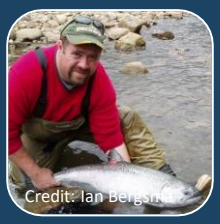
Fieldnotes

Spotlight on salmon stock assessment

Fisheries and Oceans Canada (DFO) staff, often in collaboration with partners, deliver three types of monitoring programs to support area-based salmon stock assessment. The information generated by these programs is compiled annually to provide advice on the management of salmon populations.

POPULATION MONITORING programs estimate the abundance of salmon and their condition. Methods used range from basic visual surveys to application intensive mark-recapture or passage enumeration, and associated biological sampling.



CATCH MONITORING programs estimate catch, releases, fishing effort, and the stock and age composition of catch, to evaluate harvest impacts. These are estimated through harvester reporting and survey methods. Age and stock composition is estimated by sampling DNA, scales, coded wire tags, and other stock identifiers.

ECOSYSTEM MONITORING programs monitor habitat changes and their impact on salmon. This may include methods such as basic water quality monitoring to more comprehensive hydrology or food-web studies.

*Note: Figure 1, Figure 4, Map 2, and Map 3 represent activities or projects funded by grants and contributions.

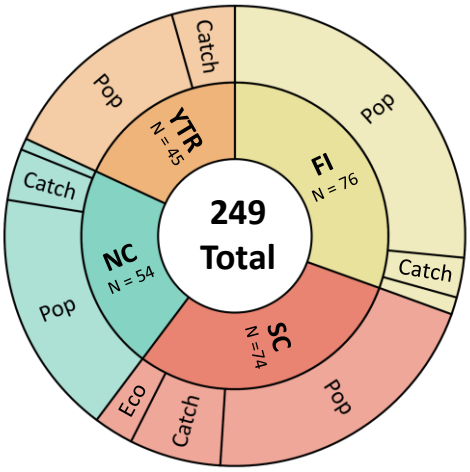


Figure 1. Pacific salmon stock assessment monitoring projects by area: YTR (Yukon and Transboundary Rivers, NC (North Coast), SC (South Coast), and FI (Fraser River and Interior). Area-based monitoring is further subdivided by proportion of monitoring types: Eco (Ecosystem), Catch, or Pop (Population).*

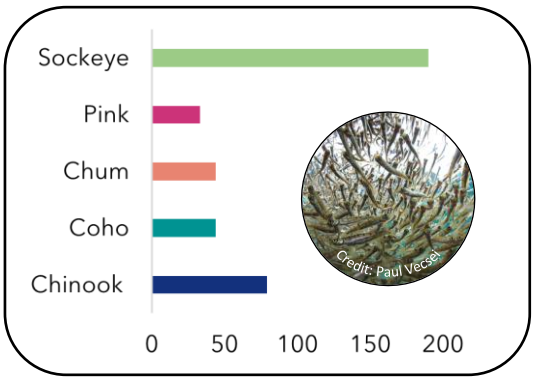
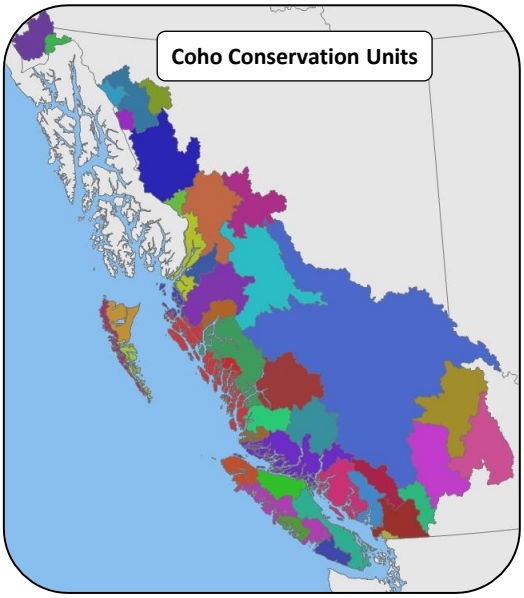


Figure 2. Pacific salmon Conservation Units (CUs) by species. Learn more...



Map 1. Coho salmon CU boundaries in British Columbia.

Fisheries and Oceans Canada | Pêches et Océans Canada

Canada

Cat. No. Fs-141-7E-PDF | ISSN 2816-5268

Working together for salmon

DFO, First Nations, and Indigenous organizations are committed to working together and weaving science and Indigenous Knowledge to understand the many challenges facing Pacific salmon populations and inform better decision-making.

