

Presentation to the Bycatch Advisory Council
Bycatch Utilization Subcommittee
12/19/2023

Slides prepared by NOAA Fisheries and North Pacific Fishery Management Council staff
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What is bycatch?

"Bycatch" means fish which are harvested in a fishery but are not sold or kept.

Bycatch includes **economic discards** and **regulatory discards**.

In other words:

Bycatch = Discarded fish

Economic discards: fish harvested which could be legally retained, but are of insufficient value to retain (e.g., sculpins, grenadiers, brittle stars)

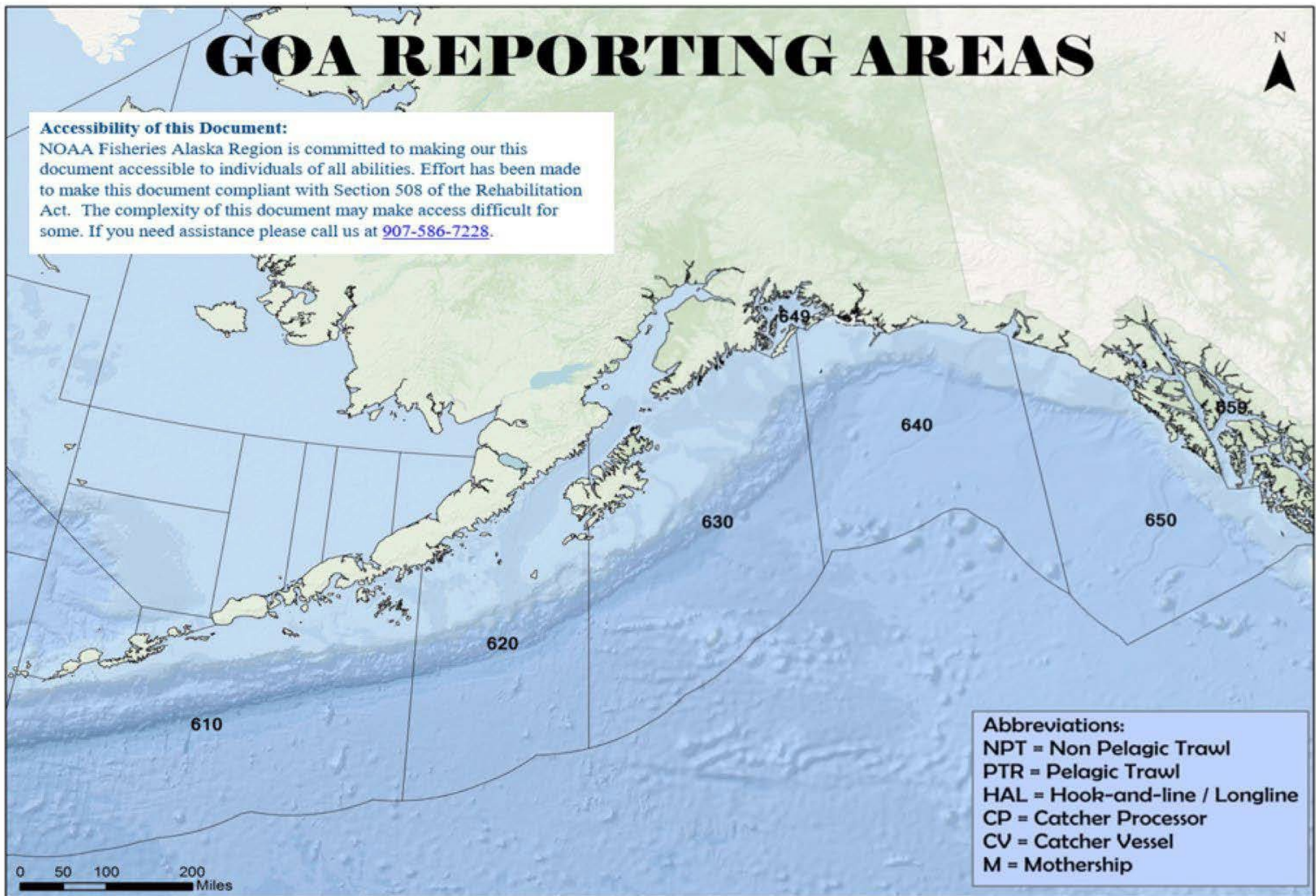
Regulatory discards: fish harvested which are required by regulation to be discarded whenever caught, or are required by regulation to be retained but not sold

- **Prohibited Species Catch (PSC)** : A special type of regulatory discard. Fish caught that must be returned to sea with a minimum of injury = **Pacific halibut, Pacific herring, Pacific salmon, steelhead, king crab, bairdi, opilio crab.**

GOA REPORTING AREAS



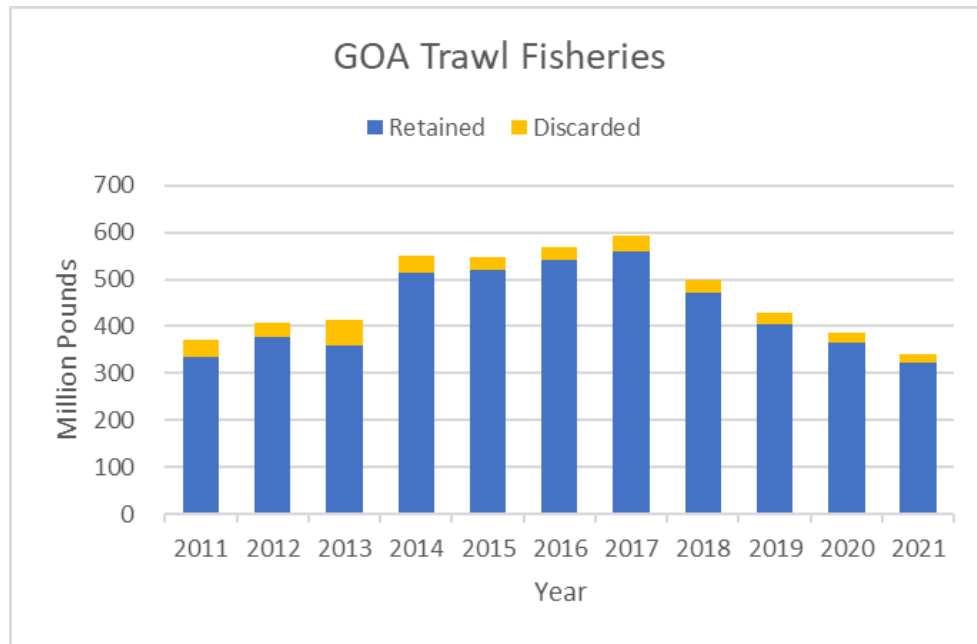
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Total Bycatch by Gear Type in the Groundfish Fisheries

