

Workshop 1

Bridging Global and Regional Marine Ecosystem Modelling: Connecting the Fish-MIP and PICES Communities under Fish-MIP 2.0

Sponsors: PICES S-CCME; FishMIP (Fisheries and Marine Ecosystem Model Intercomparison Project); TropEcS (Modelling Socio-Economic Dimensions across Tropical Coastal Ecosystems and the Earth System); Schmidt Sciences

Conveners:

Julia Blanchard (University of Tasmania, Australia)
Viv Tulloch (University of British Columbia, Canada/ S-CCME Member)
Kelly Ortega Cisneros (University of Cape Town, South Africa)
Camilla Novaglio (Leibniz Centre for Tropical Marine Research, Germany)
Phoebe Woodworth-Jefcoats (NOAA/ S-CCME Member)
Peng Lian (Chinese Academy of Fishery Sciences, China)

Workshop Format: Hybrid (in-person + online participation)

Time	Activity
9:00-9:10	Introduction (Convenors; Workshop structure and objectives)
9:10-10:30 (80 min)	Keynote presentations (2 presentations, 20 min each) <i>Scaling marine ecosystem modelling with human-AI systems.</i> Scott Spillias CSIRO Environment, Hobart, TAS. <i>Enhancing the ecosystem modelling cycle: machine learning approaches for parameter sensitivity and model calibration.</i> Hem Nalini Morzaria-Luna Long Live the Kings, Seattle, US. Lighting talk (5 min) <i>Linking historical fisheries records and modern surveys with explainable AI in China's coastal seas.</i> Peng Lian Chinese Academy of Fishery Sciences, Beijing, China. Questions and Discussions (20 min)
10:30-10:50	Coffee break
10:50-12:20 (90 min)	Hands on AI-assisted ecosystem modelling session and discussion

	Participants will explore the use of an AI-assisted ecosystem modelling tool for regional climate impact modelling applications. This will be followed by discussions of potential applications, limitations, and best practice for future use in support of FishMIP and PICES modelling communities.
12:20-12:30	Closing remarks and next steps

Description

This workshop aims to bridge FishMIP's global modelling expertise with the leading regional modelling capacity of the PICES community. It will provide an opportunity to share methodological advances and explore the potential use of AI-assisted modelling tools to advance the development of regional marine ecosystem model ensembles, from the tropics to the poles, to support climate-resilient fisheries management.

By bringing together the FishMIP and PICES communities, the workshop will:

1. Showcase recent advances in regional marine ecosystem model ensembles using AI-assisted data tools.
2. Discuss best practices for using these tools and explore potential future activities for FishMIP-PICES regional modelling networks.

Through presentations, breakout discussions on AI tools, and collaborative planning, the workshop will support PICES objectives related to ecosystem forecasting and adaptive management across member nations and beyond.