Workshop 9 Applying a Cumulative Effects Framework to Explore Actionable, Social-Ecological Solutions for Climate Extreme Event Impacts Across the North Pacific

PICES Working Group 49 aims to address multi-disciplinary aspects of climate extreme events, including their physical drivers, attribution to climate change, predictability on seasonal to interannual time scales, and impacts on coastal marine ecosystems and the coastal communities that are reliant on their ecosystem services. This workshop is part of a multi-step process to investigate a WG49 principal objective of gaining a better understanding of the drivers and impacts of extremes under changing climate conditions.

Climate extreme events occur with regularity across the North Pacific. Physical ocean and atmospheric events cascade into ecological anomalies such as harmful algal blooms, marine species die offs, and changes in the distribution and abundance of species. These physical and ecological dynamics often have direct consequences for social systems requiring management such as through fishery closures or expansion, damage to infrastructure and property, and health problems. Using the preliminary results of a bibliometric analysis on ECEs conducted by WG49, this workshop will explore case studies in the North Pacific to outline drivers, and their ecological and societal impacts using a cumulative effects framework. We will work to draw out interactions between physical pressures and impacts to identify related shifts in ecosystem services and societal benefits. The workshop will explore possible indicators for future monitoring and discuss responses that may be useful for de-escalation of future potential impacts.

Workshop Activities:

1. Present Bibliometric analysis and workshop plan
2. Provide draft causal progression for ECE case studies
3. Using rotating break-out groups, ask participants for feedback on what the literature review informs about each event, and
4. Have participants add to and clarify the possible cumulative causal progression for the event(s) and future monitoring (literature has much speculation)

AGENDA

Sunday, Nov 9th 9:00-12:25

9:00-9:45 – Introduction of WG49 Bibliometric Analysis and Plan for the Workshop

9:45-10:00 – Presentation of Extreme Climate Event (ECE) case studies

10:00-10:35 – Break out 1 (two groups)– Review of Drivers, Vulnerabilities and Stressors of the ECE on physical, ecological and social systems

10:35-10:55 – COFFEE BREAK

10:55- 11:30 - Break out 2 (two groups)– Review of Impacts and Responses of the ECE on physical, ecological and social systems

11:30 – 12:10 – Break out 3 (two groups) – Discussion of relevant indicators within components of the causal progression of the ECE.

12:10-12:25 – Plenary – review of today's outcomes and next steps.