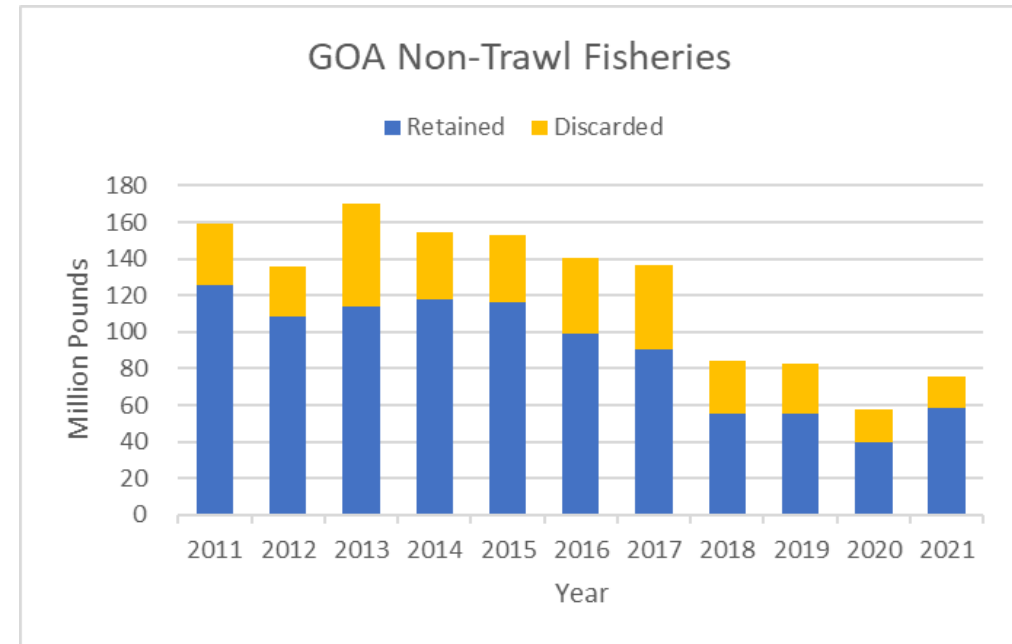
Trawl Gear

4.7 – 13.1% discarded
Ave ~ 31 million lbs/yr

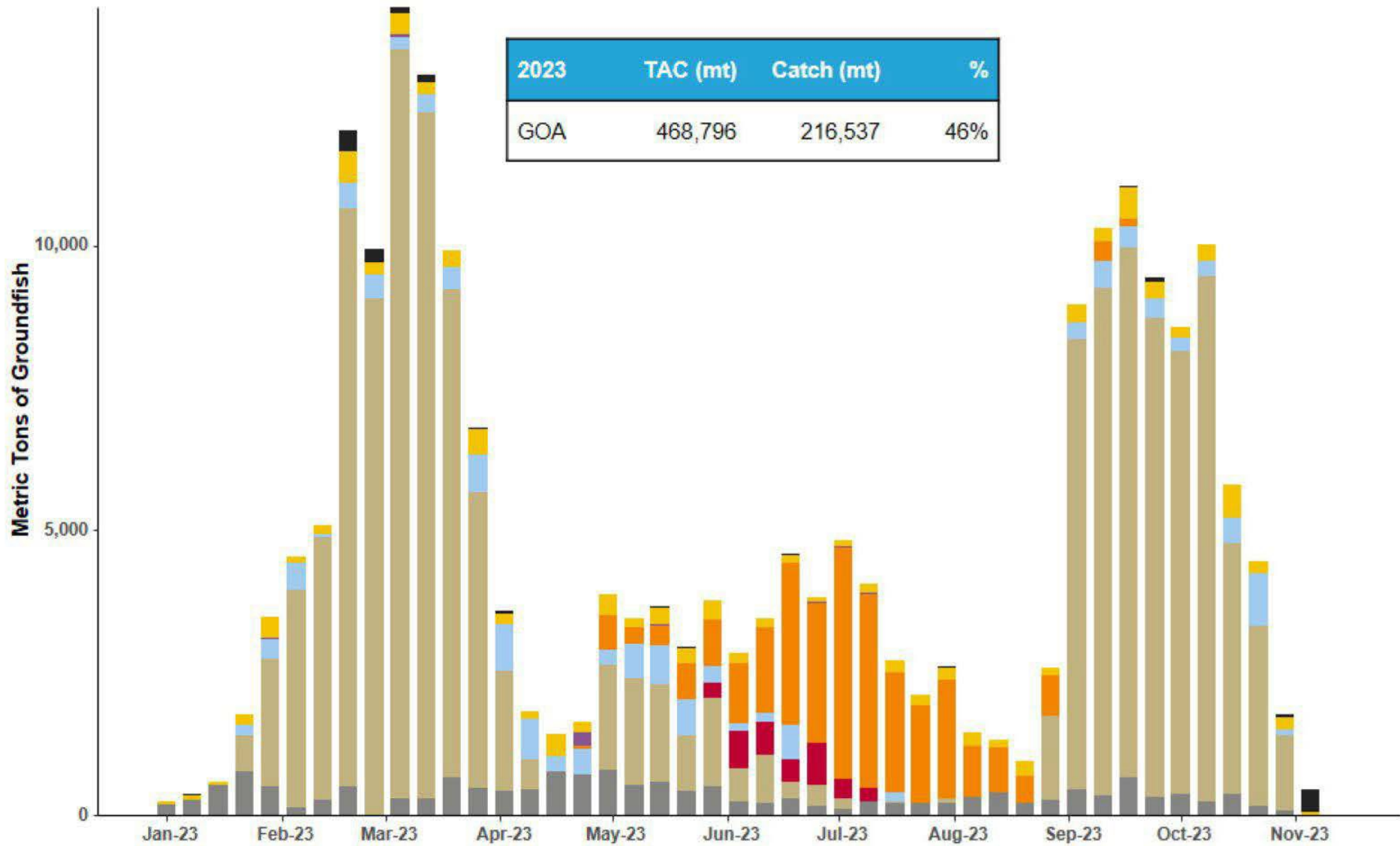


Longline and Pot Gear

20.0 – 33.3% discarded
Ave ~ 33 million lbs/yr



2023 GOA Total Groundfish Catch by Gear and Sector





Chinook Salmon

Chinook Salmon	Total Catch (#)	Limit (#)	%
Pollock Western GOA	1,980	6,684	30%
Pollock Central GOA	13,023	18,316	71%
Catcher Vessel Non-pollock/Non-Rockfish Program	937	3,060	31%
