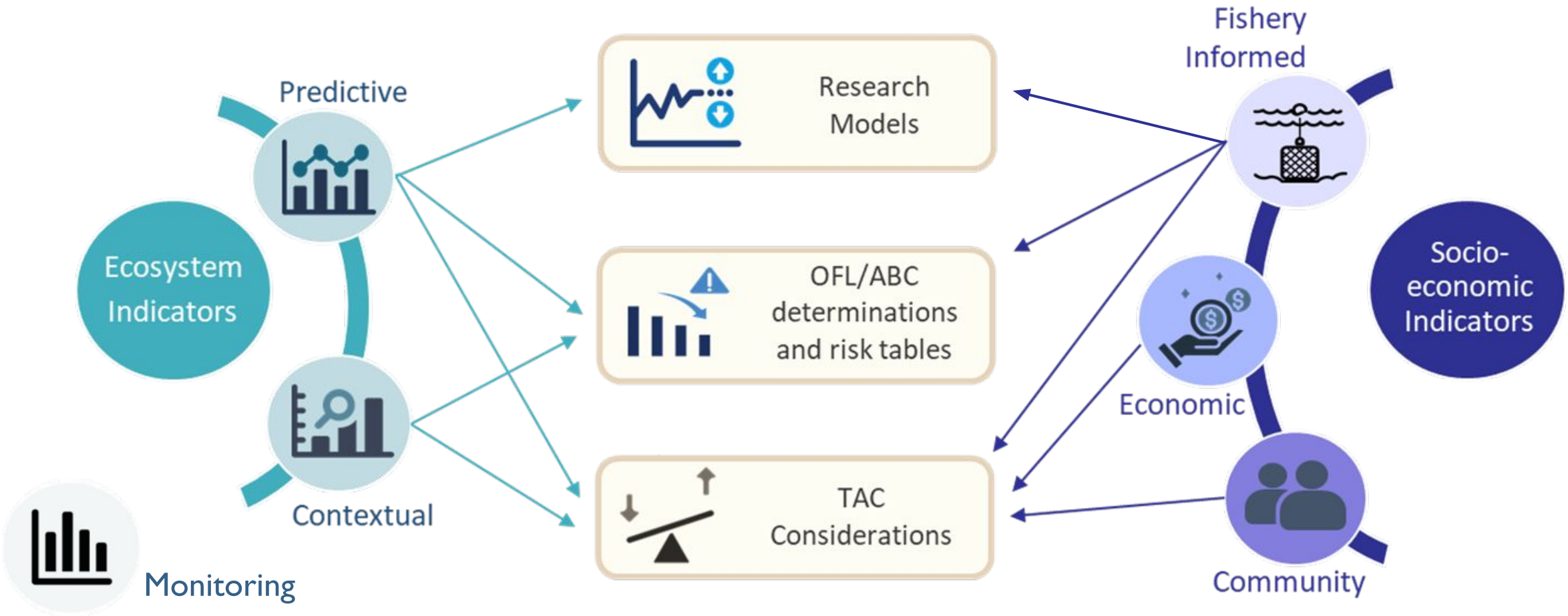
Jane Sullivan

Overview

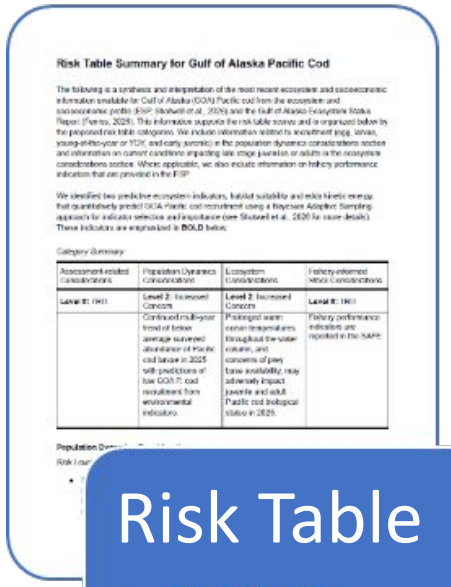
- Appendix 3L Alaska Sablefish SAFE Report
- New ESP categories and templates
- Bayesian Adaptive Sampling (BAS) analysis for ecosystem indicators (frozen from 2024 ESP)
- Summary of indicator status/trends
- Future plans



Indicator Pathways to Decisions

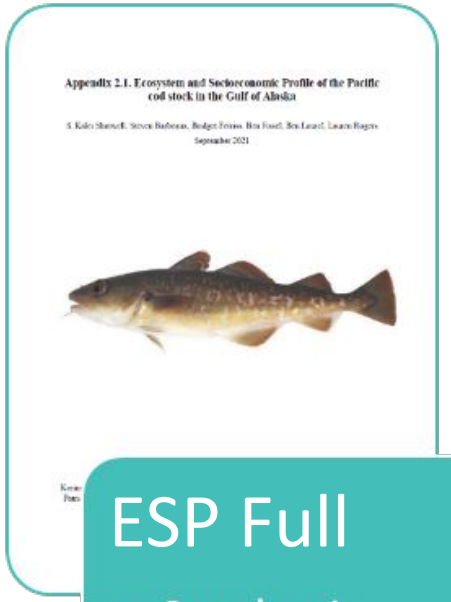


Templates for Streamlining Communication


Risk Table Summary for Gulf of Alaska Pacific Cod

Risk Table

- ESP/ESR Coordination
- Internal Doc


Appendix 2.1. Ecosystem and Socioeconomic Profile of the Pacific cod stock in the Gulf of Alaska

ESP Full

- Synthesis
- Analysis
- First/CIE ESP


Appendix 2.1. Ecosystem and Socioeconomic Profile of the Pacific cod stock in the Gulf of Alaska: Update

