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Gulf of Mexico Gag Grouper Interim Analysis

Gulf Branch SFD
NOAA Fisheries - SEFSC

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Overview

- Gag Grouper last assessed in 2021/2022
 - Terminal year 2019
- Two Fishery Independent indices are good candidates for IA
 - Panama City Video Survey (ages 0-3)
 - SEAMAP Reef Fish Video Survey (ages 3+)
- Since indices were only updated to 2021, this IA serves as a **health check** on the condition of the stock
- The Age-0 index was updated to 2022 to look at recent recruitment signals in the population



Panama City Video Survey

year	number of fish
2006	90
2007	53
2008	83
2009	106
2010	136
2011	158
2012	147
2013	85
2014	160
2015	164
2016	166
2017	149
2018	91
2019	107
2020	137
2021	292

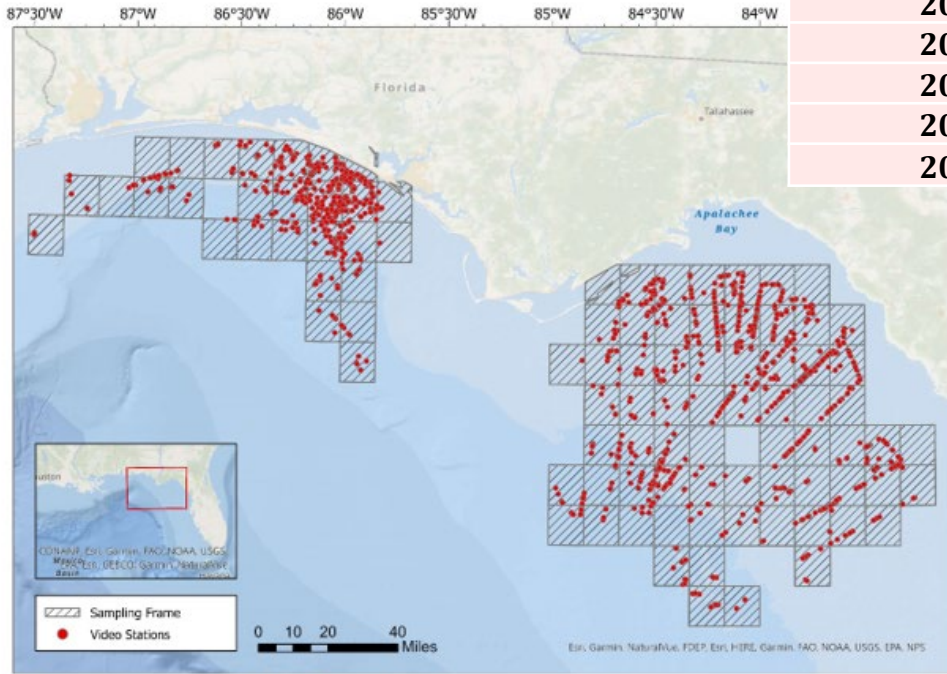
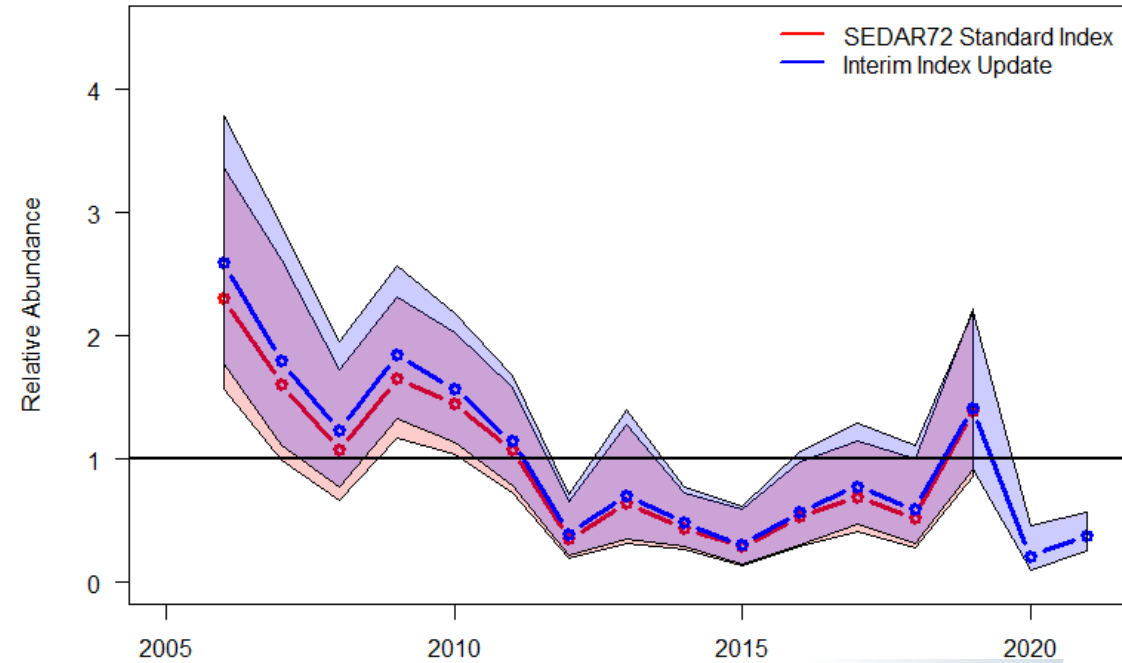


