

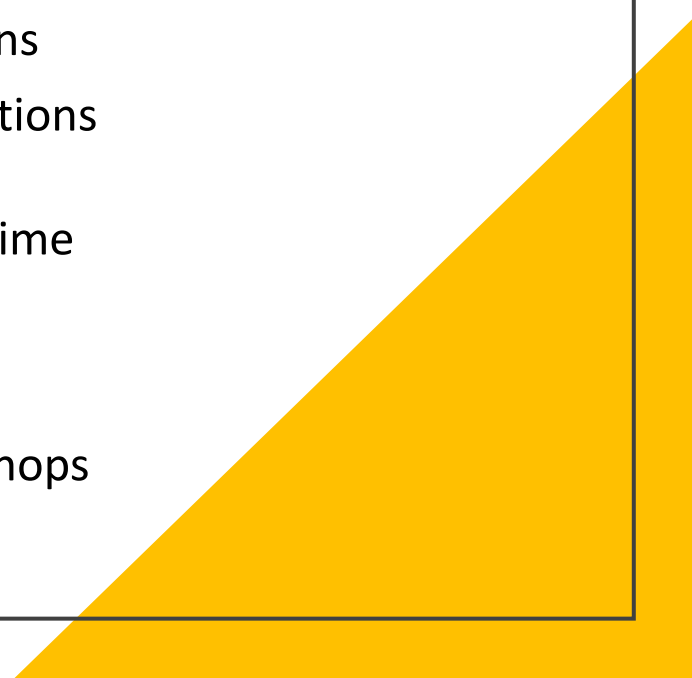
# Introduction to Using Environmental Indicators to Inform Salmon Management

