



GOA Rockfish Stock Structure & Spatial Management

Sara Cleaver, NPFMC

Presentation to the GOA Groundfish Plan Team, September 2024



Dec 2023 Council Motion

Requested brief discussion paper on:

- 1) the stock structure status for Gulf of Alaska shortraker rockfish, rougheye and blackspotted rockfish, and thornyhead rockfish and the current ABC spatial management level; and*
- 2) management or fishery implications resulting from alternative spatial allocations of ABC (i.e, if there are no conservation concerns, what combinations of subareas are necessary to reduce or avoid fishery management implications).*

The Council also noted that the Other Rockfish stock complex could be included in the paper if staff indicated it would be appropriate.

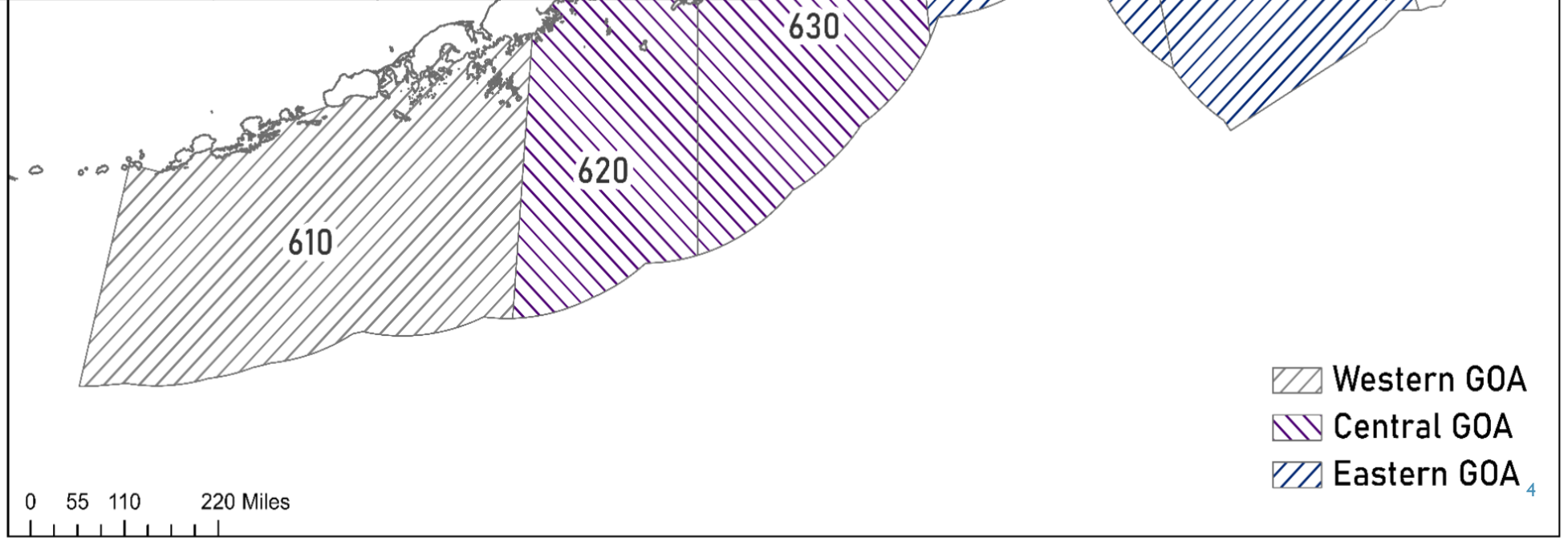


Questions for/ feedback from PT:

- Feedback on conclusions in the paper RE stock structure status for each stock or stock complex
- Any biological reasons to divert from status quo (current apportionment/ subarea groupings)? Alternatively, biological reasons **for** current apportionment / subarea groupings.
- Any additional considerations or information as this issue goes through SSC/Council



Species/Stock	Subarea/Reporting Area	2024		
		OFL	ABC	TAC
Shortraker Rockfish	W	n/a	34	34
	C	n/a	189	189
	E	n/a	424	424
	Total	863	647	647
Rougheyeye and Blackspotted Rockfish	W	n/a	197	197
	C	n/a	315	315
	E	n/a	525	525
	Total	1,555	1,037	1,037
Thornyhead Rockfish	W	n/a	314	314
	C	n/a	693	693
	E	n/a	621	621
	Total	2,170	1,628	1,628
Other Rockfish	W/C/WYAK	n/a	1,353	1,353
	SEO	n/a	2,421	300
	Total	4,977	3,774	1,653



Shortraker, Thornyhead, RE/BS, Other Rockfish

- Changes to species groups over time → narrower “boxes” for each stock or complex
- Highly variable survey biomass estimates fluctuating across mgmt. areas
- Survey challenges- untrawlable habitat
- Mainly retained as incidental catch, except in the CGOA rockfish program (allocated cooperative quota)
- Slow growing, long lived
- Lacking information



Stock Structure- Section 3 & Appendix 2

Shortraker rockfish (3.1)

- Most recent SS evaluation: 2016
- Regional size comp differences
- Gene flow: high (W. Larson)
- Stock structure? N

Thornyhead rockfish (3.3)

- Tagging data show little to no movement, but some (24% of tagged) moved across subareas
- No spatial structure observed in genetic markers (W. Larson)
- Gene flow: high
- Stock structure? N

