Enhanced salmon bycatch monitoring and sampling in the Pacific region groundfish trawl fishery

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Field sampling onboard a groundfish trawl vessel.

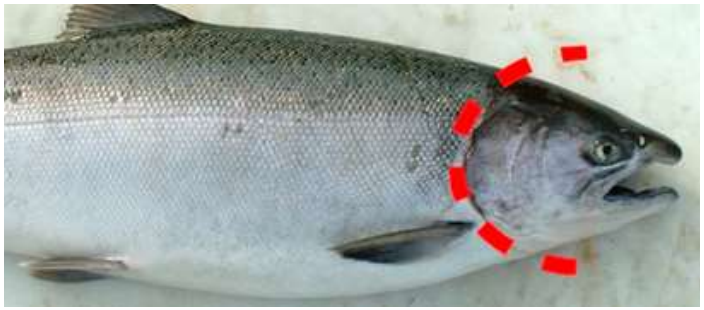
The Pacific Region groundfish trawl fishery represents one of the largest sources of Pacific salmon bycatch in a non-salmon directed commercial fishery. While trawl fisheries in British Columbia have been intercepting Pacific salmon as bycatch for decades, concerns around Chinook salmon bycatch have surfaced more recently due to increased bycatch amounts and the potential for impacts on stocks of conservation concern.

This sampling program was designed in collaboration between DFO Science, Fisheries Management, industry and monitoring service providers to provide accurate estimates of salmon bycatch by species and representative information on Chinook stock composition and coded wire tag recoveries. Estimating Chinook salmon stock composition will allow us to understand the potential impacts of the fishery on stocks of conservation concern, which is currently an important consideration for management of salmon fisheries.

Sampling of salmon bycatch was initiated in 2022 and collection of coded wire tag and DNA samples has been ongoing. In early 2024, a report was published providing initial estimates of salmon bycatch to inform management of the fishery. The report included information from over 15,000 samples of Chinook salmon that were collected. This project will continue during the 2024/25 year to collect data that will support an accurate understanding of trawl bycatch amounts by salmon species, and to inform our understanding of impacts on Chinook salmon stocks of concern.

Take-aways

- The groundfish trawl fishery is one of the largest sources of salmon bycatch in a non-salmon directed fishery, yet salmon bycatch has not been a focus of monitoring until recently.
- This program is providing more accurate counts of salmon bycatch and estimates of Chinook salmon stock composition using coded wire tags and DNA.



Chinook photograph showing cut line for biosampling.

Timeline

- ✓ Sep 2022 - Mar 2025: Sample collection
- ✓ Jan 2024: Initial results published
- ↻ Dec 2024: Additional year of results published

DFO Science Division

Stock Assessment and Research

DFO Science Section

Salmon Assessment

Project Leads

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Location

BC Coast

Collaborations

Canadian Groundfish Research and Conservation Society

Species

Chinook

Project ID

2394