ESP Update

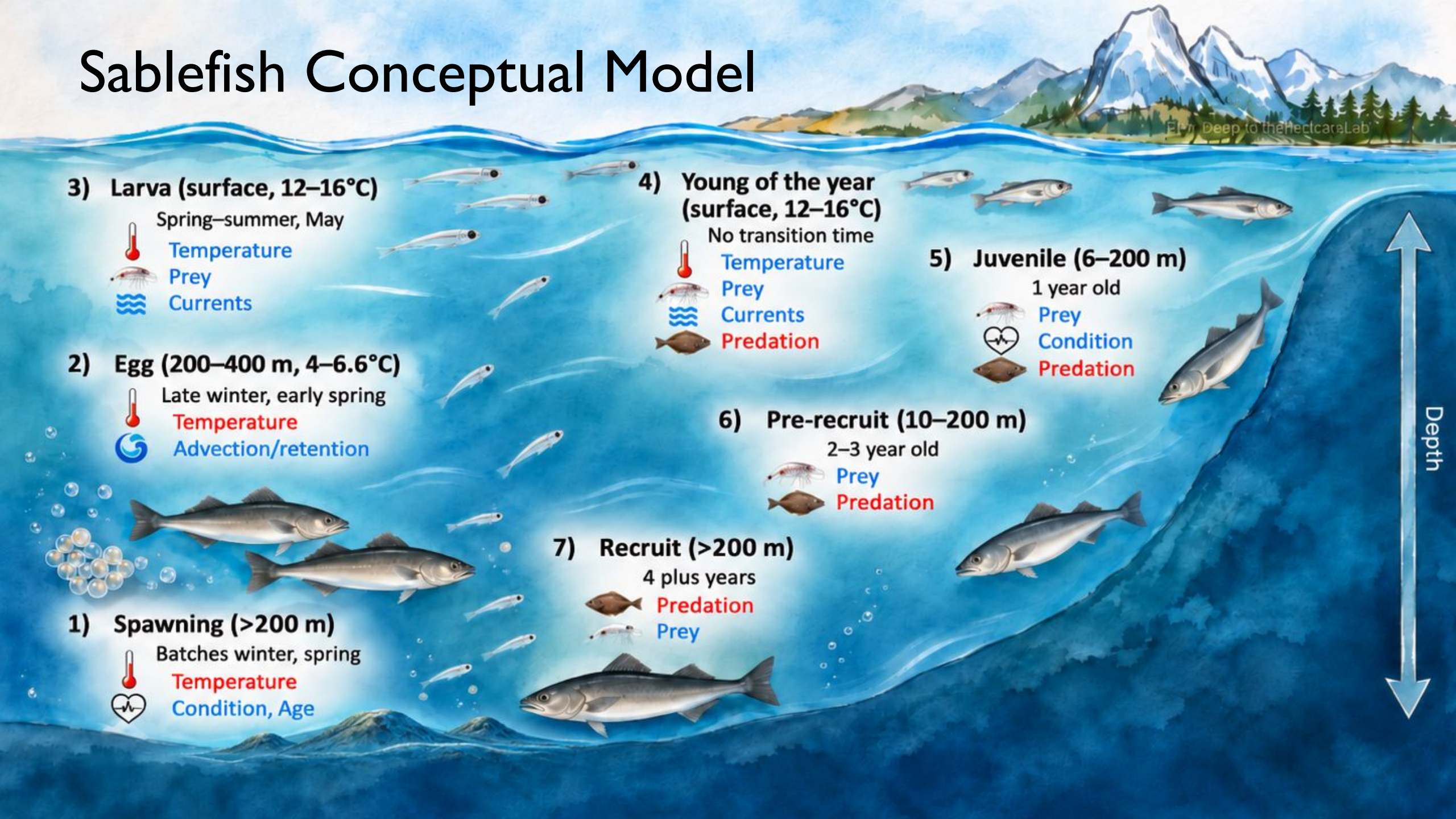
- Reference
- Analysis
- Interim ESP



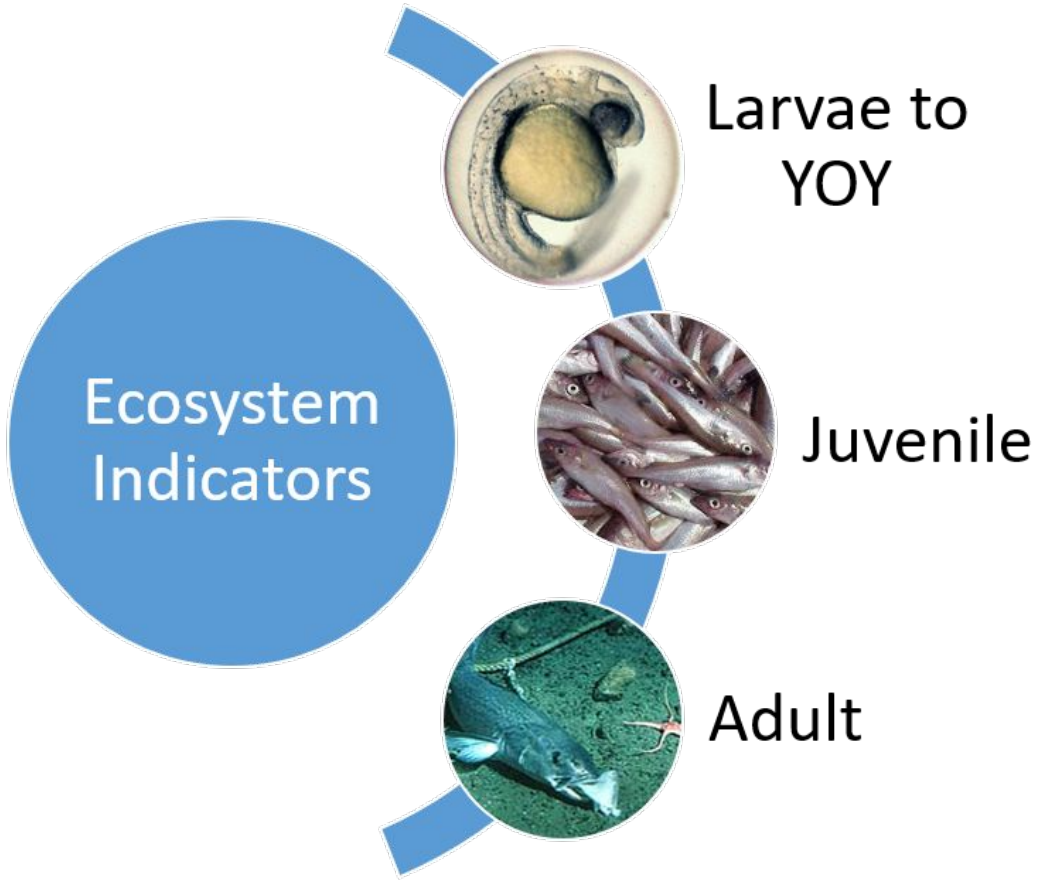
ESP Card

- Highlights
- Current Year
- Infographic

Sablefish Conceptual Model



Ecosystem Indicators

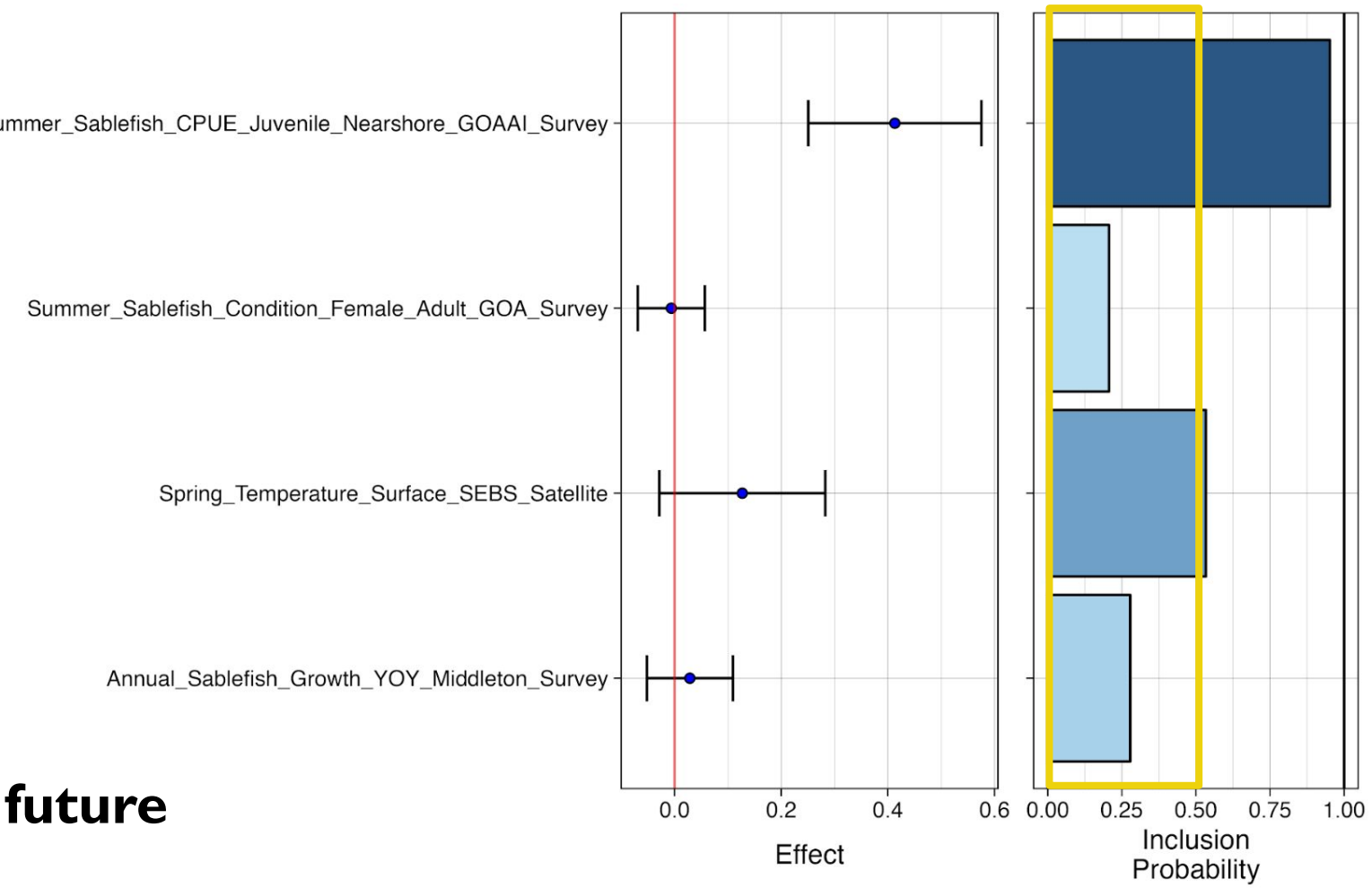


- Annual Marine heatwave index (model), +
- **Sea surface temperature** (2, satellite), +
- Eddy kinetic energy (satellite), +
- Chlorophyll-a biomass (2, satellite), +
- Peak timing of the spring bloom (2, satellite), -
- Copepods community (2, CPR), +
- **YOY size** (auklet seabird diets), +
- **Juvenile CPUE** (ADF&G nearshore), +
- Juvenile CPUE (bottom trawl survey), +
- Hauls of small sablefish (BSAI fishery), +
- Bottom temperature (longline survey), -
- Age 4 (maturing) condition (longline survey), +
- **Adult condition** (longline survey), +
- Incidental catch sablefish (ATF fishery), -