Catcher Vessel Rockfish Program	731	1,200	61%
Catcher Processors	1,025	4,080	25%
TOTAL	17,696	33,340	53%
Pollock 640	197	n/a	n/a
Non-trawl Gear	0	n/a	n/a

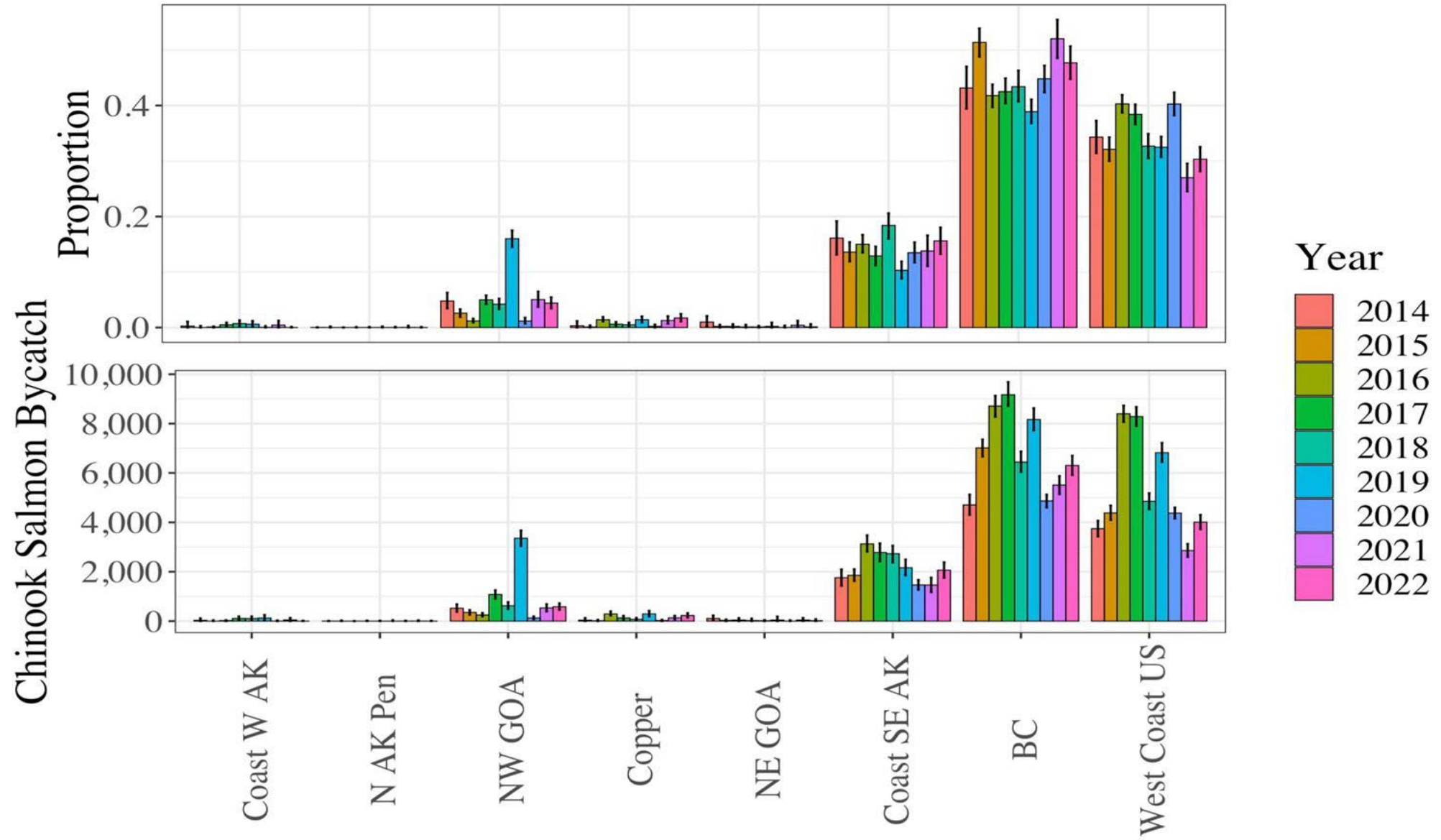
Other PSC Species	2022	2023
Non-Chinook Salmon (#)	5,306	5,756
Trawl Bairdi Tanner (#)	7,715	14,652
Fixed Gear Bairdi Tanner (#)	16,434	10,755
Red King Crab (#)	0	0
Golden King Crab (#)	358	1,742
Herring (mt)	85	70