Table 2. Gag lengths (FL mm) observed from the NMFS Panama City Lab Video Survey 2009-2021.

Year	n	Mean FL (mm)	SD	Min FL (mm)	Max FL (mm)
2009	33	460	156.3	245	913
2010	22	527	157.0	334	909
2011	22	598	180.3	299	987
2012	13	506	107.8	362	698
2014	6	507	126.2	308	657
2015	6	527	149.1	333	672
2017	7	492	178.5	304	833
2018	6	259	179.6	111	566
2019	16	475	143.2	278	736
2020	5	451	112.6	308	611
2021	11	442	219.9	143	806
Total	147	493	169.3	111	987

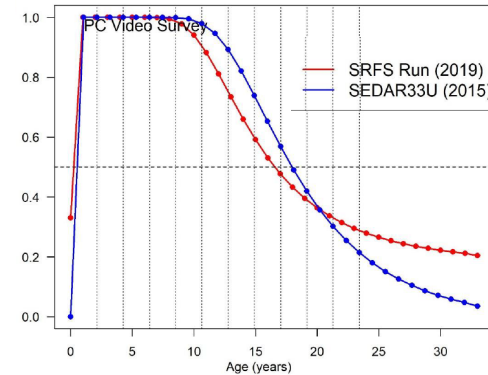


Figure 1. Video sampling locations 2005 - 2021. |



SEAMAP Reef Fish Video survey

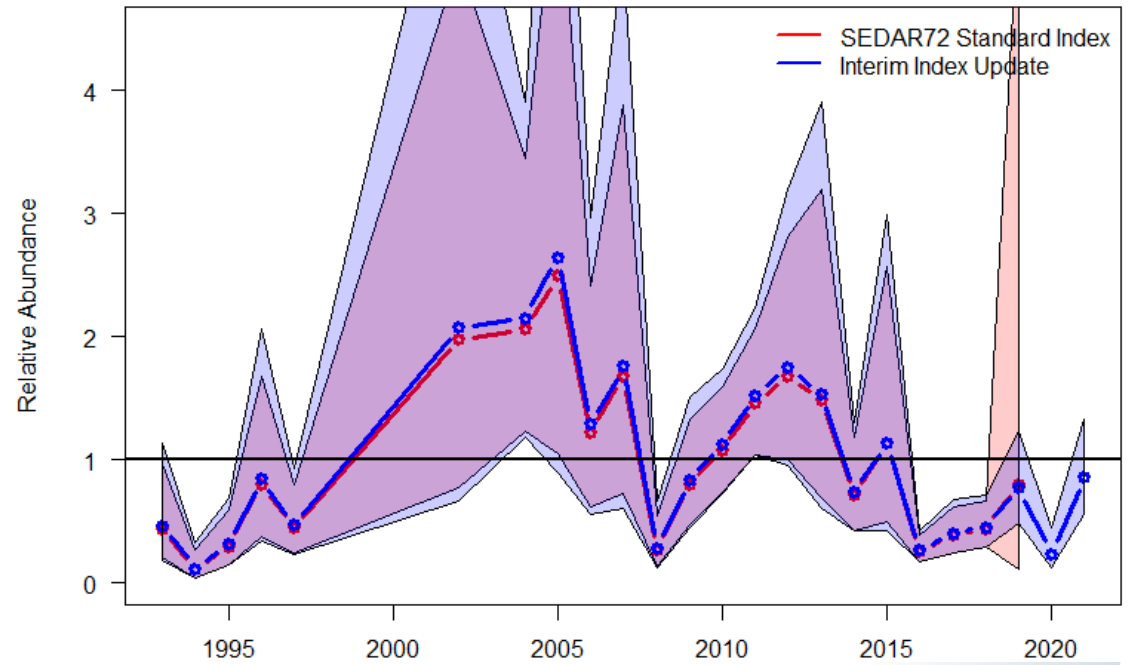
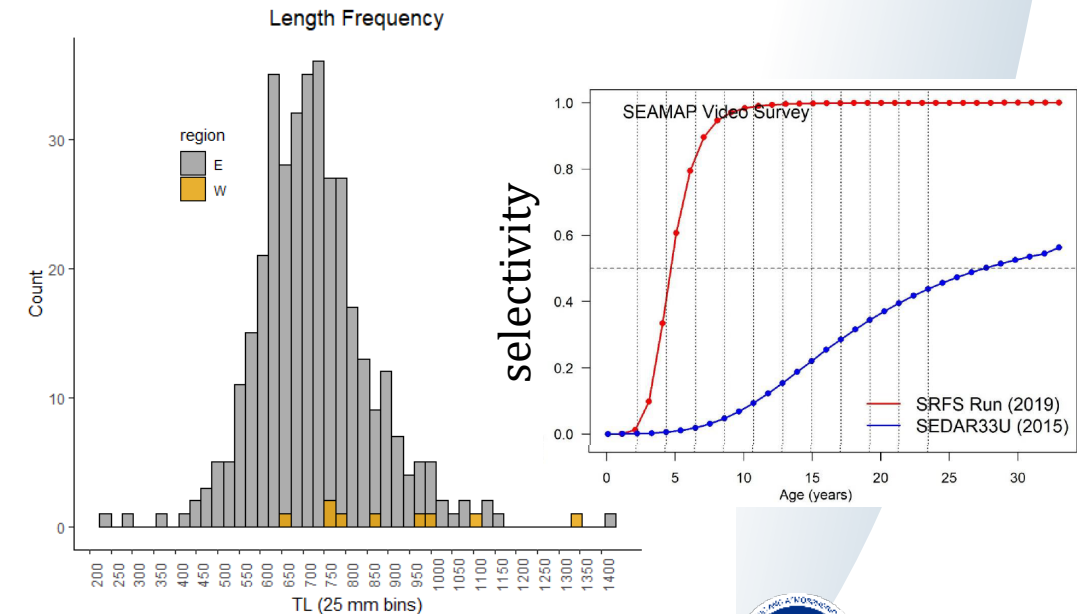
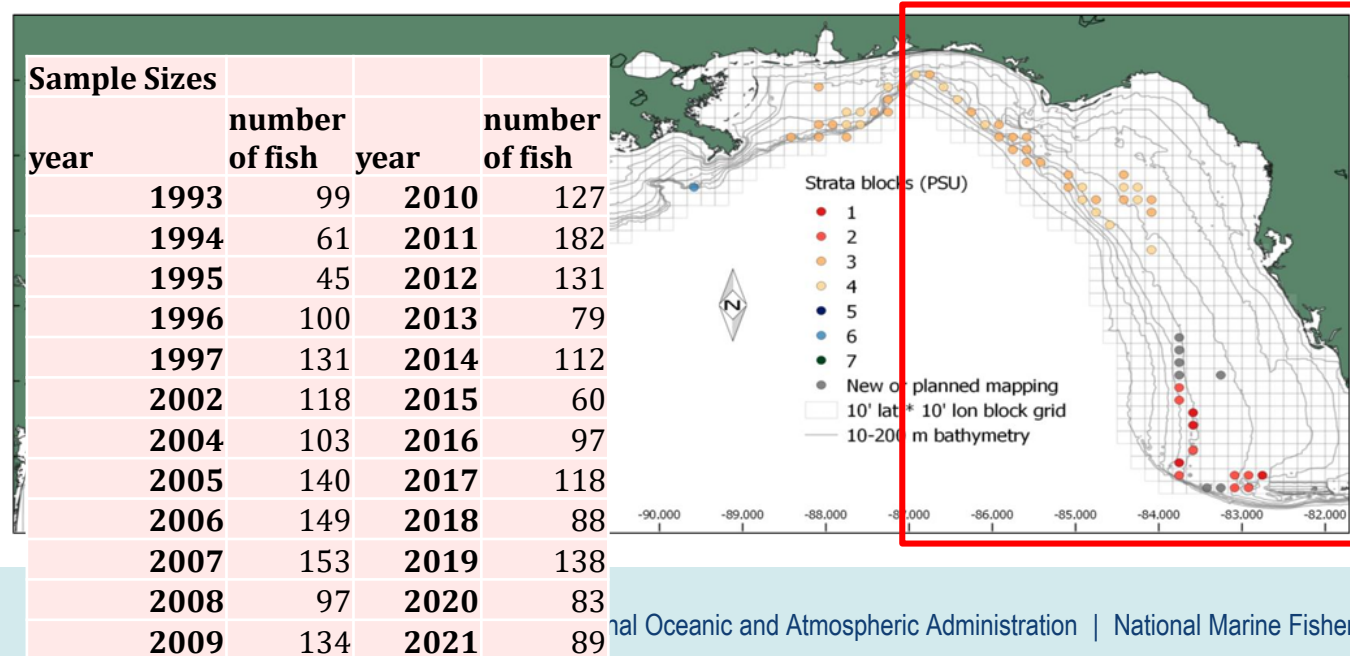


