

Ecosystem & Socioeconomic Profile: GOA Pollock Report Card

Kalei Shotwell, November Groundfish Plan Team 2022



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Overview

- Appendix in SAFE Report
 - Full ESP in 2019
 - Partial ESP in 2020
 - Report Card in 2021
- Report Card in 2022
 - Simplified template, current data
 - 7 editors, 19 contributors
- Full Updated ESP in ~2024

Appendix 1A. Ecosystem and Socioeconomic Profile of the Walleye Pollock stock in the Gulf of Alaska - Report Card

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Ecosystem Summary Table

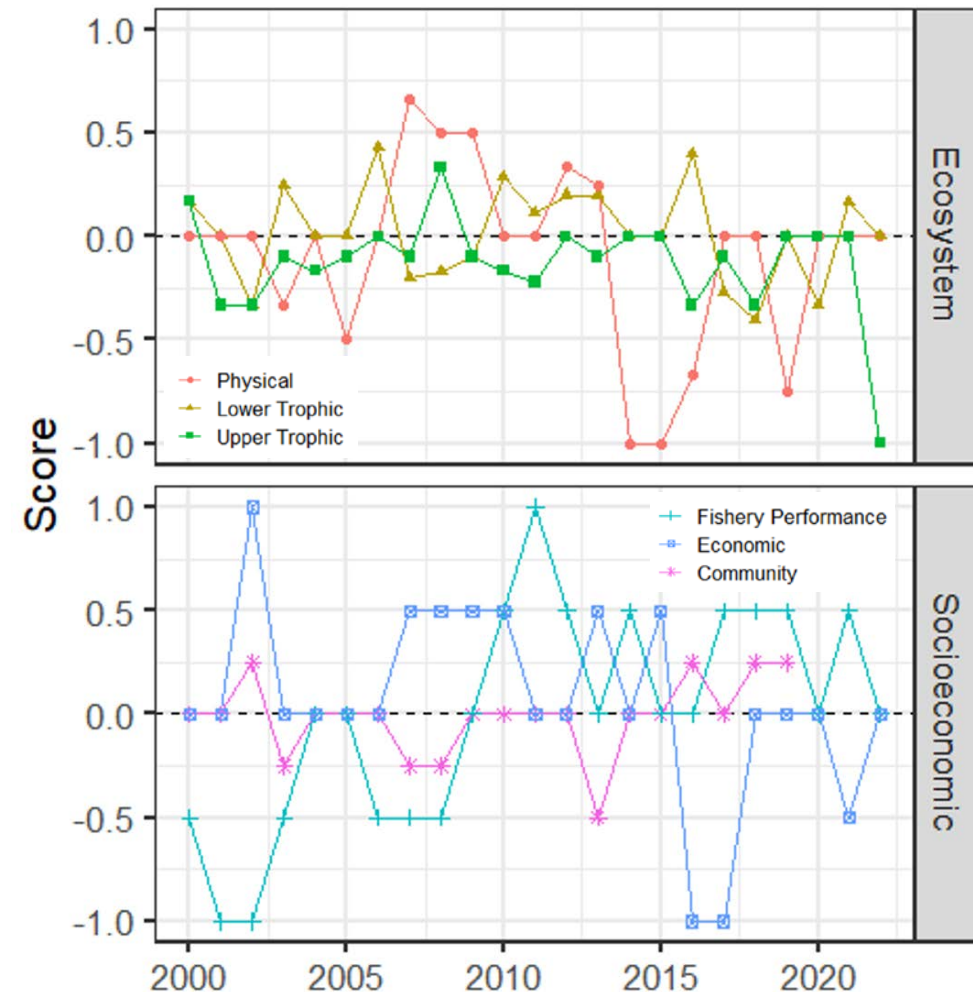
Category	Indicator	2018 Status	2019 Status	2020 Status	2021 Status	2022 Status
Physical	-Annual Heatwave GOA Model	neutral	high	neutral	neutral	neutral
	-Spring Temperature Surface WCGOA Satellite	neutral	high	neutral	neutral	neutral
	-Summer Temperature Bottom GOA Survey	NA	high	NA	neutral	NA
	-Spring Wind Direction Kodiak Buoy	NA	neutral	neutral	neutral	neutral
Lower Trophic	+Spring Chlorophylla Biomass WCGOA Satellite	low	low	neutral	neutral	neutral
	+Spring Chlorophylla Peak WCGOA Satellite	low	high	low	neutral	neutral
	+Spring Small Copepod Abundance Shelikof Survey	NA	high	NA	neutral	NA
	+Summer Large Copepod Abundance Shelikof Survey	NA	neutral	NA	NA	NA
	+Summer Euphausiid Abundance Kodiak Survey	NA	neutral	NA	NA	NA
	+Annual Auklet Reproductive Success Chowiet Survey	low	neutral	NA	neutral	neutral
	+Spring Pollock CPUE Larvae Shelikof Survey	NA	neutral	NA	neutral	NA
	+Summer Pollock CPUE YOY Shelikof Survey	NA	neutral	NA	NA	NA
	+Summer Pollock Condition YOY Shelikof Survey	NA	low	NA	NA	NA
	+Summer Pollock CPUE YOY Nearshore Kodiak Survey	high	neutral	neutral	high	neutral
	+Annual Pollock Relative Biomass Aiktak Survey	neutral	neutral	NA	NA	NA
Upper Trophic	-Summer Pollock MT Consumed Age1 GOA Model	NA	neutral	NA	neutral	NA
	+Summer Pollock Euphausiid Diet Juvenile GOA Survey	NA	high	NA	neutral	NA
	+Fall Pollock Condition Adult GOA Fishery	neutral	neutral	neutral	neutral	NA
	+Winter Pollock Condition Adult GOA Survey	low	neutral	neutral	neutral	low
	-Summer Pollock Center Gravity NE WCGOA Model	NA	neutral	NA	neutral	NA
	+Summer Pollock Area Occupied WCGOA Model	NA	neutral	NA	neutral	NA
	-Annual Arrowtooth Biomass GOA Model	neutral	neutral	low	low	NA
	-Annual Pacific Ocean Perch Biomass GOA Model	high	high	high	high	NA
-Annual Sablefish Biomass GOA Model	neutral	neutral	neutral	neutral	NA	
-Annual Steller Sea Lion Adult GOA Survey	neutral	neutral	neutral	neutral	NA	