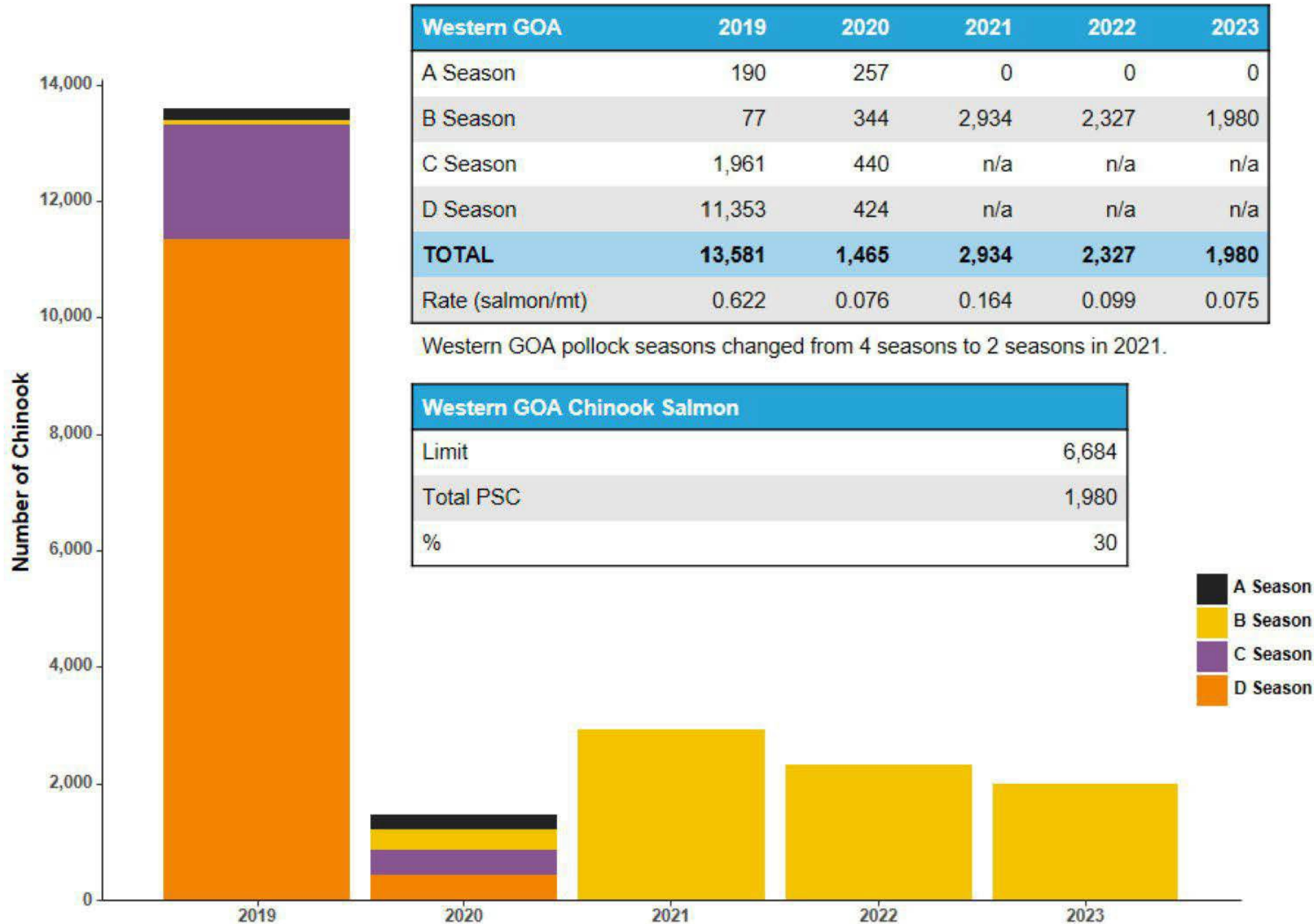


Golden King Crab

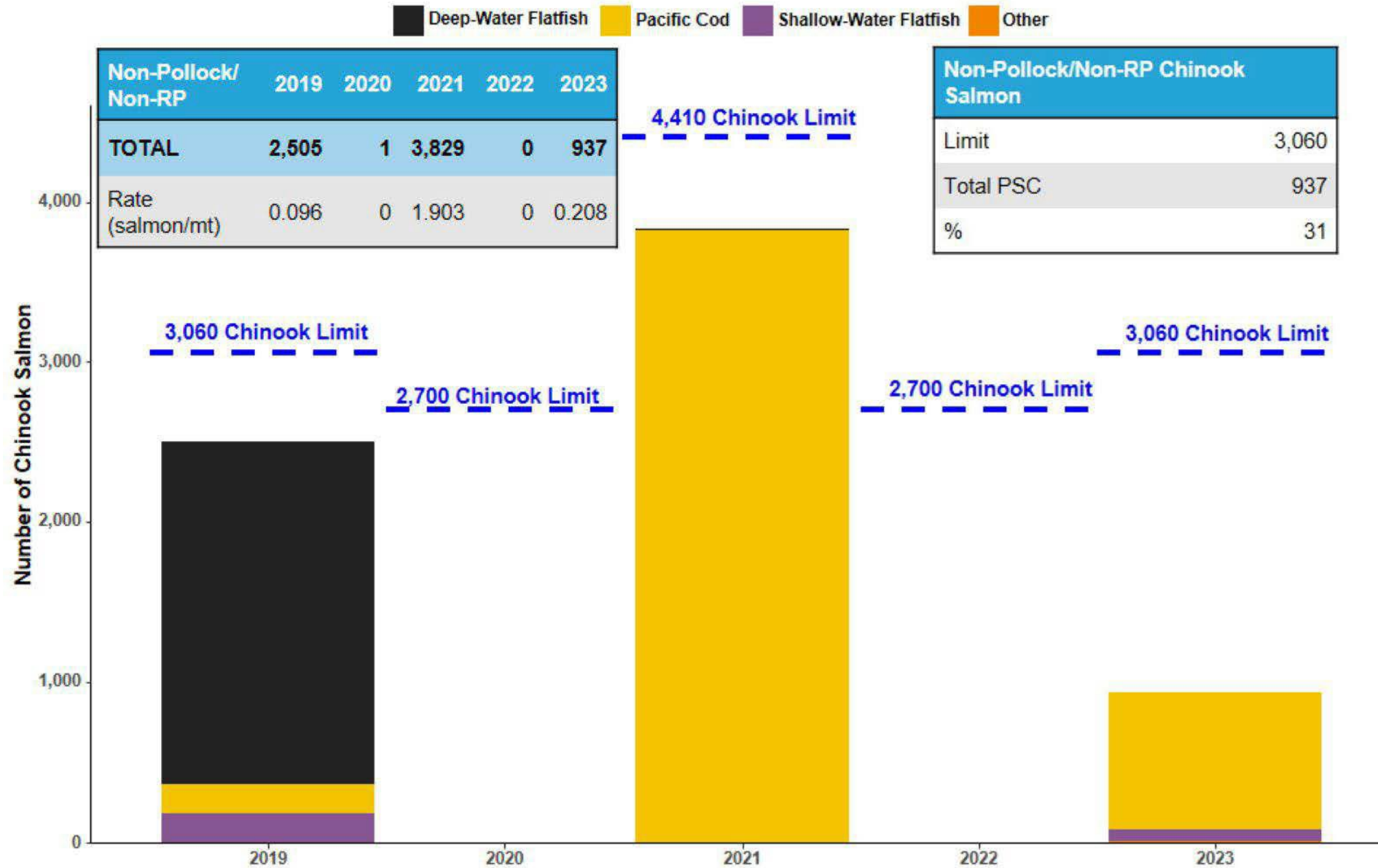
Crab and salmon PSC is reported in number of animals. Herring PSC is reported in metric tons.