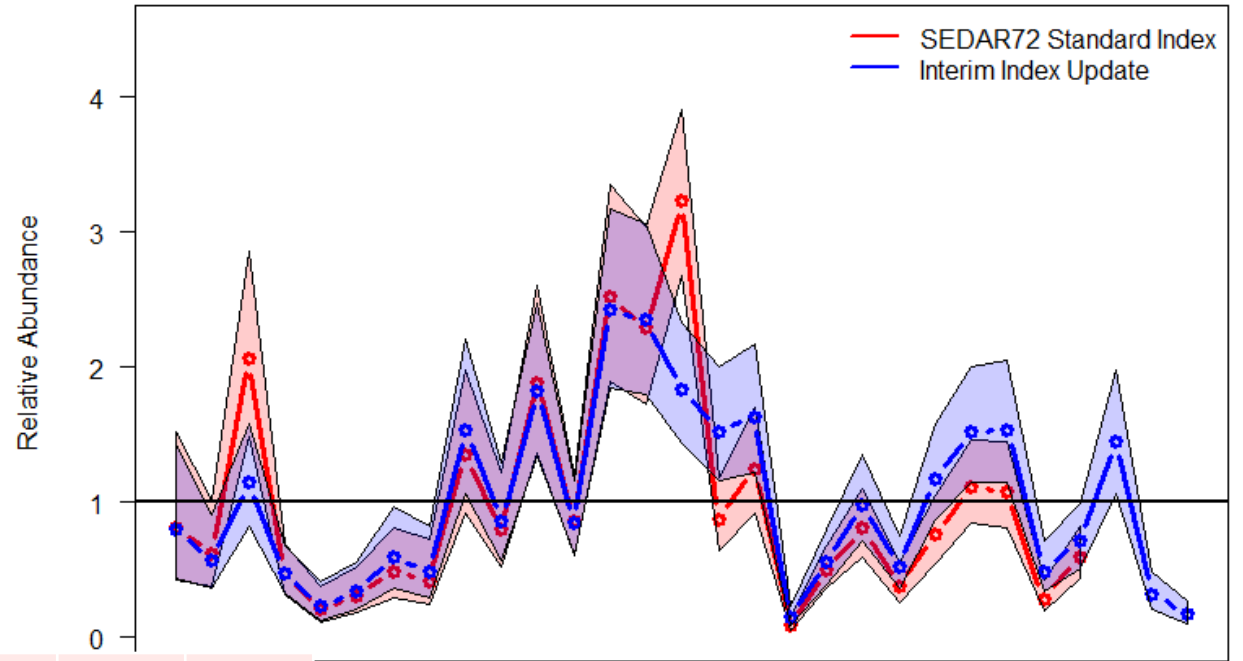
Figure 1. Spatial distribution of known reef from which stations are randomly selected for sampling for the reef fish video survey. Over the history of the survey (1992-2019) new reef tract has been discovered and mapped and therefore this map represents what was available through 2019, and not necessarily what has been available over the entire time series.