Indicator Analysis - Importance Testing

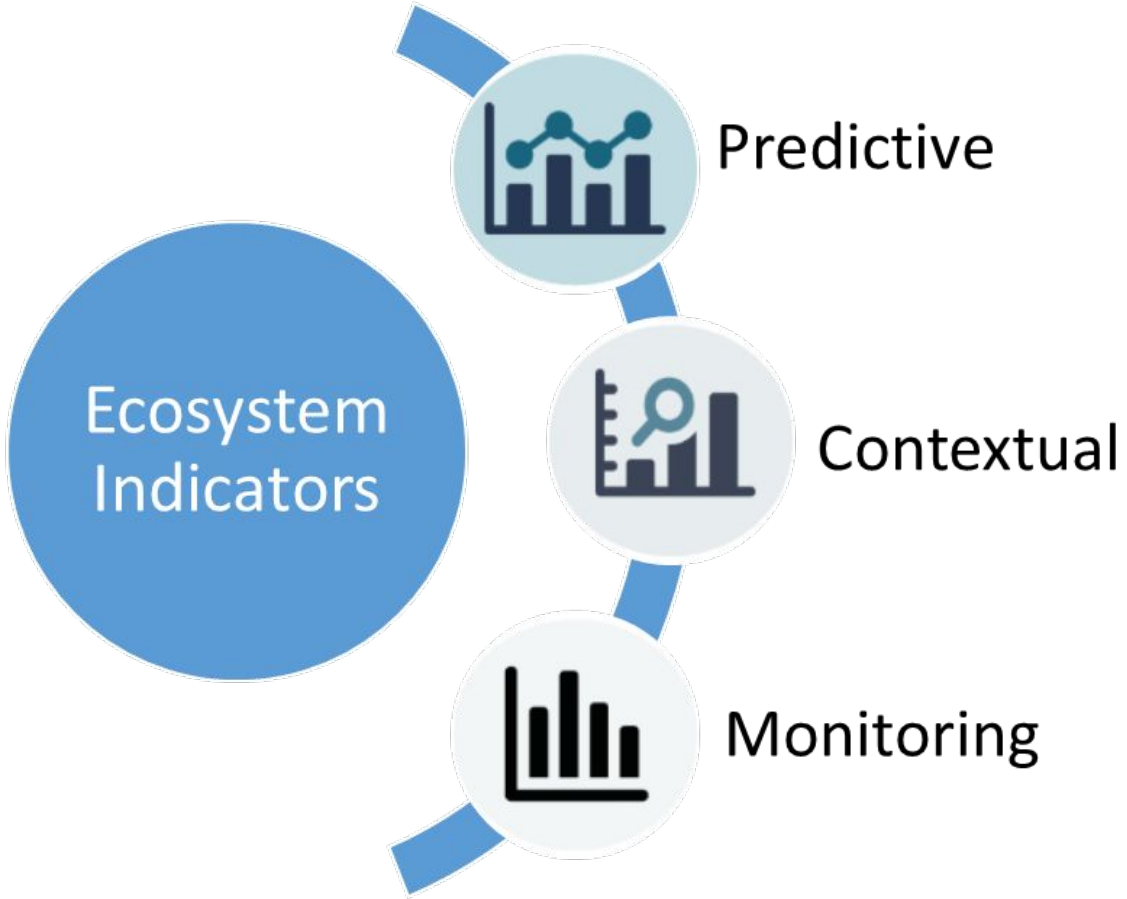
Two indicators with importance > 0.5:

- Juvenile sablefish CPUE in ADF&G nearshore survey
- Spring sea surface temperature from SEBS
- 1996-2019 year class



Note: Moving to DSEM in future

Ecosystem Indicator Categorization



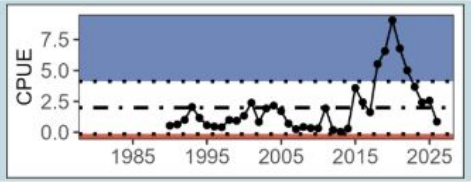
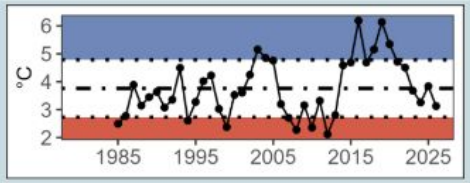
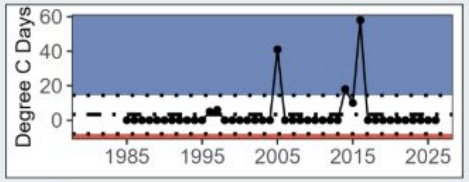
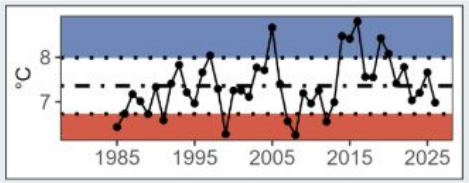
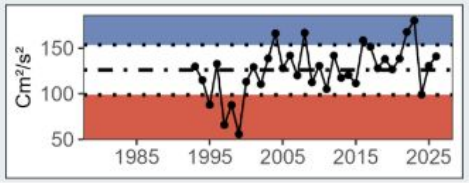
- **Sea surface temperature** (SEBS, satellite), +
- **Juvenile CPUE** (ADF&G nearshore), +
- Annual Marine heatwave index (model), +
- Sea surface temperature (GOA, satellite), +
- Eddy kinetic energy (satellite), +
- Chlorophyll-a biomass (2, satellite), +
- Peak timing of the spring bloom (2, satellite), -
- Copepods community (2, CPR), +
- YOY size (auklet seabird diets), +
- Juvenile CPUE (bottom trawl survey), +
- Hauls of small sablefish (BSAI fishery), +
- Bottom temperature (longline survey), -
- Age 4 (maturing) condition (longline survey), +
- Adult condition (longline survey), +
- Incidental catch sablefish (ATF fishery), -