Figure 3. Unique Indigenous collaborators in 2023 and 2024.

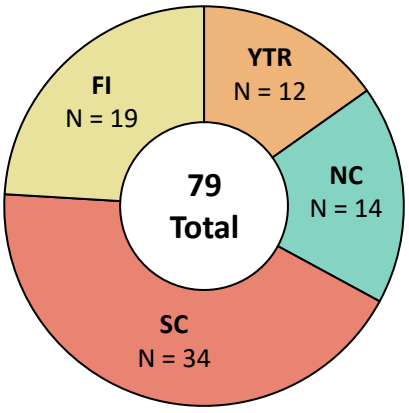
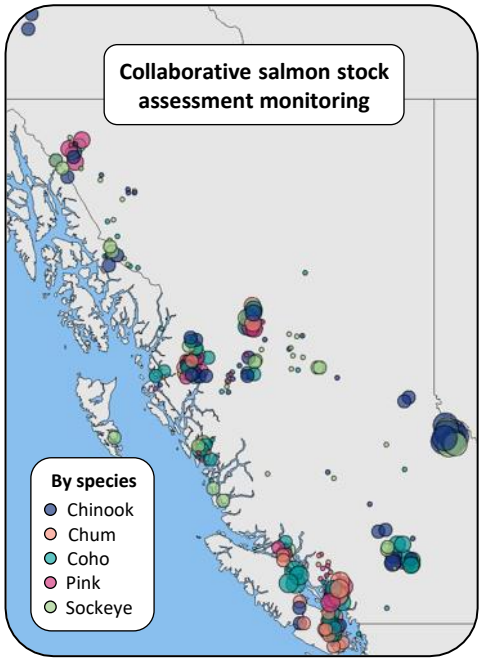
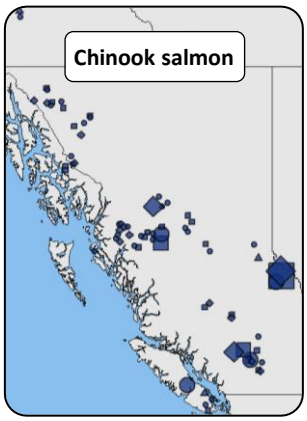


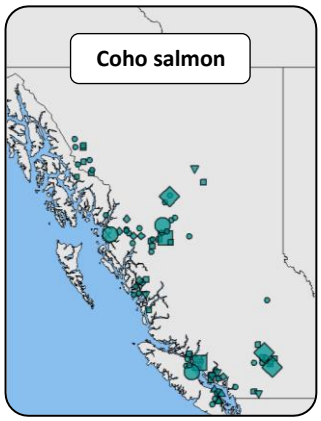
Figure 4. DFO-Indigenous monitoring projects by area.*

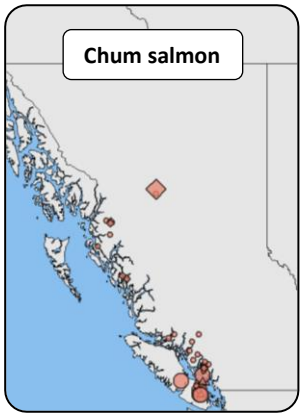


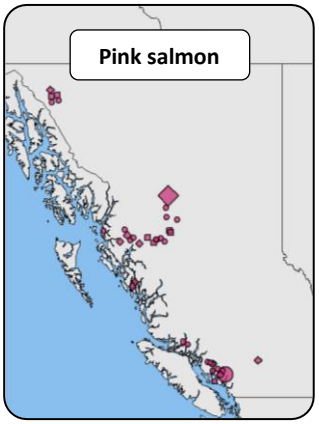
Map 2. DFO-Indigenous monitoring projects by species.*

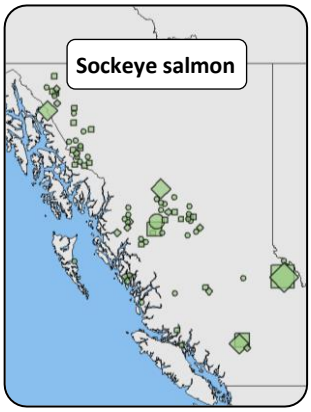
Salmon stock assessment activities











Map 3. DFO-Indigenous salmon stock assessment monitoring programs by activity and species.*

