

Alaska Bycatch Review Task Force

Gulf of Alaska Halibut and Salmon Committee

Date: August 30, 2022
To: Science, Technology and Innovation Committee
From: Brian Gabriel, chair of the GOA Halibut and Salmon Committee
Subject: Bycatch Research Recommendations

The committee adopted the following three general bycatch research recommendations.

- Develop state bycatch research priorities to share with funding entities that would help identify and acquire research funds.
- Implement strategies to encourage and facilitate industry/agency cooperative research to reduce bycatch and associated mortality.
- Create methods for collaboration with other research entities to better track proposed or funded bycatch research, along with developing opportunities for cooperative projects and combined reporting of findings.

The committee also suggested that the following specific research recommendations be considered for adoption by the ABRT.

- Investigate better ways to estimate total removals and discard mortality. This should include research on assumed discard mortality rates
- Fund and support gear modification research for all gear types to reduce incidental take of Chinook and halibut, as well as discard mortality
- Conduct annual genetic and spatial assessment of GOA Chinook bycatch

The following is a listing of bycatch-related research projects recommended by groups and agencies, some of which are projects already underway, but should continue. Some are new ideas, while some recommendations have been suggested before, but have not yet been put into a research project.

SALMON

Continued funding for Dr. Katie Howard's work on ocean survival studies

Additional funding for ecosystem studies

Better understand the interactions and impact of hatchery salmon, including pink and Chinook (from all areas) on wild-run Alaska salmon and ways to determine amount of hatchery salmon bycatch

HALIBUT

Research Gulf statistical areas to update/revise closed areas for trawling

Impacts of fish gear types on halibut habitat

Increase tagging studies to better understand movement between areas

Investigate halibut diet and growth rate to better understand changes in length at age

Studies on size limit and trade-offs (ongoing at IPHC and report due in October 2022)

Determine relative fecundity of halibut based on size and age, and estimate impact on halibut stock of removals from all sources

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Addendum (Aug. 31): ADF&G Chinook and chum salmon research recommendations

- 1) Research that can provide an additional (non-adult) abundance estimate. This is powerful for helping triangulate which life stages are most important for determining productivity.
 - a. Juvenile salmon surveys – A survey occurs annually in the eastern GOA to monitor SEAK salmon stocks (Southeast Coastal Monitoring project).
 - i. ADF&G will pilot a juvenile salmon survey in the western Gulf of Alaska in 2023. This will align with surveys in the northern and southern Bering Sea and Southeast Alaska to give a comprehensive assessment of Alaska Chinook and chum early in the marine life stage.
 - b. Neither the GOA nor the Bering Sea projects are funded beyond 2023.
- 2) Research that helps us understand the relative importance of particular mechanisms for driving abundance of Alaska Chinook and chum salmon.
 - a. Studies that help us understand how ocean/climate conditions impact future runs
 - i. Marine pelagic trawl surveys in the Bering Sea and GOA (including western/central AK and SEAK surveys)
 - ii. Immature salmon surveys (like the IYS surveys) in the Bering Sea, Gulf of Alaska, and North Pacific Ocean
 - iii. Additional studies could be done using industry vessels as platforms for data collection
 - b. Studies that help us understand the role of diet, health and disease on the survival and spawning success of Alaska Chinook and chum.
 - i. Understanding vectors of disease for Chinook salmon, and whether it is causing significant en route mortality during the spawning migration
 - ii. Understanding diet, nutrition and condition of AK Chinook and chum stocks at juvenile (marine pelagic trawl surveys – see above), immature (IYS surveys, industry catches, etc.), and adult life stages (adult return samples)
 - c. Studies that help us understand the relative role of marine interceptions and bycatch
 - i. Improved information on marine migration patterns and its relation to fishery locations and timing
 1. Extend the distribution and timing projects using bycatch data in the Bering Sea to include the western GOA.
 2. A tagging project of immature chum salmon in the North Pacific Ocean to help us understand their destination, timing and maturity
 3. A synthesis of marine migration information from fishery dependent data sources, marine surveys, and tagging studies, and how these patterns have changed with a changing climate
 - ii. Improved demographic information that will enable assessment of stock specific impacts
 1. Collect samples to improve demographic information such as stock, age, sex, size and maturity for Chinook and chum salmon caught in any marine fisheries.
 2. Improved information to help understand fishery impacts through AEQ or similar analyses.