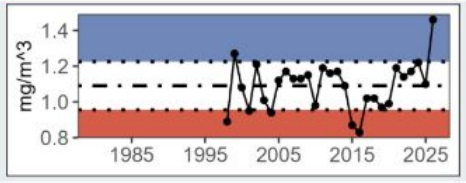
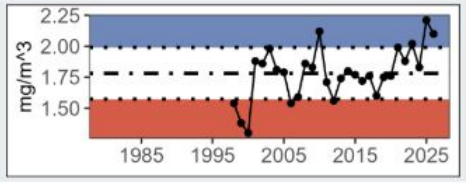
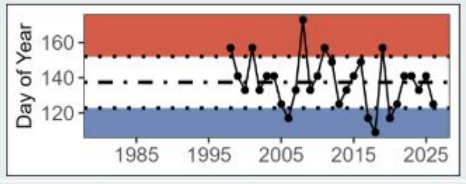
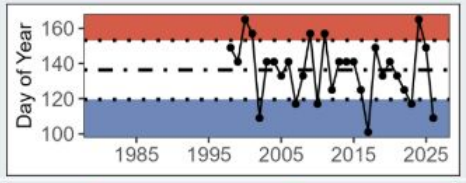
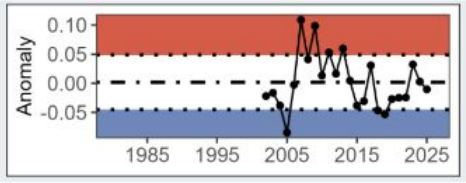
Alaska Sablefish Report Card



Predictive

Contextual

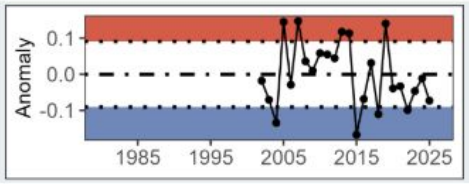
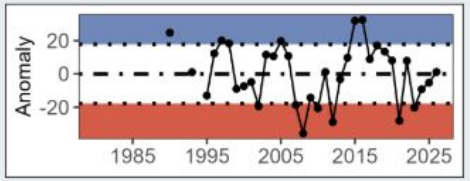
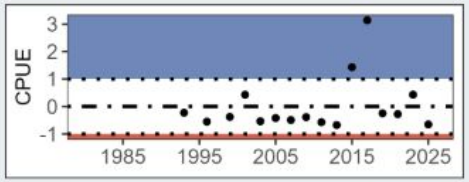
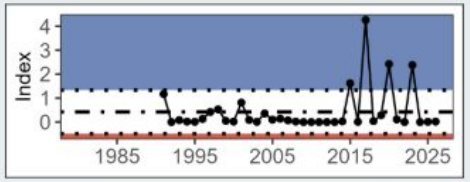
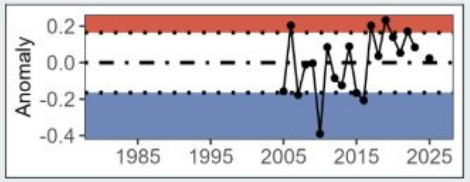
Indicator	Status	Trend
CPUE Juvenile Sablefish in the GOA-AI	Near long-term mean	
Spring Sea Surface Temperature in SEBS	Near long-term mean	
Heatwave in GOA	Near long-term mean	
Spring Sea Surface Temperature in GOA	Near long-term mean	
Eddy Kinetic Energy in Amchitka	Near long-term mean	

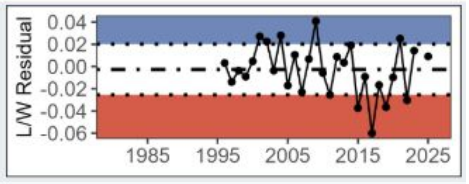
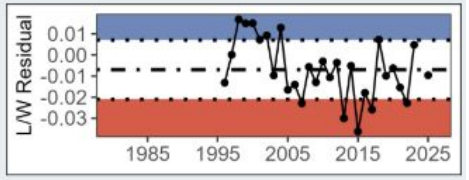
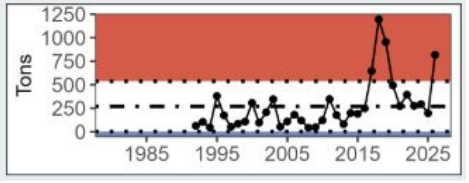
Indicator	Status	Trend
Spring Chlorophyll-*a* Biomass in GOA	Above long-term mean	
Spring Chlorophyll-a Biomass in SEBS	Above long-term mean	
Peak Timing of the Spring Bloom in GOA	Near long-term mean	
Peak Timing of the Spring Bloom in SEBS	Below long-term mean	
Copepod Community Size in EGOA	Near long-term mean	

Alaska Sablefish Report Card



Contextual

Indicator	Status	Trend
Copepod Community Size in WGOA	Near long-term mean	
Size of YOY Sablefish in Middleton	Near long-term mean	
CPUE Juvenile Sablefish in GOA	Near long-term mean	
Small Sablefish Index in Fishery	Near long-term mean	
Summer Temperature at 250 m in GOA	Near long-term mean	

Indicator	Status	Trend
Condition Age-4 Female Sablefish in GOA Survey	Near long-term mean	
Condition Adult Female Sablefish in GOA Survey	Near long-term mean	
Incidental Catch Sablefish in Arrowtooth Fishery	Above long-term mean	

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2026 Ecosystem and Socioeconomic Profile (ESP) Report Card Summary



Predictive Indicators

Surface Temperature: Below average in the Southeastern Bering Sea, implying potentially slower larval sablefish growth.

Nearshore Abundance: Sablefish CPUE from ADF&G has declined since the peak in 2020 and is now below average.

Contextual Indicators

Recruitment: Age-0 size in seabird diets at Middleton increased to average, but small-sablefish index in fishery was below average.

Ocean conditions: GOA temperatures returned to below average with no heatwaves; increased eddy kinetic energy near Aleutian passes may improve larval retention and transport.

Prey availability: High chlorophyll-*a*, early spring blooms, and variable zooplankton abundance suggest variable feeding for larvae and age-0.

Fish Condition: Above-average condition of maturing and average condition of large adult females suggests adequate prey resources.

Predation / Competition: Increased spatial overlap with arrowtooth flounder in fishery suggests potentially greater predation or competition.

Overall Takeaway

Predictive indicators suggest less favorable conditions for sablefish growth with declines in nearshore survey, while contextual indicators suggest average to above average conditions.

