

Comparison of Prohibited Species (Bycatch) Management Programs in North Pacific Groundfish Fisheries



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Background

US managers have implemented a series of management actions to reduce and/or manage bycatch of prohibited species (salmon, Pacific halibut, Pacific herring and crab) in the North Pacific groundfish fisheries. Prohibited species must be avoided in target groundfish fisheries, and must be carefully released in some cases. Attainment of bycatch (or Prohibited Species Catch (PSC)) limits, or their seasonal or fishery sector apportionments, results in closure of the fishery in which that bycatch is taken. Such closures result in economic losses to groundfish fishermen and processors, and the communities that support these operations. In the absence of limits, bycatch has been managed using time and area closures based upon historical bycatch trends.

Past and current actions to set or reduce PSC limits of halibut and salmon in North Pacific groundfish fisheries are listed below. Rationalization programs, which provided enhanced tools for maximizing catches while minimizing costs, also included measures to reduce bycatch of PSC species in fisheries and/or fishing sectors (e.g., gear type, vessel category) in which they occurred. Recent bycatch reduction programs include 1) Chinook salmon in the Bering Sea (BS) pollock fishery; 2) chum salmon in the Bering Sea pollock fishery; 3) Chinook salmon in the Gulf of Alaska (GOA) pollock fishery; 4) Chinook salmon in the GOA non-pollock fishery; and 5) Pacific halibut in the GOA groundfish fisheries. Managers are scheduled to receive reports in June 2014 on the use of Pacific halibut PSC in the Bering Sea/Aleutian Islands (BSAI) groundfish fisheries.

SUMMARY OF NORTH PACIFIC MANAGEMENT ACTIONS TO LIMIT OR MANAGE PROHIBITED SPECIES CATCH (BYCATCH) OF PACIFIC SALMON AND PACIFIC HALIBUT