Workshop hosted by PSC Secretariat and CoTC/CSC

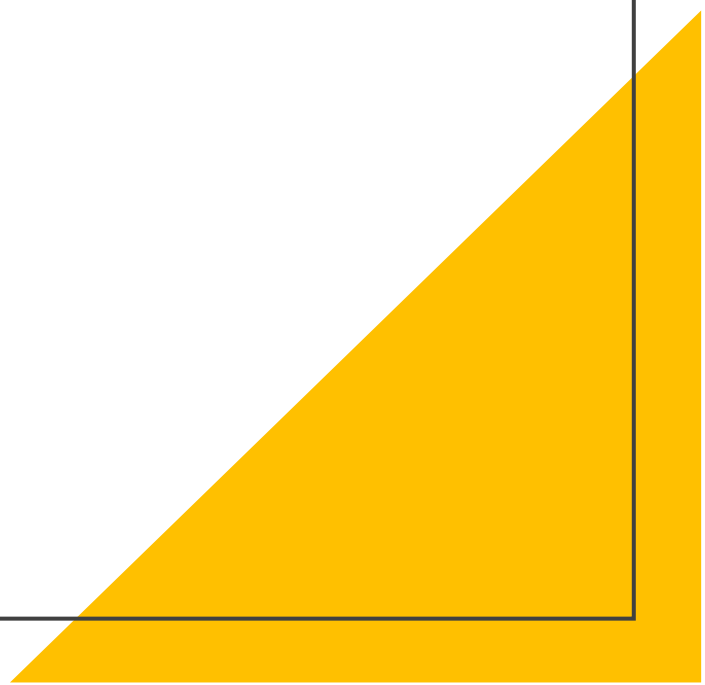
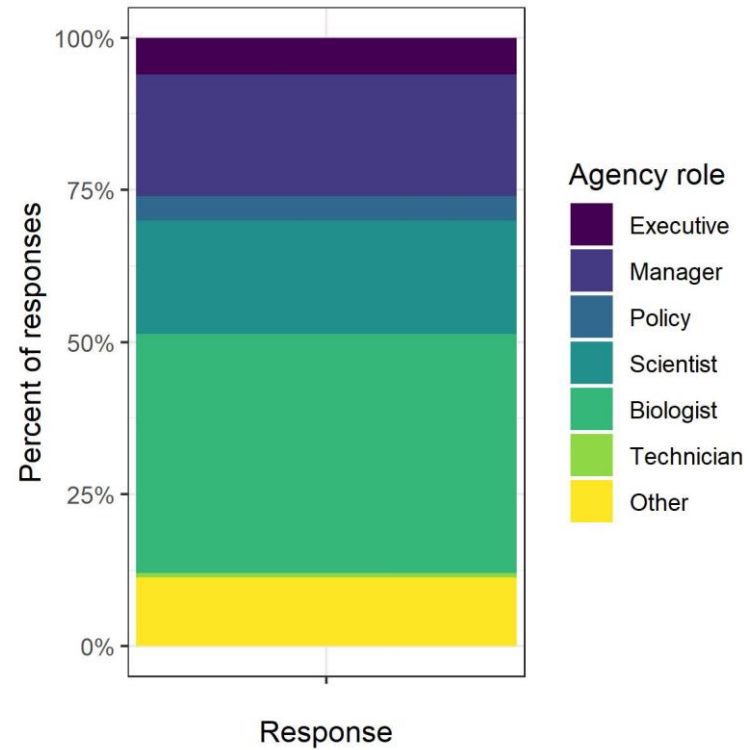
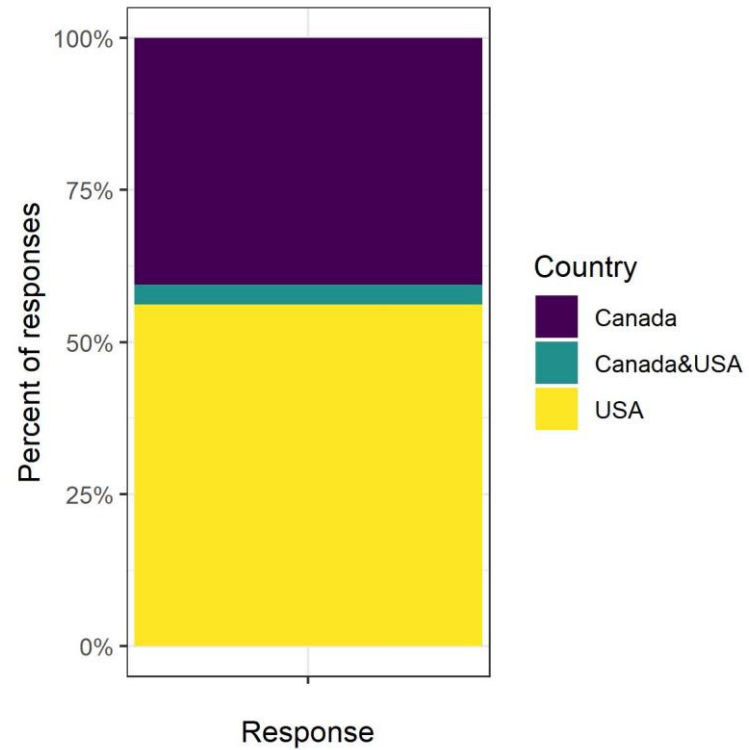
May 11, 2021 1-5pm PDT via ZOOM



# Ground Rules:

- Workshop will be recorded and posted to the PSC YouTube site after editing
  - Audience muted but can pose questions using the Q&A or chat functions
  - Chat box will be monitored – we will do our best to respond to all questions and post on Workshop link
  - Respect each other and everyone's ideas, be engaged, and mindful of time
  - No bad ideas or questions (be visionary)
  - We are compiling a reference library – invite contributions
  - Importance of pre- and post-survey questions for guiding future workshops
- 
- A large yellow triangle is positioned in the bottom right corner of the slide, pointing towards the top right.

# Participants:



# Objective:

- share background information, perspectives, and examples of the use of environmental indicators to inform salmon management using both western and indigenous knowledge.

This workshop is intentionally introductory and envisioned as the first of a series of workshops addressing requirements of the new PST Annex to be “responsive to changes in productivity associated with environmental conditions”.



### **Introductions, background information**

- 1:00-1:10 Introduction – Marisa Litz (WDFW) and Brendan Connors (DFO)  
1:10-1:20 Environmental change and the PST – Gary Morishima (Quinault Nation)  
1:20-1:40 Where do salmon typically go in the ocean? – Laurie Weitkamp (NWFSC)  
1:40-2:05 Sources of environmental data (CCIEA website) – Chris Harvey (NWFSC)  
2:05-2:30 Climate change and Pacific salmon (fresh and marine) – Nate Mantua (SWFSC)
- 2:30-2:40 **\*\*BREAK\*\***