Socioeconomic Indicators



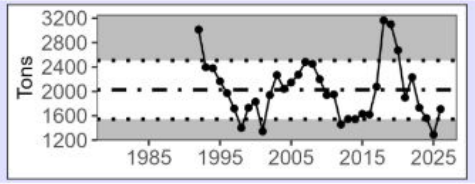
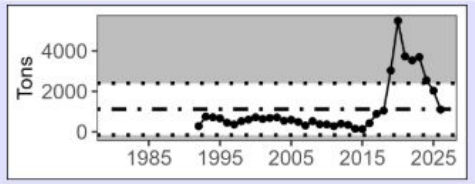
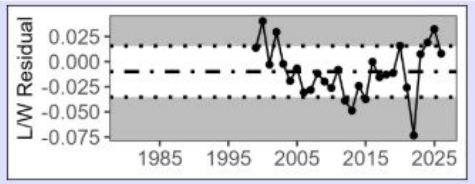
1. Incidental catch (GOA fisheries)
2. Incidental catch (BSAI fisheries)
3. Fish condition GOA fishery

4. Retained catch
5. Ex-vessel price per pound
6. TAC utilization
7. Ex-vessel value

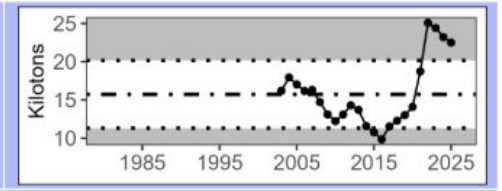
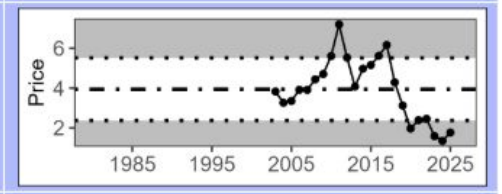
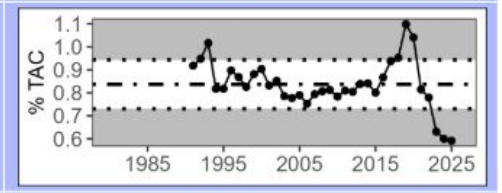
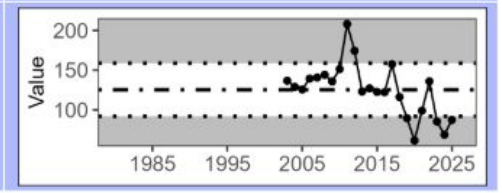
Alaska Sablefish Report Card



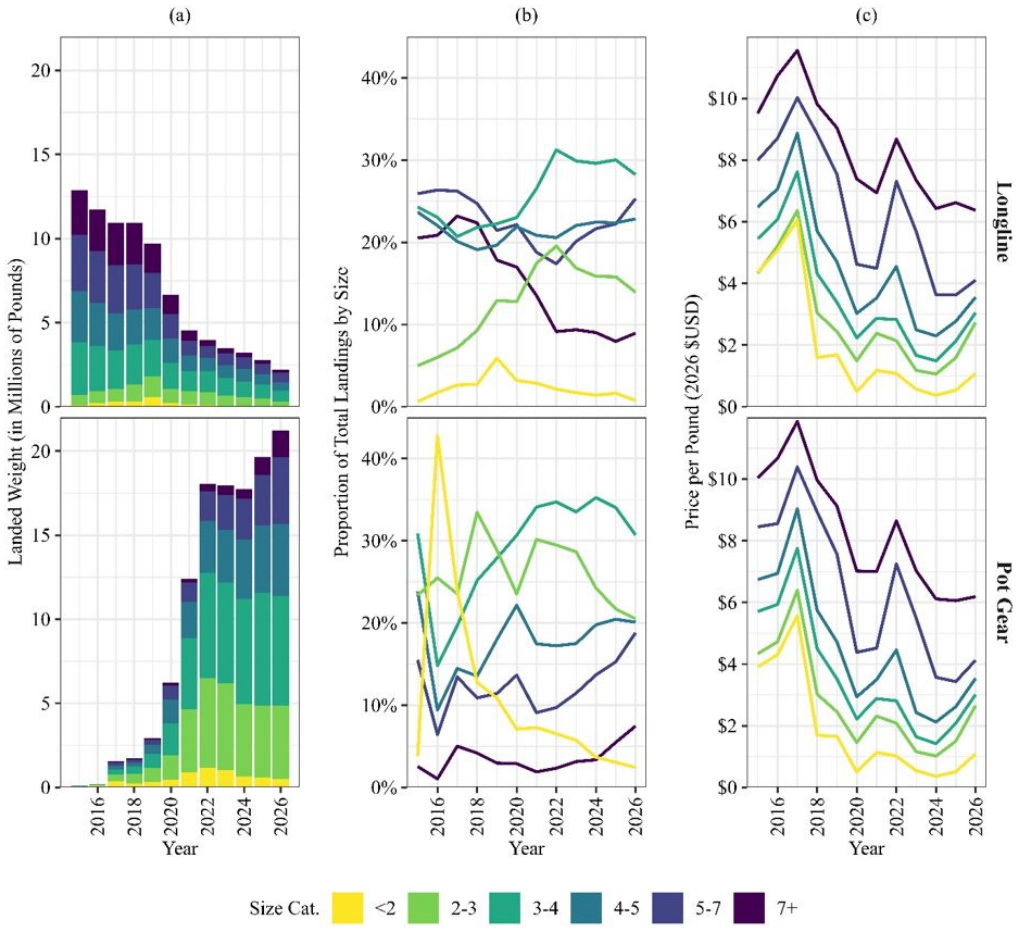
Fishery Informed

Indicator	2025 Status	Trend
Incidental Catch Sablefish in GOA Fishery	Near long-term mean	
Incidental Catch Sablefish in BSAI Fishery	Near long-term mean	
Condition Adult Female Sablefish in GOA Fishery	Near long-term mean	

Economic

Indicator	2025 Status	Trend
Sablefish Retained Catch in Alaska Fishery	Above long-term mean	
Sablefish Ex-Vessel Price	Below long-term mean	
Sablefish TAC Utilization in Alaska Fishery	Below long-term mean	
Sablefish Real Ex-Vessel Value	Below long-term mean	