	Program	Type of allocations/caps	Year	Prohibited Species	Bycatch Reduction	Fishery Management Plan	Target Species	Management Units	Season Length	Vessel Types	Gear	Problems Resolved	
Component of Rationalization Program	Western Alaska Community Development Quota Program	Community Development Quota	1992	All	Transferable CDQ & PSC among CDQ groups minimizes bycatch while maximizing target catch	BSAI Groundfish, BSAI Crab, Pacific Halibut by Federal regulation	Groundfish, Crab, Halibut, & Prohibited Species	Bering Sea Aleutian Islands - multiple species, area, and gear categories	Seasonal openings & closings based on PSC apportionments & catch	Small, medium, & large Catcher vessels (CVs), medium & large catcher processors (CPs)	Hook-and-line, trawl & pot	Lack of Western Alaska community participation Derby fishery Short seasons Product quality Safety Overcapitalization Derby fishing Overcapitalization Sea lion interactions Economic efficiency Bycatch rates Safety High discards Overcapitalization Economic efficiency Derby fishing High bycatch rates Safety	
	Pacific Halibut and Sablefish Quota Share Programs	Quota Shares/ Individual Fishing Quotas	1995	Pacific halibut	400 mt reduction in PSC limit, as both IFQ species may be retained; transferable IFQs allow vessels to cover harvests of both species	BSAI Groundfish, GOA Groundfish, Pacific Halibut by Federal regulation	Pacific Halibut & Sablefish	Multiple area and vessel categories	Increased from up to 1 week to up to 9 months	Small, medium, & large CVs, medium & large CPs	Fixed Gear (Hook-and-Line for Halibut & Hook-and-Line & Pots for Sablefish)	Safety Overcapitalization Derby fishing Overcapitalization Sea lion interactions Economic efficiency Bycatch rates Safety	
	American Fisheries Act	Voluntary Cooperatives	1999	All	Inter-cooperative agreements (ICAs) manage pollock, TACs, PSC reduction, overharvest, & voluntary halibut bycatch reduction measures	BSAI Groundfish	Walleye pollock	BSAI NOTE: AI pollock was allocated to Aleut Corp. in 2005	seasonal openings and closings based on PSC apportionments & catch	7 inshore CV cooperatives, and one each for offshore CVs, CPs, and motherships	Pelagic trawl	High discards Overcapitalization Economic efficiency Derby fishing High bycatch rates Safety	
	Amendment 80 (Non-American Fisheries Act non-pollock)	Sector allocation Voluntary cooperatives	2008	All	Cooperative agreements manage cooperative quota, PSC limits, & other groundfish harvests	BSAI Groundfish	AI Pacific ocean perch, AI Alaska mackerel, BSAI Flathead sole, BSAI rock sole, BSAI yellowfin sole, & BSAI Pacific cod Primary species: Northern rockfish, Pacific ocean perch, Pelagic shelf rockfish Secondary species: Pacific cod, sablefish, and thornyhead, shortfin, & rougheye rockfishes	BSAI	Jan 20 - Dec 31	Two CP cooperatives (currently)	Non-pelagic trawl	Derby fishing Low product quality Economic efficiency High bycatch rates Safety	
	Rockfish Pilot Program	Limited (5-year) Cooperatives with limited access option Limited (10-year) Voluntary CV cooperatives and CP cooperatives, with no limited access option	2007	Pacific halibut	27.4 mt halibut trawl PSC reduction; transferable shares within sectors minimizes bycatch while maximizing target catch	GOA Groundfish	Same as above	Same as above	Same as above	Same as above	Same as above	mid sized trawl vessels with shore-based & at-sea vessels	Derby fishing Low product quality Economic efficiency High bycatch rates Safety
	Rockfish Program	Bycatch limit Closed areas	2012	Same as above	12.5% reduction in halibut PSC which remains in the water, and transferable shares within & between sectors in some cases minimizes bycatch while maximizing target catch	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above	Modified features of the pilot program
Bycatch Reduction Program	Chinook salmon savings area	Bycatch limit Closed areas	1995	Chinook salmon	Set PSC limit at 48,000 fish PSC limit of 42,000 "other" salmon taken within the catcher vessel operational area (CVOA). Closed to all trawling from Aug 1 - Aug 31; would remain closed or re-close after Sep 1 through Oct 14. NOTE: fleet is currently exempt to this closure when triggered, due to action in 2007 for Amendment 84 exemption for ICA participation	BSAI Groundfish	Walleye pollock	BSAI (Separate CDQ and non-CDQ caps)	Closed when cap reached	CVs & CPs	Trawl	High bycatch	
	Chum salmon savings area	Bycatch limit Closed areas	1995	Chum salmon	Reduced bycatch limit to 29,000 fish, revised boundaries of Chinook salmon savings area and closure dates. See NOTE above.	BSAI Groundfish	Walleye pollock	BSAI CVOA	Closed when cap reached	CVs & CPs	Trawl	High bycatch	
	Chinook salmon savings area	Bycatch limit	2000	Chinook salmon	Set 700 PSC in the AI (Area 1); designated BS Chinook salmon savings area as Area 2. Note that Area 2 no longer exists (Chinook salmon savings area)	BSAI Groundfish	Walleye pollock	BSAI (Separate CDQ and non-CDQ caps)	Closed when cap reached	CVs & CPs	Trawl	High bycatch	