Age-0 Surveys



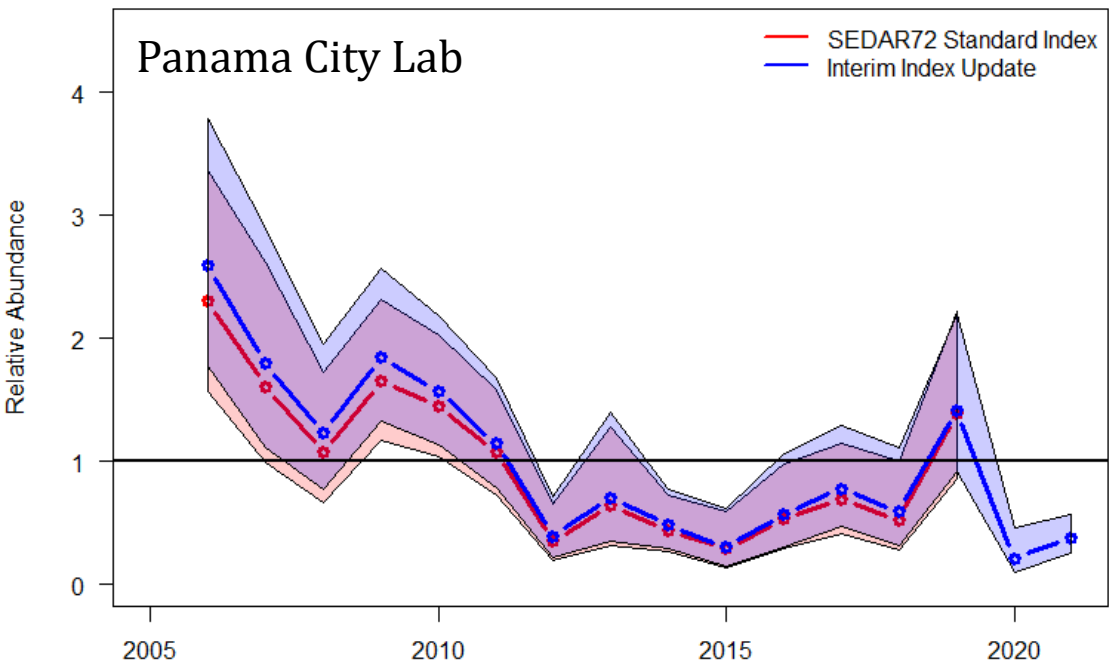
Figure 1.1. Nine sampling regions used in this study. The green areas indicate seagrass coverage between 0 and 6 feet of water depth. Seagrass coverage in acres for each region is listed.



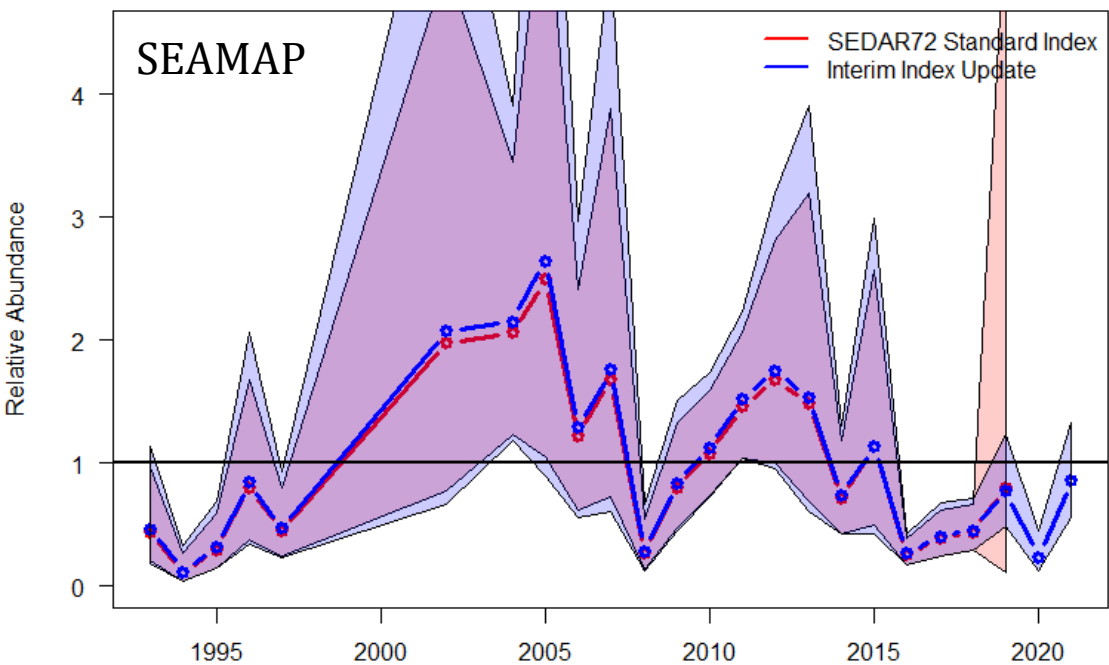
Sample Sizes			
year	number of fish	year	number of fish
1994	126	2009	1265
1995	337	2010	1158
1996	626	2011	1343
1997	681	2012	1154
1998	570	2013	1255
1999	723	2014	1243
2000	648	2015	1142
2001	709	2016	1060
2002	895	2017	1060
2003	868	2018	1051
2004	865	2019	1180
2005	977	2020	735
2006	966	2021	1179
2007	895	2022	1180
2008	1533		