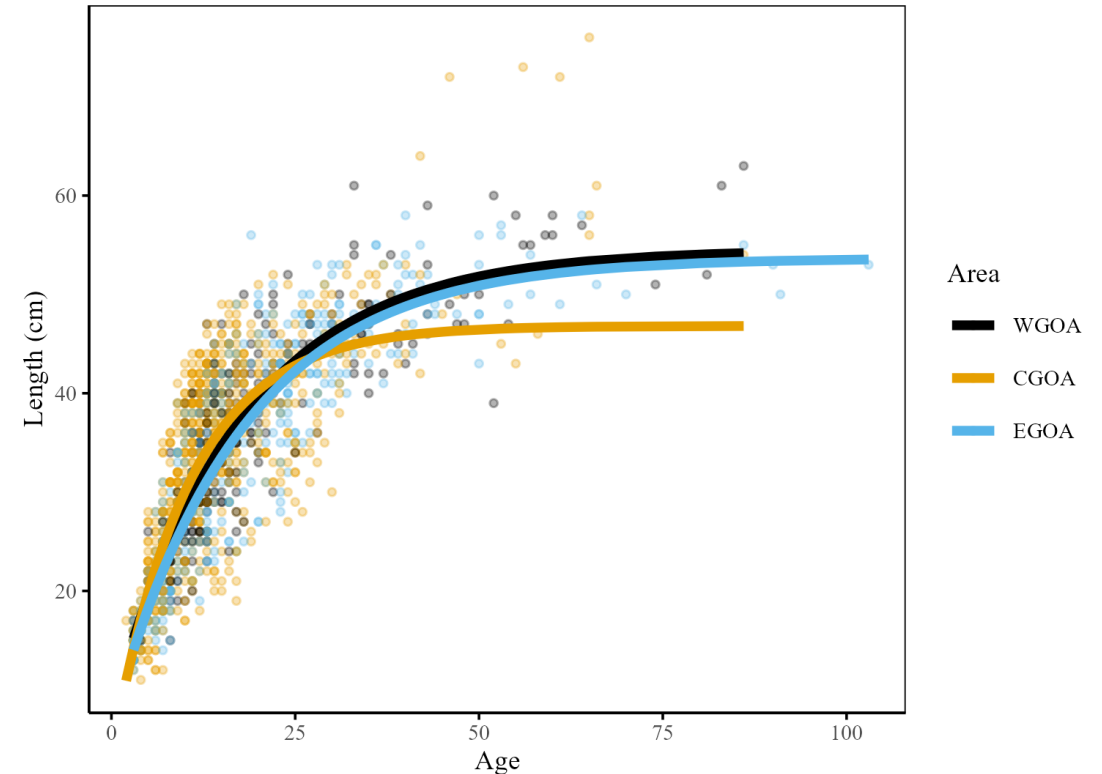


Stock Structure- Section 3 & Appendix 2

Rougheye & blackspotted (3.2)

- Most recent SS eval: 2010 (based on data with both species combined)
- Differences in population trends, age, length, growth by area (still valid based on surveys)
- More recently, no genetic structure detected (W. Larson): High gene flow
- Suggested spatial structuring of the population
- Declining abundance and spawning stock biomass

Area-specific growth curves
Rougheye and blackspotted data combined



Stock Structure- Section 3 & Appendix 2

Other Rockfish Stock Complex (3.4)

- Most recent SS eval: 2015
- Patchy distribution
- Spatial mismatch between the fishery and trawl survey data, particularly for harlequin
- Little information on behavior, site fidelity, movement, genetics
- No indication of area-specific stock structure in GOA



Stock Structure- Section 3 & Appendix 2

No stock structure for:

- GOA shortraker rockfish
- GOA thornyhead rockfish
- GOA Other Rockfish

However, spatial structuring of RE/BS

Genetic Structure?

- high gene flow observed in these rockfish likely due to long distance larval dispersal
- Localized depletion?



Table 3. recent years when rockfish went on PSC status (2014-2023)

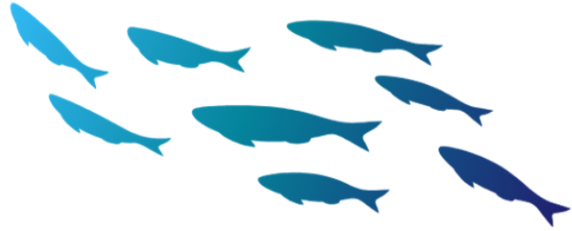
If NMFS Inseason Management determines that an annual TAC will be reached in any subarea, they will place a species or species group on '**PSC status**' for that regulatory area

YEAR	SPECIES	AREA	PSC STATUS
2014	Thornyhead rockfish	W	11/13/2014
2016	Shortraker rockfish	W	9/19/2016
2016	Shortraker rockfish	C	9/19/2016
2017	Shortraker rockfish	W	10/16/2017
2018	Shortraker rockfish	C	11/9/2018
2021	Other rockfish	W/C	8/30/2021
2022	Shortraker rockfish	C	10/25/2022
2023	Other rockfish	W/C	11/13/2023

ALTERNATIVE SPATIAL APPORTIONMENTS, CONSIDERATIONS (SECTIONS 4 & 5)

- Shortraker: only stock that may be likely to face subarea TAC overages (at current levels) **and** which does not have evidence of stock structure
- For shortraker, thornyhead, and RE/BS, any combination of subareas involving CGOA would need to consider **impacts to the Rockfish Program.**
- Addtl impacts to voluntary trawl CP cooperatives in WY and WGOA
- Section 5: Potential next steps for apportionment, opportunity for clarification from Council





Thank you:

Abby Jahn
Molly Watson
Katy Echave
Jane Sullivan
Kristen Omori
Steve Whitney
Krista Milani
Chris Lunsford
[Mary Furuness]



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