	Chinook salmon savings area	Bycatch limit	2005	Chinook salmon	Exempted pollock trawl vessels from Chinook and chum salmon savings area closures if participating in an industry-wide cooperative agreement (ICA), & exempted vessels in non-pollock fisheries from chum salmon savings area closure due to minimal bycatch. Note no longer applicable to Chinook with new PSC limits in 2011	BSAI Groundfish	All groundfish	AI (Separate CDQ and non-CDQ caps)	Closed when cap reached	CVs & CPs	Trawl	High bycatch Economic efficiency	
	Chum salmon	Exemption to regulatory closure for industry run closure system	2007	Chum salmon	Established salmon bycatch inter-cooperative agreement (ICA) to reduce salmon bycatch using a voluntary rolling hotspot system to avoid areas of high salmon bycatch rates. Exempted vessels in the ICA from salmon savings area closures and limited the Chum Salmon Savings Area closure to only vessels directed fishing for pollock. See NOTE above.	BSAI Groundfish	Walleye pollock	BSAI	Closed when cap reached	CVs & CPs	Trawl	High bycatch Economic efficiency	
	Chinook & non-Chinook salmon	Cooperative agreement	2007 & 2008	Chinook salmon Chum salmon	Dual cap PSC limits of 60,000 and 47,591, allocated by sector and season. The higher cap proportion by sector is available to sectors with an approved incentive plan agreement for further bycatch reduction. The lower cap represents a performance standard which if the sector proportion of the standard is exceeded more than 2x in a 7 year rolling period would then become the sector's maximum cap for all future years.	BSAI Groundfish	Walleye pollock	Bering Sea	Closed when cap reached	CVs & CPs	Trawl	High bycatch Economic efficiency	
	Chinook salmon	Bycatch limit	2011	Chinook salmon Chinook salmon (limit)	Established PSC limits of 18,316 Chinook salmon in the Central GOA & 6,884 Chinook salmon in the Western GOA (& adjacent State of Alaska waters) Required full retention of all salmon	GOA Groundfish	Walleye pollock	Central and Western GOA	Regulatory area closes when pollock fishery reaches cap	CVs	Trawl	Unregulated bycatch	
	Pacific Halibut PSC Reduction	PSC reduction	2013	Pacific halibut	PSC reduced: Total trawl sector by 15% over 3 years to 1,848 mt in 2014, 1,759 mt in 2015, and 1,705 mt in 2016 • CV hook-and-line sector by 15% over 3 years to 161 mt in 2014, 152 mt in 2015, and 147 mt in 2016 • CP hook-and-line sector by 7% (set annually) • demersal shelf rockfish fishery from 10 mt to 9 mt in 2014 Set a PSC limit of 7,500 Chinook salmon for non-pollock trawl fisheries, apportioned by CV and CP • Rockfish Program CVs: 1,200 PSC (rollover provision for unused PSC) • Non-Rockfish Program CVs: 2,700 PSC • CPs: 3,600 PSC (may not use more than 66% before June 1) "Uncertainty Pool" incentive program Full retention of all salmon in non-pollock trawl fisheries.	GOA Groundfish	Pacific cod (trawl and longline), Shallow-water flatfish complex & arrowtooth flounder (trawl), Rockfishes (trawl)	GOA	Closed when cap reached	CVs & CPs	Trawl & longline	High bycatch Declining halibut biomass	
	Chinook Salmon	Bycatch limits	under review	Chinook salmon (limit) All salmon species (retention)	Potential to Reduce PSC: Minimize Chinook salmon PSC & achieve more efficient use of halibut PSC Potential halibut PSC savings Cooperative management (e.g., hotspot program, gear modifications, excluder use, incentive plan agreements) Modify gear for crab protection	GOA Groundfish	Walleye pollock, Pacific cod, Flatfishes, Rockfishes (West Yakutat & WGOA)	Western and Central GOA	Sector fisheries close when cap reached	CVs & CPs	Trawl	Unregulated bycatch Provide tools to allow fleet to operate under reduced PSC limits Declining Chinook salmon & Pacific halibut biomass	
	Pacific Halibut & Chinook Salmon PSC Management	Allocation to voluntary cooperatives Improved incentives for PSC reduction & management Potential PSC reductions	In prep.	Pacific halibut Chinook salmon		GOA Groundfish	Walleye pollock, Pacific cod, Flatfishes, Rockfishes (West Yakutat & WGOA)	Western GOA, Central GOA & West Yakutat	Closed when cap reached	CVs & CPs	Trawl		

Conclusions

The North Pacific Fishery Management Council and National Marine Fisheries Service continue to refine management policies for Pacific salmon and Pacific halibut in its BSAI and GOA groundfish fisheries. Current discussions include developing management tools for improving incentives for Chinook salmon and Pacific halibut PSC reduction and management; these tools may include PSC allocations to voluntary cooperatives. Potential PSC reductions and management incentives also may be considered for salmon and halibut PSCs in the BSAI groundfish fisheries.

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