Socioeconomic Summary Table

Category	Indicator	2018 Status	2019 Status	2020 Status	2021 Status	2022 Status
Fishery Performance	Winter Spring Pollock CPUE Adult GOA Fishery	high	high	neutral	high	neutral
	Summer Fall Pollock CPUE Adult GOA Fishery	neutral	neutral	neutral	neutral	NA
Economic	Annual Pollock Real Ex-vessel Price Fishery	neutral	neutral	neutral	neutral	NA
	Winter Spring Pollock Roe Per Unit Catch Fishery	neutral	neutral	neutral	low	neutral
Community	Annual Pollock RQ Harvesting Revenue Kodiak Fishery	high	high	NA	NA	NA
	Annual Pollock RQ Processing Revenue Kodiak Fishery	high	high	NA	NA	NA
	Annual Pollock RQ Harvesting Revenue Small Communities GOA Fishery	low	low	NA	NA	NA
	Annual Pollock RQ Processing Revenue Small Communities GOA Fishery	neutral	neutral	NA	NA	NA

Traffic Light Score

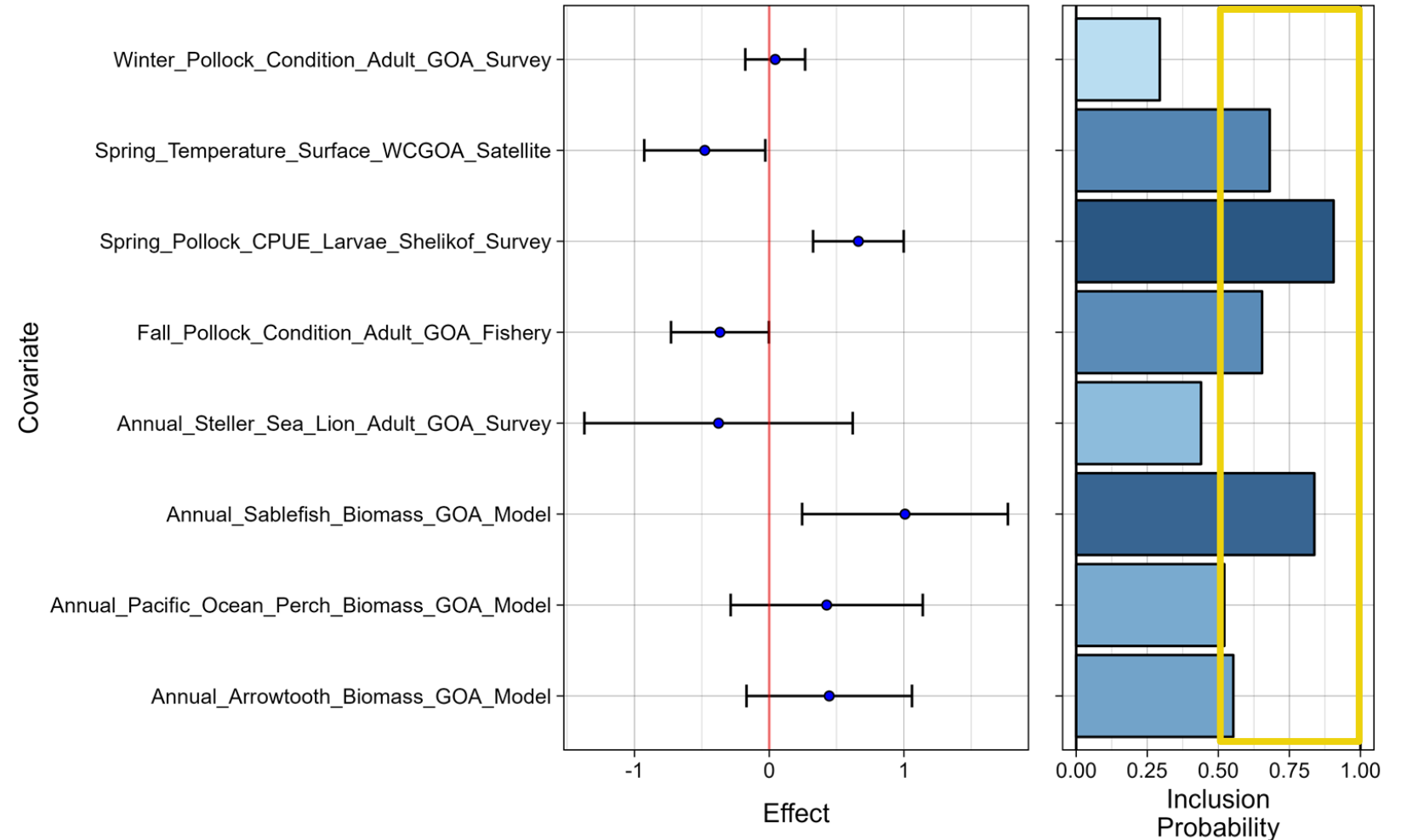
- Ecosystem (15 of 25 total)
 - Physical remained average
 - Lower trophic < to average
 - Upper trophic < to below average
- Socioeconomic (4 of 8 total)
 - Fishery performance < to average
 - Economic > to average
 - Community not updated



Importance Results

Six indicators with importance > 0.5 , same indicators as last year:

- Spring SST WCGOA
- Spring Larvae CPUE
- Fall condition fishery
- Sablefish biomass
- POP biomass
- Arrowtooth biomass



Considerations Highlights

- Management Summary
 - Average surface temps, bottom temps, marine heatwave events, and NW wind, suggesting average egg and larval habitat conditions
 - Mixed lower trophic with $>$ in chlorophyll a, late spring bloom, lower planktivore success, average prey resources, above average nearshore CPUE
 - Condition of fall and winter adult pollock below average, some reduction of prey resources, and biomass of competitors and predators variable
 - Fishery CPUE decreased from last year but remains above average, roe per unit effort increased but remain low ex-vessel price low and stable in 2021
 - Incidental catch sablefish in arrowtooth fishery increased, slight decrease overall in GOA and BSAI
- Modeling Summary
 - 6 potential covariates for GOA pollock recruitment, 3 consistent with last year
 - Several potential research ecosystem models (predation model, temp projection model,)





Next Steps

- 1) Request for Indicators (RFI) in 2024, use ESP data gaps and research priorities, indicators submitted in January, reviewed in February by ESP teams
- 2) Plan to run report card in 2023 and potentially a full update in 2024 following the RFI process
- 3) Predation model published (Dorn and Barnes, 2022)
- 4) Working on revamping economic and community section and will consider new avenues for displaying that information

Questions?



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