GOA Chinook salmon





Chinook Salmon PSC in Non-Pollock / Non-Rockfish Program by CV

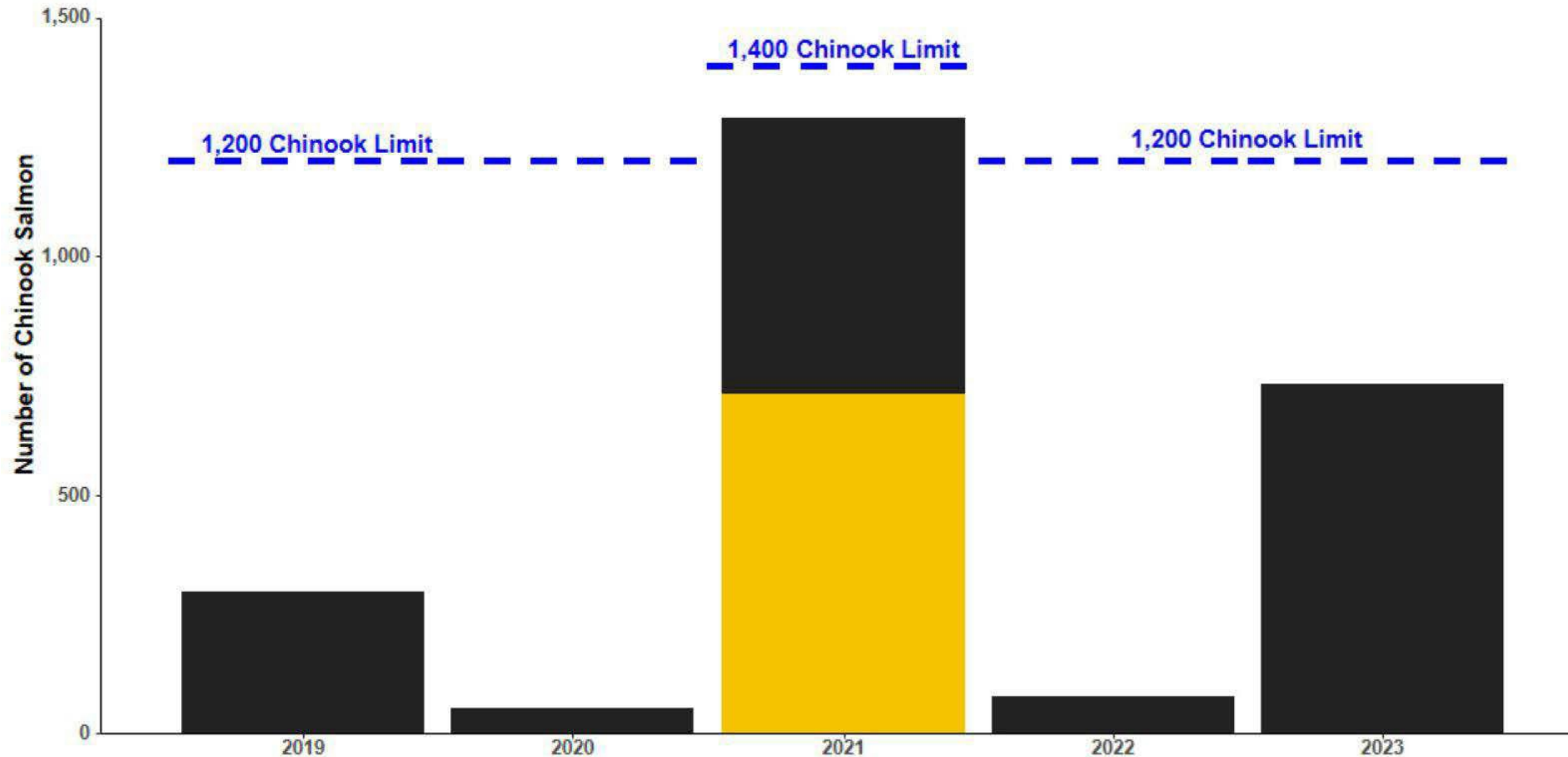


Chinook Salmon PSC in Rockfish Program by Catcher Vessels

Rockfish Program	2019	2020	2021	2022	2023
TOTAL	297	53	1,290	77	731
Rate (salmon/mt)	0.021	0.004	0.071	0.005	0.048