Population Monitoring

- ○ Enumeration (escapement) → **169**
- ◇ Biological sampling → **86**

Catch Monitoring

- ○ Enumeration (catch) → **72**
- ◇ Biological sampling → **12**

Ecosystems Monitoring

- □ Stream assessment → **11**
- △ Lake assessment → **5**

Salmon outlook summary

YUKON / TRANSBOUNDARY RIVERS	
Chinook	
Alsek	3
Porcupine	1
Stikine	1
Taku	2
Yukon	1
Chum	
Porcupine	1 to 2
Transboundary	Data Deficient
Yukon	1 to 2
Coho	
Alsek	2
Stikine	Data Deficient
Taku	3
Yukon	Data Deficient
Sockeye	
Alsek	3
Stikine	2 to 3
Taku	3

NORTH AND CENTRAL COAST			
Chinook			
Central Coast	2		
Haida Gwaii	Data Deficient		
Nass	2		
Skeena	2		
Chum			
Central Coast	2	DD	
Haida Gwaii	1		
Skeena/Nass	1	2	3
Coho			
Central Coast	Data Deficient		
Haida Gwaii	Data Deficient		
Nass	3		
Skeena	3	DD	
Pink			
Central Coast	2 to 3		
Haida Gwaii	2 to 3		
Nass	3 to 4		
Skeena	3 to 4		
Sockeye			
Central Coast	2		
Haida Gwaii	2		
Nass	3		
Rivers/Smith	1		
Skeena	2		

SOUTH COAST		
Chinook		
Lower Strait of Georgia	4	
Mainland Inlet	Data Deficient	
Middle Strait of Georgia	1/2	4
Upper Strait of Georgia	3 to 4	
West Coast Vancouver Island	1	4
Chum		
Inner South Coast	1 to 2	
West Coast Vancouver Island	2	
Coho		
Johnstone Strait/Mainland Inlet	3	
Strait of Georgia	3	
West Coast Vancouver Island	3	
Pink		
East Coast Vancouver Island/Mainland - Even	2 to 3	
East Coast Vancouver Island/Mainland - Odd	N/A	
West Coast Vancouver Island	Data Deficient	
Sockeye		
East Coast Vancouver Island/Mainland	2	
West Coast Vancouver Island - Barkley	2	3
West Coast Vancouver Island - Other	Data Deficient	

FRASER RIVER AND INTERIOR		
Chinook		
Fraser Fall Run 4_1	2	4
Fraser Spring Run 4_2	2	
Fraser Spring Run 5_2	2	
Fraser Summer Run 4_1	1	4
Fraser Summer Run 5_2	2	
Okanagan	1	
Chum		
Fraser	2	
Coho		
Interior Fraser	2	
Lower Fraser	Data Deficient	
Pink		
Fraser - Odd	N/A	
Sockeye		
Fraser - Early Stuart	1	
Fraser - Early Summer	1	2	4
Fraser - Late	1	
Fraser - Summer	1	2	3
Okanagan	3	

OUTLOOK CATEGORY			
1 – Well below average	2 – Below average	3 – Near average	4 - Abundant
Between 1 and 2	Between 2 and 3	Between 3 and 4	Data Deficient (DD)

Figure 5. The Outlook provides an annual estimate of expected abundance by Stock Management Units and is used in fishery planning and reporting. For more information, consult the salmon Integrated Fisheries Management Plans.

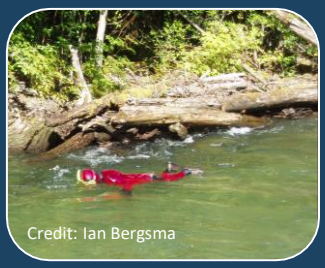
Accessible and transparent salmon data

The Pacific Salmon Data Portal will launch spring 2024!

The portal will eventually contain data visualization tools, built-in analysis tools such as charts, maps, and graphs providing insights about Pacific salmon, and the ability to export or connect to the underlying salmon datasets. These dashboards will improve data accessibility and enable conservation and restoration work.

Salmon stock assessment contacts


Credit: Ian Bergsma


Credit: Ian Bergsma

- **Yukon:** Jaclyn.Kendall@dfo-mpo.gc.ca
- **BC-Yukon Transboundary:** Marc.Ross@dfo-mpo.gc.ca
- **North Coast:** Shaun.Davies@dfo-mpo.gc.ca
- **South Coast:** Erin.Rechisky@dfo-mpo.gc.ca
- **Fraser R. and Interior:** Chuck.Parken@dfo-mpo.gc.ca
- **Fraser R. and Interior:** Scott.Decker@dfo-mpo.gc.ca

Fisheries and Oceans Canada | Pêches et Océans Canada

Canada