### **Using environmental indicators to inform management**

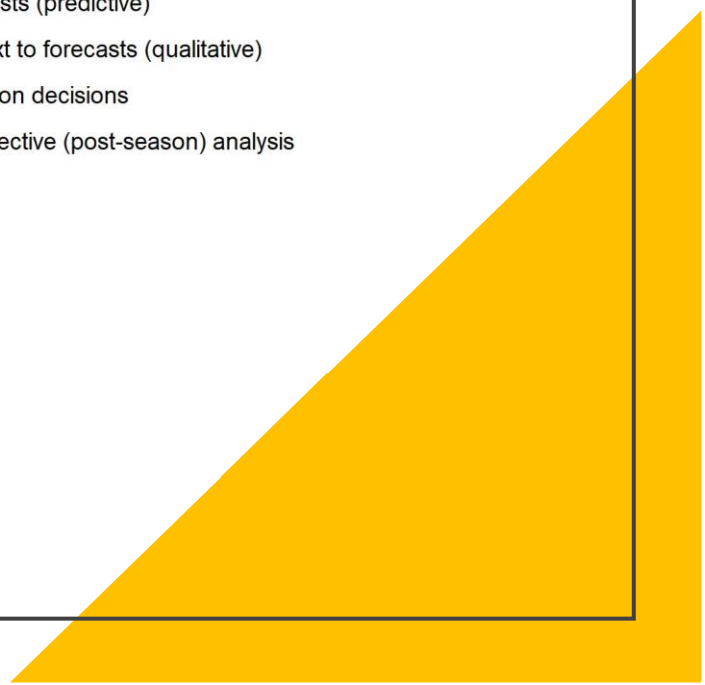
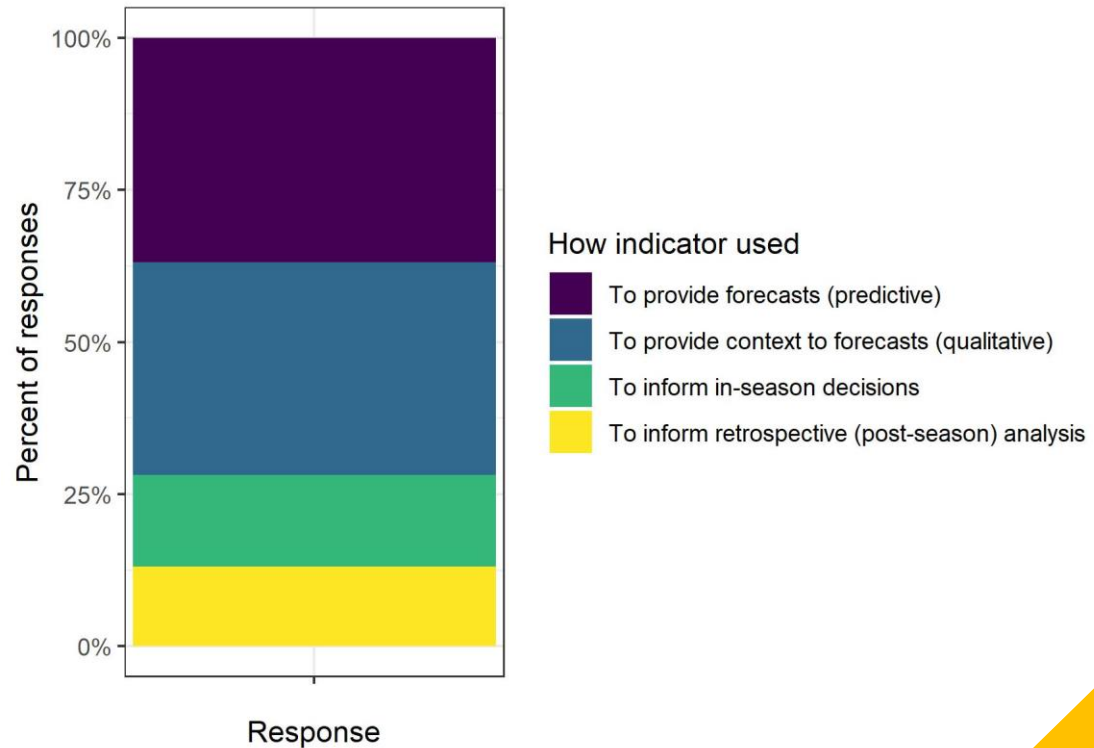
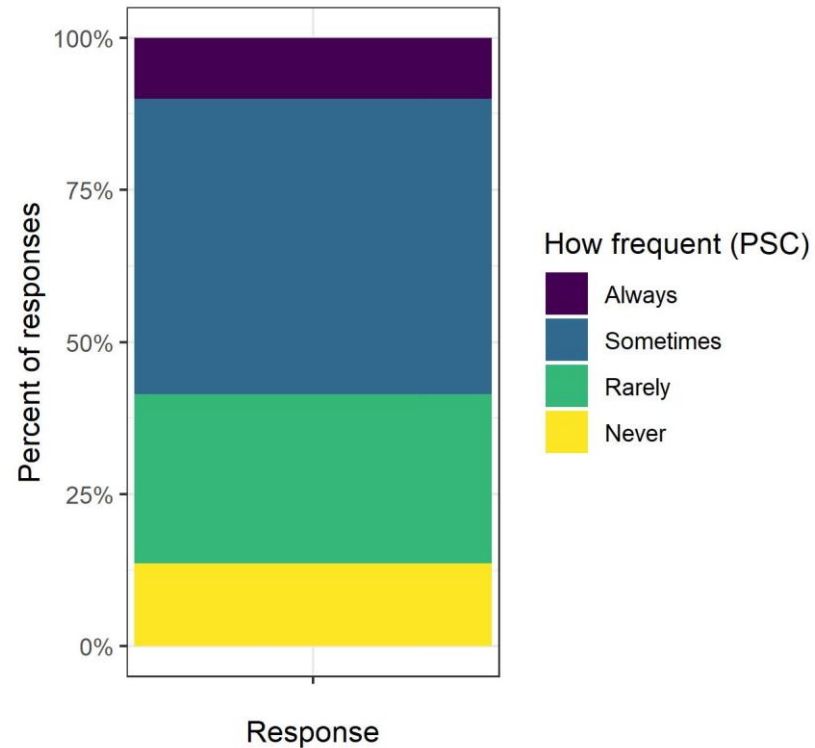
- 2:40-3:05 The role of indigenous knowledge in fisheries management – Andrea Reid (UBC)  
3:05-3:30 NOAA salmon stoplight chart – Brian Burke (NWFSC)  
3:30-3:55 State of Canadian Pacific salmon – Sue Grant (DFO)  
3:55-4:20 Hypothesis-based testing of multiple indicators – Kathryn Sobocinski (WWU)
- 4:20-4:30 **\*\*BREAK\*\***

