

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, shortraker, & 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 shell 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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