Value-Added: Price by Size

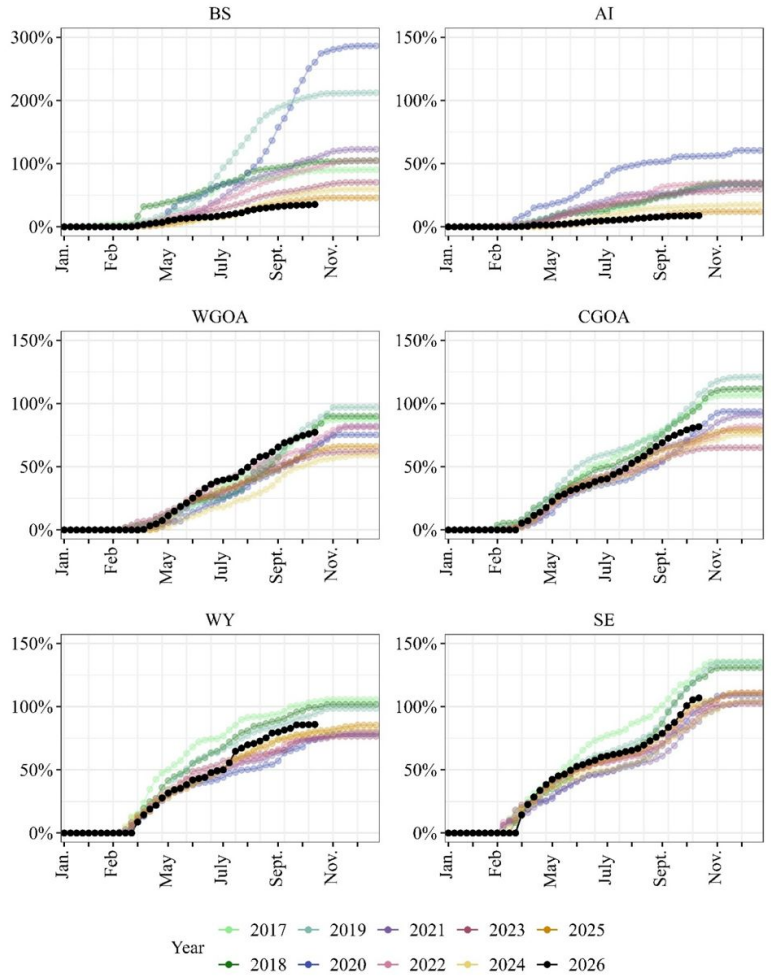


Description: Comparison of total landings, proportion of total landings by size, and price per pound by size for the fixed gear fishery differentiated by gear-type

Status/Trends: Proportion of larger sablefish (5 to 7+ pounds) increasing, with prices per pound also increasing for most categories

Implications: Information on fishery performance and market conditions for the fixed gear fishery

Value-Added: %TAC by Region

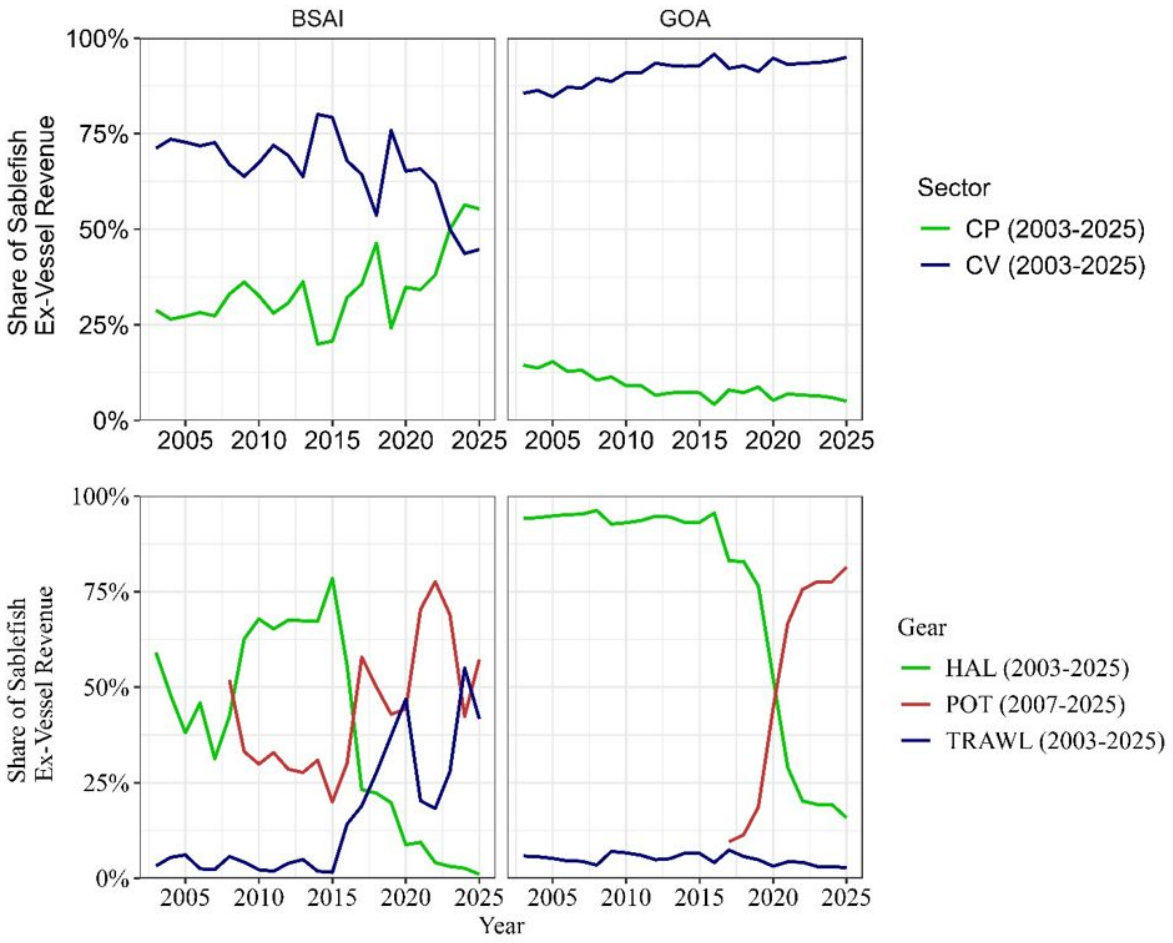


Description: Comparison of the historical and in-season sablefish TAC utilization (by week) differentiated by subregion