### **Panel and group discussion**

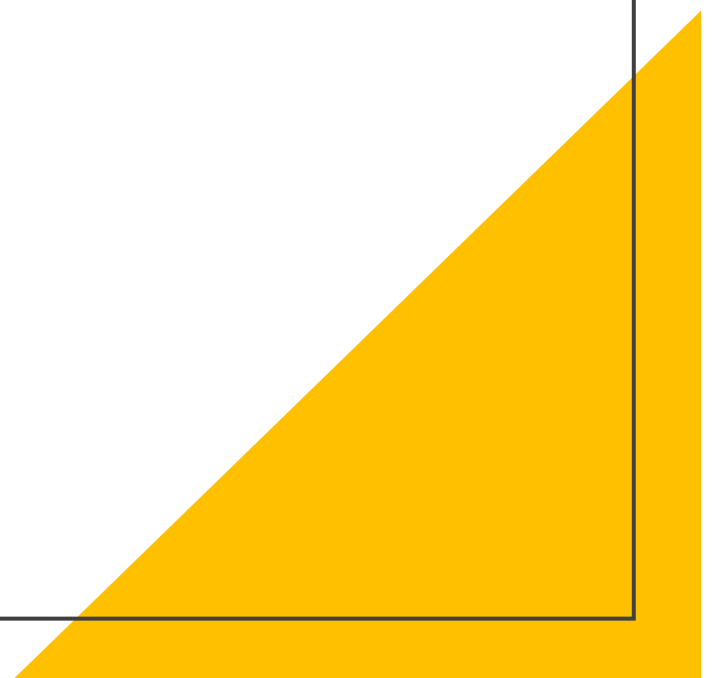
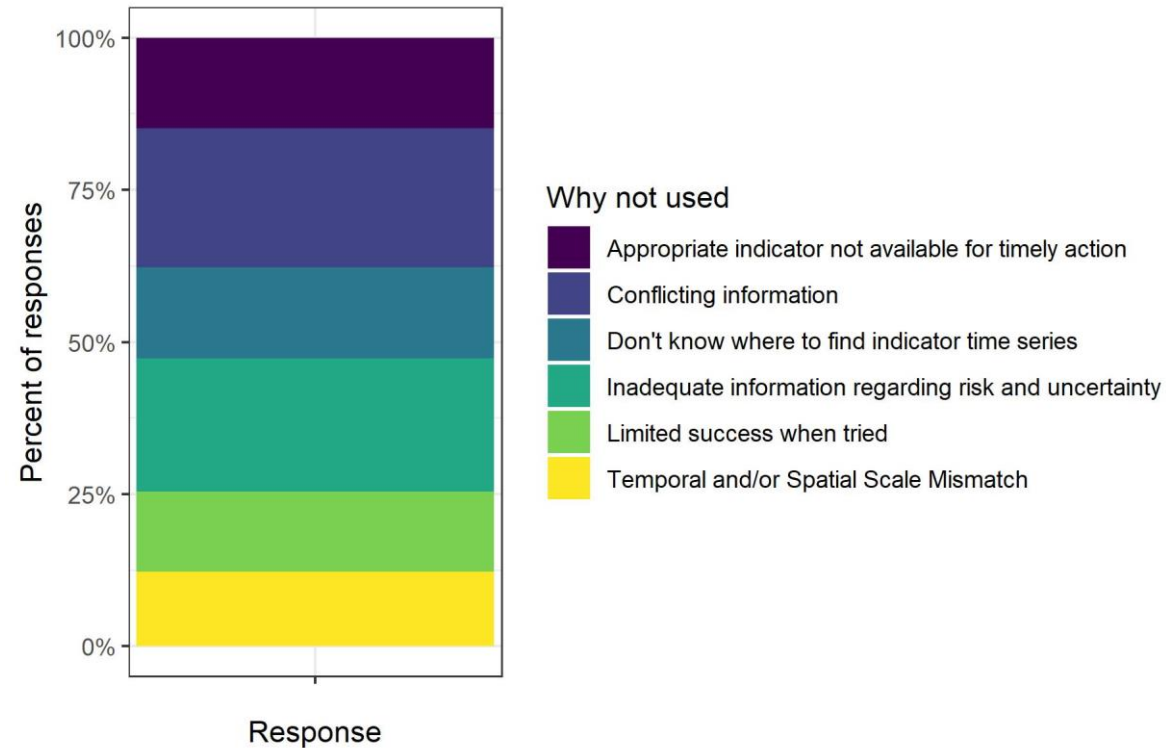
- 4:30-4:55 Facilitators - John Holmes (DFO) and Brian Beckman (NWFSC)  
4:55-5:00 Wrap up

# Agenda


# Environmental Indicators and the PSC:



# Environmental Indicators and the PSC:



# What is an Environmental Indicator?

- A quantitative measure that helps provide insight into the state of the environment
  - Can be measured over a broad range of spatial scales
  - Respond predictably to ecosystem change and are relevant to management concerns (e.g., salmon survival or distribution)
  - To be useful for decision making, indicators must be available in a timely manner
  - Indicators can be shared with the public and policymakers to help make informed decisions (pre-season, in-season)
- 
- A large yellow triangle is positioned in the bottom right corner of the slide, pointing towards the top right.



# Environmental change and the Standing Committee on Scientific Cooperation (CSC)

CSC has been tasked by Commission to\*:

- **Inventory current** PSC assessment models and management frameworks to determine if/how they incorporate environmental indicators and/or account for changes in productivity (by PSC chapter)
- **Analyze results** (e.g., best practices, barriers, gaps, opportunities)
- **Develop recommendations** to adapt PSC management approaches to environmental change (e.g. promulgate best practices, address barriers, fill gaps)

\*Over next 1.5 years

# Post workshop survey



- Feedback on workshop and interest in, and ideas for, future workshops (e.g., format, content, etc.)
- Thoughts on barriers to, and opportunities for, incorporation of environmental information into PSC assessment models and management frameworks
- Ideas about the role the PST community should play in helping Pacific salmon management institutions adapt and respond to environmental change)