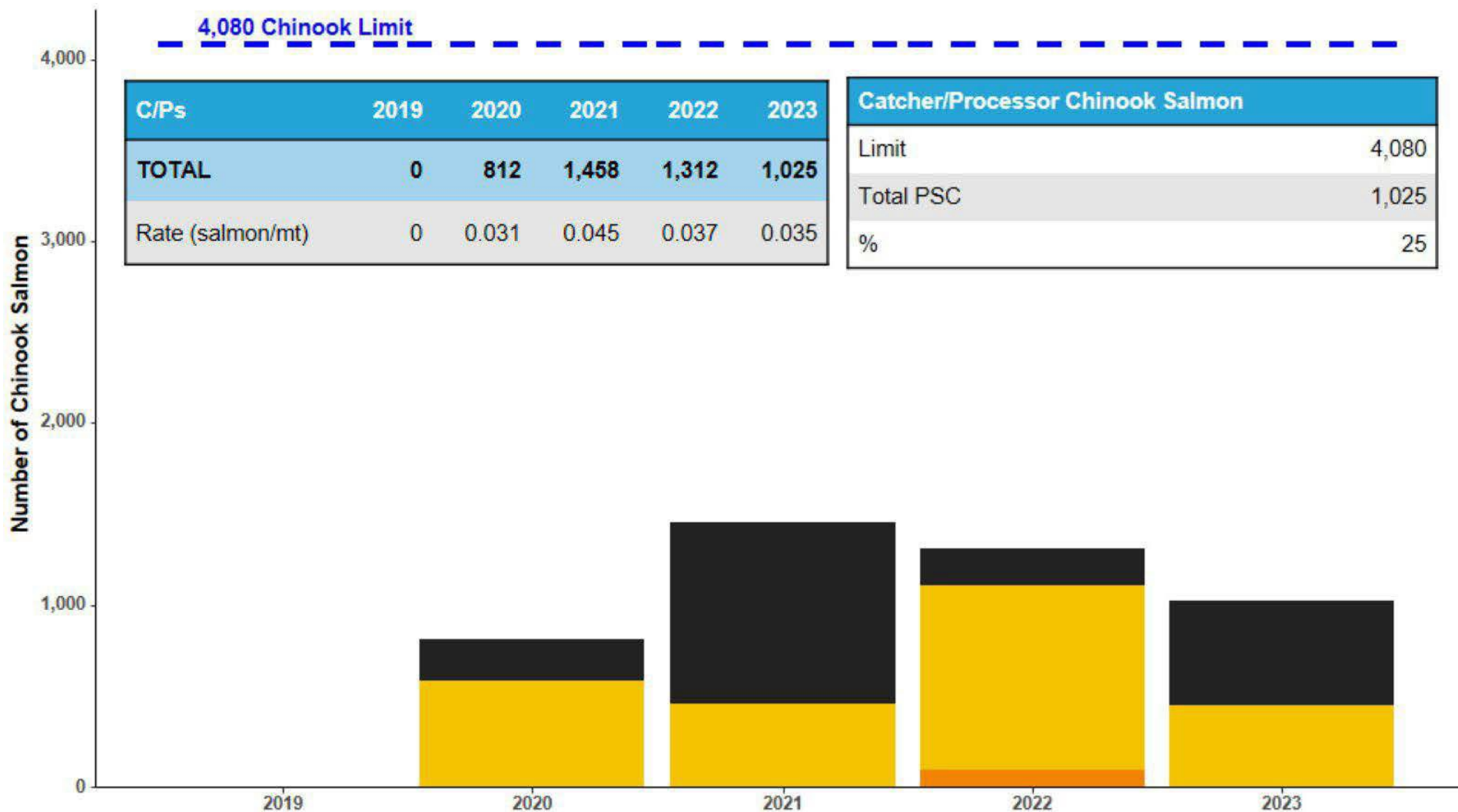
Rockfish
 Other

Rockfish Program Chinook Salmon	
Limit	1,200
Total PSC	731
%	61

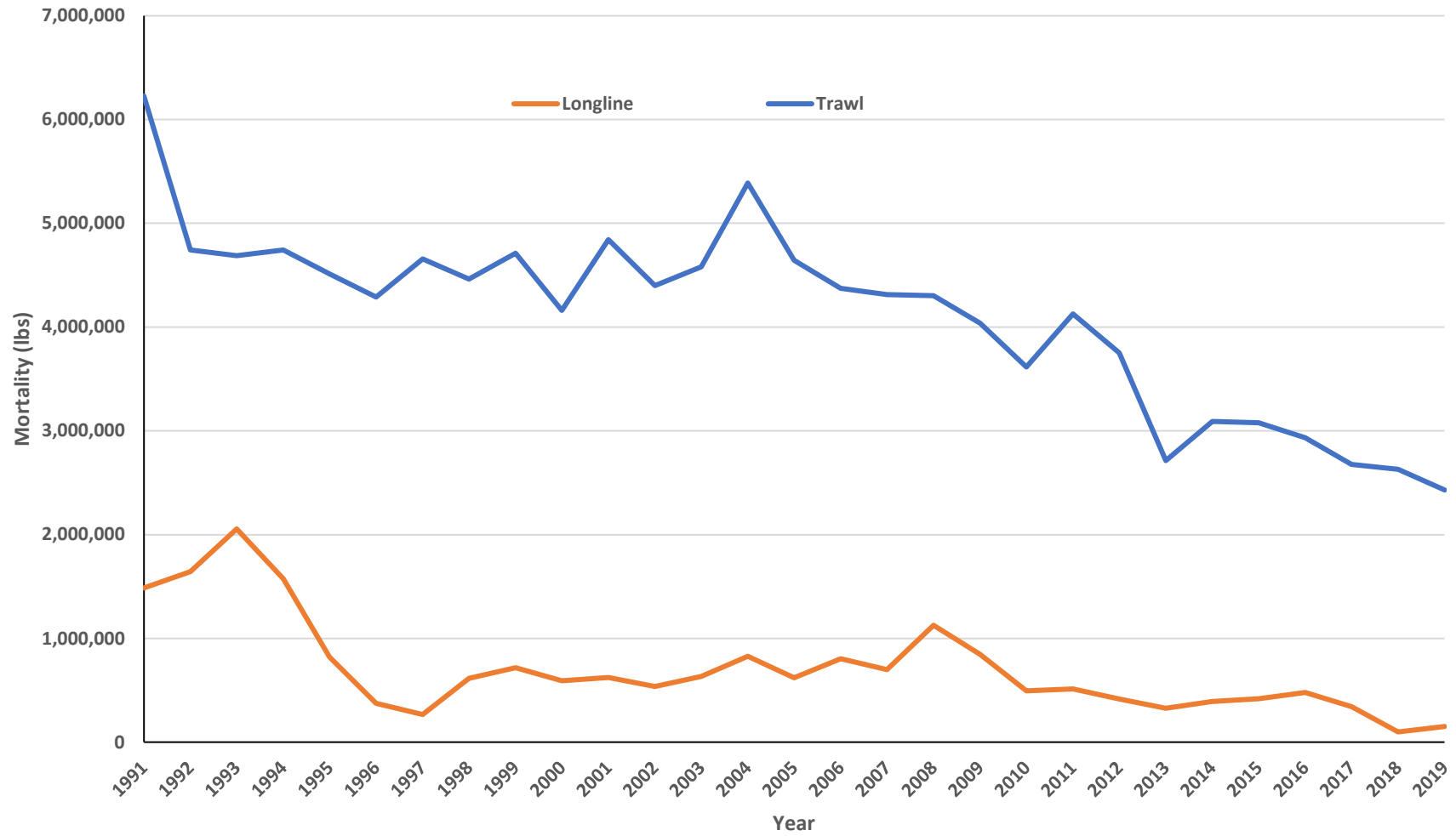


Chinook Salmon PSC by Catcher/Processors

Deep-Water Flatfish
 Rockfish
 Shallow-Water Flatfish
 Other



Halibut PSC in GOA Groundfish Fisheries



Fixed Gear Halibut (mt)	Retained	Discard	Mortality	Limit	%
IFQ Halibut Fishery	8,001	3,529	565	n/a	n/a
IFQ Sablefish Fishery		73	13	n/a	n/a
Pacific Cod/Other Groundfish Targets - HAL		307	32	257	13%
Pacific Cod/Other Groundfish Targets - Pot		10	3	n/a	n/a
TOTAL	8,001	3,919	613	n/a	n/a

All catch, retained and discarded, is in round weight metric tons.