Status/Trends: TAC utilization for each subregion is within the historical average (excluding BS and AI)

Implications: Subregions that consistently utilize TAC may be more impacted to changes in TAC regulations

Value-Added: Revenue Share by Sector

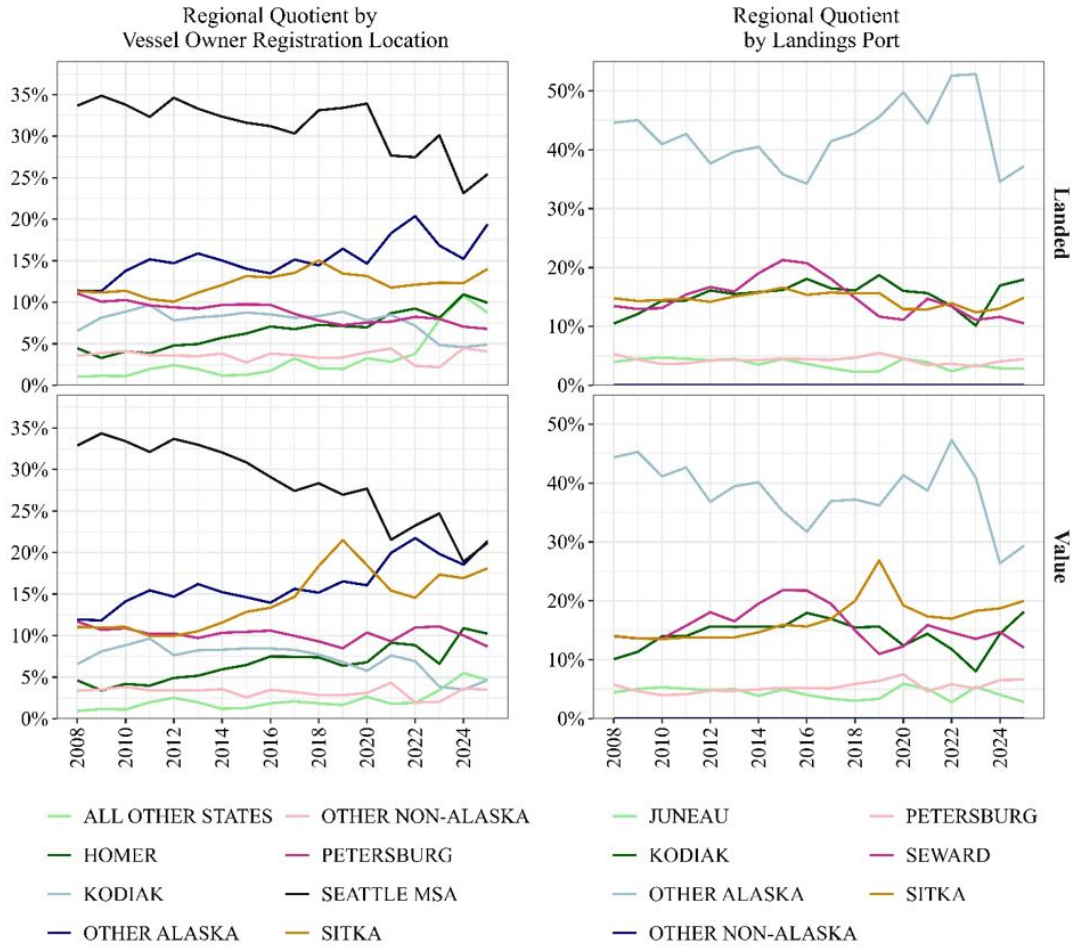


Description: The share (%) of region-specific sablefish revenue broken by sector and gear type

Status/Trends: In BASI, CPs now have majority share of sablefish revenue (opposite is true in GOA) and pot gear generates a majority of revenue across gear types

Implications: Regulations on gear may have to focus on pot and trawl gear

Value-Added: Regional Quotient



Description: The share of total revenue and landings (regional quotient) by community (vessel owner registration and landings port)

Status/Trends: Seattle continues to generate the highest share of sablefish value and landings. Three communities, Sitka, Seward, and Kodiak, generate the highest share of sablefish value and landings by landings port.

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2026 Ecosystem and Socioeconomic Profile (ESP) Report Card Summary



Fishery Informed Indicators

Incidental Catch: Increased in 2026, but remained below average in the GOA and near average in the BSAI. .

Female Condition: Adult female sablefish condition in the GOA fishery declined slightly in 2026 but remained above average. .

Economic Indicators

Retained Catch: Lower in 2025, but still high relative to pre-2022 levels.

Fish Size and Price: Prices by size categories have increased from 2025 levels, though overall prices remained below the long-term average.

TAC Utilization: Statewide utilization stayed below average as TAC increases outpaced catch; Bering Sea and Aleutians remained below historic average in 2026.

Revenue and Communities: Ex-vessel revenue increased but remained below historical average; Sitka, Seward, and Kodiak continued as leading participating communities.

Overall Takeaway

Socioeconomic indicators were mixed: fishery performance was relatively stable, while prices and revenues improved somewhat but overall economic conditions remained below average.



Planned ESP Developments

1) Request for information in 2027, use ESP data gaps and research priorities list, contact leads of current research projects for input on updating indicators, ESP team review of mechanism table

2) Improvements to indicator monitoring analysis based on recent work with sablefish and DSEM (Oke et al.)

3) National ESP workshops and training to identify support systems that will work toward improving and operationalizing ESPs

Questions?



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