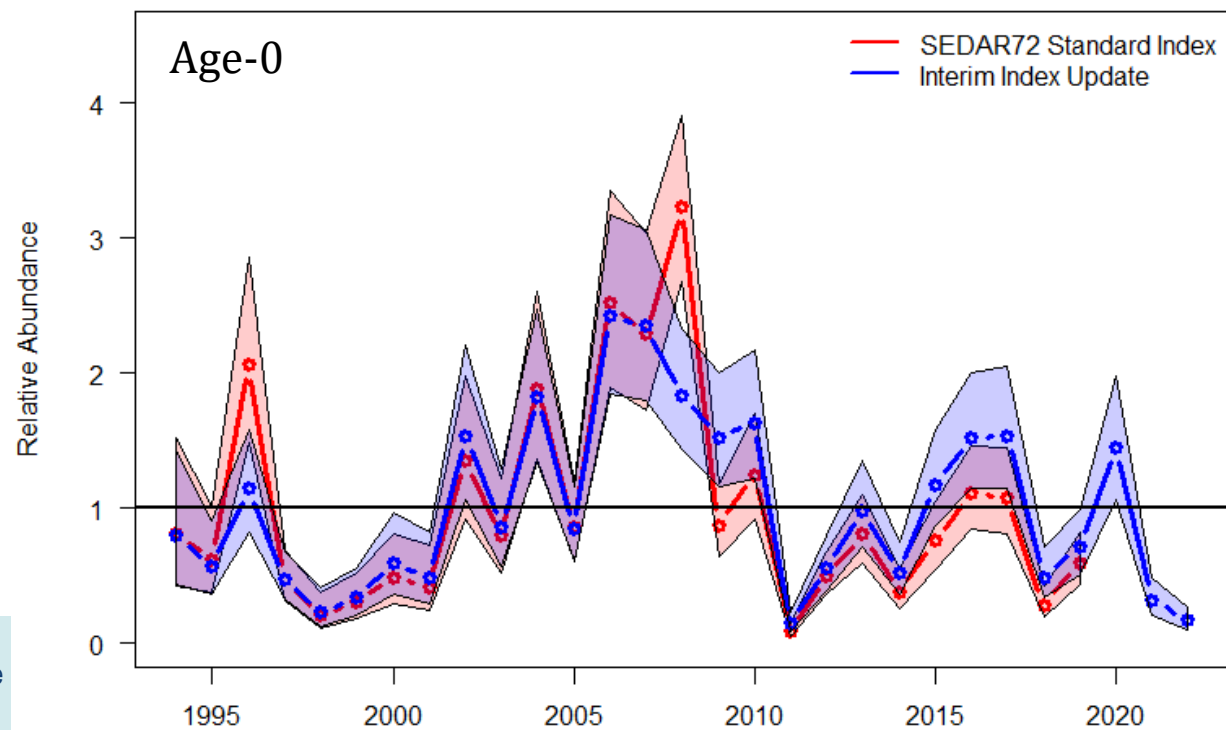
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Year	PC Index	% difference from 2019	SEAMAP Index	% difference from 2019	Age-0 Index	% difference from 2019
2019	1.41	0	0.77	0	0.71	0
2020	0.21	-85	0.24	-69	1.45	103
2021	0.38	-73	0.86	11	0.32	-55
2022					0.17	-77



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Questions?



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