Halibut mortality rate in IFQ Halibut is 16% (Gilroy, H.L. 2012. Incidental mortality of halibut in the commercial halibut fishery (Wastage). Int. Pac. Halibut Comm. Report of Assessment and Research Activities).

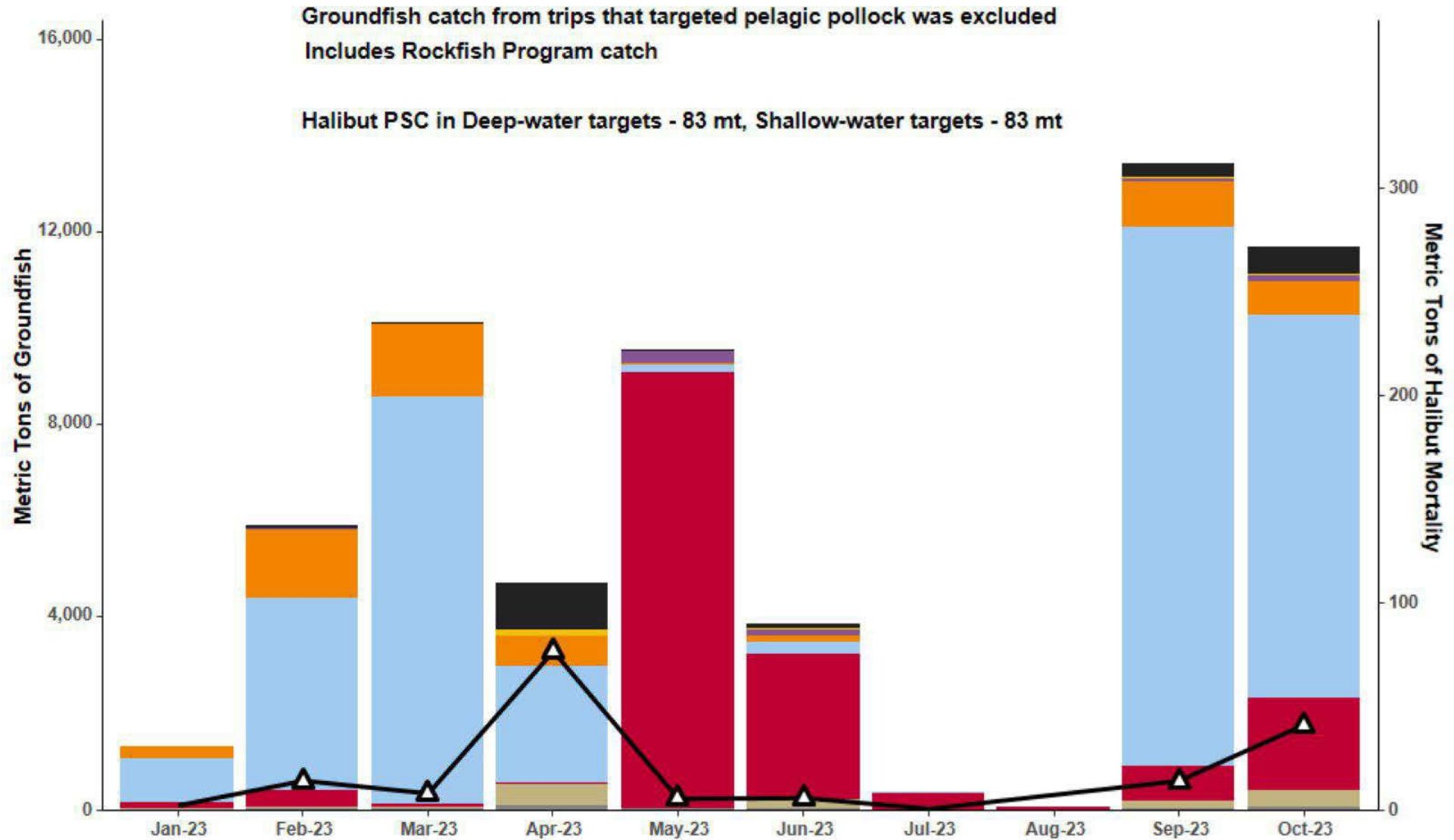
IFQ Sablefish and Pacific Cod/Other groundfish target discard mortality rates are 13% for HAL CPs, 9% for HAL CVs, and 27% for pot CPs and CVs.

Trawl Halibut	Total Discard (mt)	Mortality (mt)	Mortality Limit (mt)	%
Pollock	55	44		
Pacific Cod	16	12		
Rockfish/Sablefish	58	42	n/a	n/a
Arrowtooth Flounder	283	164		
Shallow Water Flatfish	37	27		
TOTAL	450	289	1,705	17%

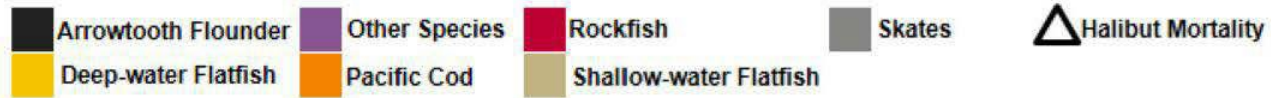
Includes 81 mt deck sorted halibut mortality by 6 trawl CPs.

Discard mortality rates are 100% for pelagic trawl, 83% for non-pelagic trawl CPs and motherships, 74% for non-pelagic trawl CVs, and 55% for Rockfish Program CVs.

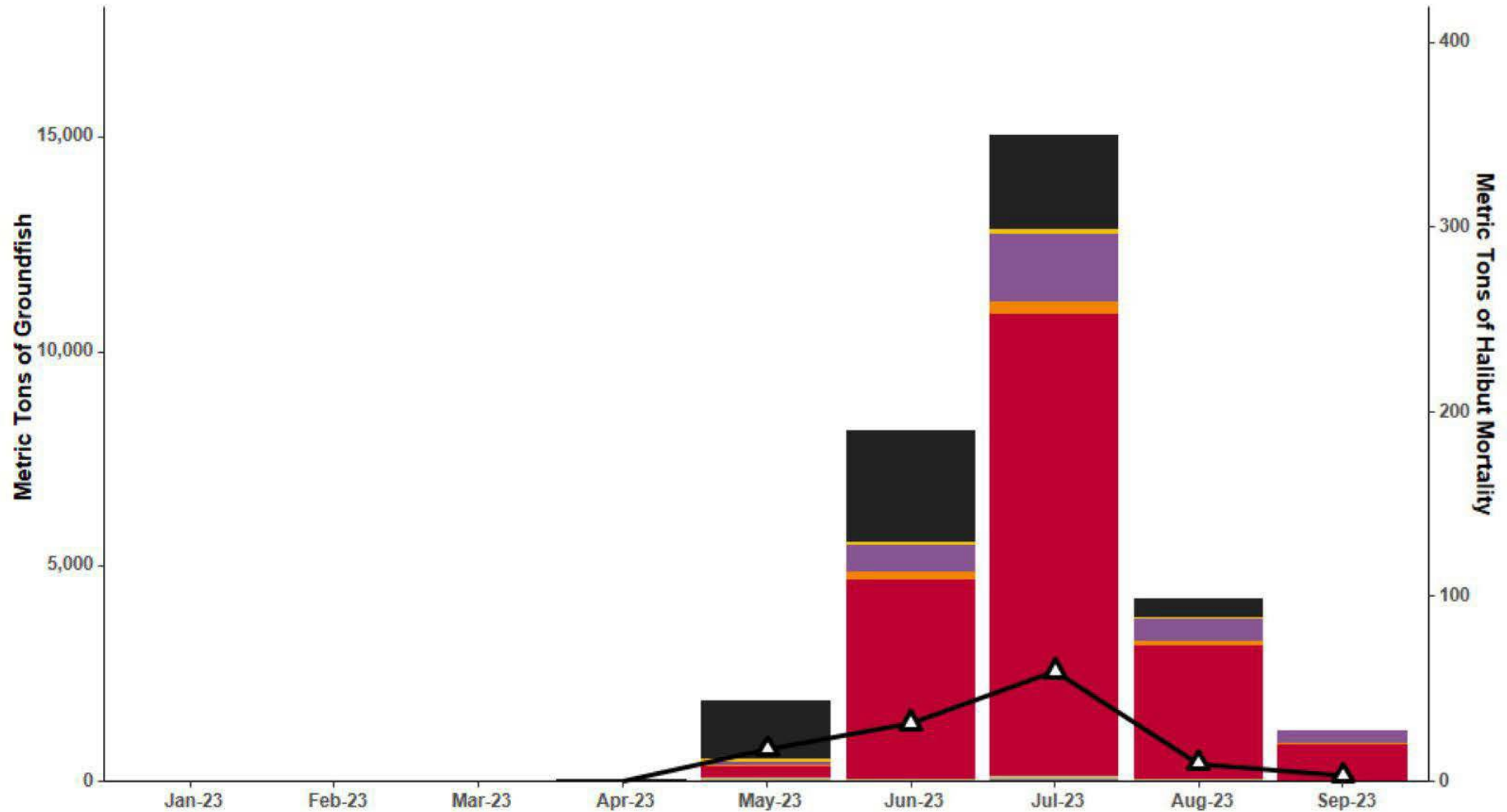
2023 GOA Catcher Vessel Trawl Catch and Halibut Mortality



2023 GOA Catcher/Processor Trawl Catch and Halibut Mortality 47



Halibut PSC in Deep-water targets - 123 mt, Shallow-water targets - 0 mt



2023 GOA Reduction in Halibut Mortality Compared to 5 year Average

49

	Sector	2018-2022 Average (mt)	2023 (mt)	% Change (mt)	2018-2022 Rate *	2023 Rate *	% Change in Rate
Hook-and-Line	Catcher/Processors	18	15	-16%	8.93	11.24	26%
	Catcher Vessels	38	17	-55%	16.69	5.27	-68%
Hook-and-Line	Total	56	32	-42%	13.45	7.03	-48%
Trawl CVs	Central GOA CVs (NPT)	478	136	-72%	18.94	12.00	-37%
	Western GOA CVs (NPT)	19	12	-37%	8.42	8.22	-2%
	Pelagic Trawl CVs	29	18	-38%	0.22	0.12	-45%
Trawl CVs	Total	526	166	-68%	3.31	1.03	-69%
Trawl CPs	Total	238	123	-48%	7.48	4.02	-46%
All Sectors	Total	820	321	-61%	4.20	1.64	-61%

Mortality from trawl and fixed gear.

* Rate is kg of halibut / mt of groundfish

2023 GOA Reduction in Halibut Mortality Compared to 2022

50

	Sector	2022 (mt)	2023 (mt)	% Change (mt)	2022 Rate *	2023 Rate *	% Change in Rate
Hook-and-Line	Catcher/Processors	21	15	-28%	7.51	11.24	50%
	Catcher Vessels	24	17	-29%	6.85	5.27	-23%
Hook-and-Line	Total	45	32	-29%	7.14	7.03	-2%
Trawl CVs	Central GOA CVs (NPT)	65	136	108%	6.18	12.00	94%
	Western GOA CVs (NPT)	2	12	375%	1.09	8.22	653%
	Pelagic Trawl CVs	18	18	-2%	0.13	0.12	-4%
Trawl CVs	Total	86	166	93%	0.55	1.03	88%
Trawl CPs	Total	267	123	-54%	7.24	4.02	-44%
All Sectors	Total	399	321	-19%	1.99	1.64	-18%

Mortality from trawl and fixed gear.

* Rate is kg of halibut / mt of groundfish