

Report on Joint NPFC-PICES activities for SC-09, December 2024

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Background

The North Pacific Marine Science Organization (PICES) and the NPFC are both intergovernmental organizations which have several member countries in common and an overlapping geographic scope. PICES is a scientific organization that fosters multi-national, collaborative and trans-disciplinary science to advance the understanding of North Pacific ecosystems, and works with partner organizations to address shared priorities for scientific advancement.

Both organizations endorsed a *Framework for Enhanced Scientific Collaboration in the North Pacific* in October 2019, following the work of a joint Study Group which met over a year to draft the Framework. The full document can be found here: [PICES NPFC Framework](#)

The Framework identified three major areas of mutual interest that were to be a focus during the first 5 years, to 2024: (i) support for stock assessment for priority species (ii) vulnerable marine ecosystems and (iii) ecosystem approach to fisheries. Mechanisms were identified to facilitate the cooperation, such as NPFC co-sponsorship of workshops and themed sessions at PICES meetings, participation in PICES working groups and reciprocal representation at each organization's annual meetings.

The first 5-year Framework is set to expire at the end of 2024. Members of NPFC and PICES worked over summer 2024 to assess the progress on the priority areas, and to discuss new areas for collaborations. The revised Framework, which is proposed for 2024-2029, maintains these three areas as still of priority for joint activities, but also noted that climate change impacts will be considered across all priority areas and incorporated where relevant. Examples of impacts include: Distributional changes of fish stocks, the impact of ocean acidification and factors affecting species life history parameters and productivity. Data sharing and data management were also seen as something to be encouraged. The revised Framework was presented to PICES Governing Council at PICES-2024 where it was endorsed. It will be presented to NPFC at this meeting for consideration.

This report summarizes recent and other upcoming planned joint activities.

1. Working Group on Small Pelagic Fish

PICES and ICES formed a joint Working Group on Small Pelagic Fish (WG 43) in 2019, and NPFC nominated two representatives, Dr. Toshihide Kitakado and Dr. Oleg Katugin to the WG. Owing to the COVID-19 pandemic the WG life was extended to PICES-2023 to enable it to complete the products of the final term of reference, the joint ICES/PICES symposium on SPF, postponed until November 7-11, 2022 in Lisbon, Portugal, with a theme of "Small Pelagic Fish: New Frontiers in Science for Sustainable Management", SPF-2022. NPFC made a contribution of US\$15,000 to the symposium and was represented on the Steering Committee by Dr. Toshihide Kitakado and at the Symposium by Dr. Zavolokin, the NPFC Science Manager. The Symposium was highly successful with 288 participants from

39 countries giving 278 presentations, which contributed to two journal special issues; a Special Issue of Canadian Journal of Fisheries and Aquatic Sciences (CJFAS) and to a Theme Section of Marine Ecology Progress Series (MEPS). PICES is very grateful for the contributions of the NPFC.

The WG held a final workshop in February, 2024 to: (1) review the work done by WG Task Forces (TF on Ecological Process Knowledge, TF on Translating Process Knowledge, and TF on Social-Ecological Approaches) and to synthesize the outcomes of their activities; (2) to initiate the development of a high-impact manuscript that describes the outputs of the first phase of the WG, including papers from the Small Pelagic Fish Symposium (SPF-2022); and (3) to discuss the scope, potential scientific program and logistics for the next SPF symposium to be convened in Mexico (SPF-2026).

In June 2024 PICES and ICES approved a new joint WG, WG53 on *Sustainable Pelagic Forage Communities* which held its first business meeting as part of PICES-2024 activities. One of this WG's terms of reference is to plan and implement the upcoming SPF-2026 Symposium. PICES Governing Council approved the addition of two ex-officio members from NPFC, Dr. Kazuhiro Oshima and Dr. Toshihide Kitakado. The Symposium will also be discussed and presented at SC09.

2. Working Group on the Ecology of Seamounts

In 2020 PICES formed a [Working Group on the Ecology of Seamounts](#) (WG47) and even though NPFC is not formally represented in the WG, some NPFC scientists are involved in its work including the Chair of the NPFC Scientific Committee (Dr Janelle Curtis) who co-chairs WG 47.

NPFC Scientific Committee members co-convened a hybrid workshop at PICES-2022 with members of WG47 on "*Distributions of pelagic, demersal and benthic species associated with seamounts in the North Pacific Ocean and factors influencing their distributions*". A full report can be found in [PICES-Press-2023-Vol31No1.pdf](#)

At PICES-2023 in Seattle, USA, NPFC co-sponsored a topic session, "S14: BIO Topic Session Seamount biodiversity: vulnerable marine ecosystems (VMEs) and species associated with seamounts in the North Pacific Ocean" with 14 talks (1 invited and 13 contributed) and 3 posters.

The WG is currently preparing its final report and will then be disbanded.

3. The BECI (Basin-scale Events to Coastal Impacts) project

PICES and the North Pacific Anadromous Fish Commission (NPAFC) were partners in developing the "Basin-scale Events to Coastal Impacts: An ocean intelligence system for fish and people (BECI)" proposal which was endorsed as an UNDOS project in early October 2021. At SC-07, NPFC expressed its support for the development and implementation of the BECI project in line with the NPFC-PICES Framework for Enhanced Scientific Collaboration.

Funding for an initial (18 month) BECI Project office was secured in 2023 and a Science Director and other key staff appointed early in 2024. Their focus is on developing a detailed science and implementation plan. These plans will incorporate key components of the BECI project which include 1)

data integration and analytics, 2) ecological modelling 3) international partnerships and 4) targeted research to support effective decision making. At PICES-2024 BECI led a workshop to:

- Engage with the community of species, fisheries, ecosystem, climate and oceanographic modellers working in the North Pacific;
- Discuss attributes and considerations of different models and ensemble initiatives in the North Pacific and identify best practices for ensemble development;
- Identify best practices for ensemble development and start developing a protocol for a North Pacific Ocean Marine Ecosystem Model Ensemble (NOMEME), including key standardisation factors, focal species/fisheries, management targets.

A workshop report will be available in due course and published in the next edition of PICES Press. The BECI Science Director, Kathryn Berry, is participating in the NPFC SC09 meeting.

4. Representation at Annual Meetings

Representatives of the NPFC participated in PICES-2023 and PICES-2024 attending business meetings of the Science Board, Biological Oceanography Committee (BIO), Fishery Science Committee (FIS) and some business meetings of PICES working groups (such as WGs 43, 47 and 53). Written reports were also provided to PICES Governing Council.

The Executive Secretary of PICES attended the NPFC's Scientific Committee meeting in December 2023, Commission meeting in April 2024, also giving a presentation in each on joint activities between the organizations.

The next PICES annual meeting, PICES-2025, will be held in Yokohama, Japan from November 8 -16 and NPFC members are invited to participate. The schedule of sessions and workshops will be available in April 2025.

5. PICES External Review

During the past year PICES has undertaken an external review of itself, and the report from the Committee was released in September, prompting many discussions at PICES-2024. PICES Governing Council will now be considering how to prioritise and address the recommendations, which centre around a shift to more actionable science and some organizational changes. PICES sees an opportunity to enhance the impact of its scientific research by fostering stronger ties with policymakers and other scientific bodies with an interest in marine ecosystems of the North Pacific. By prioritizing stakeholder engagement, enhancing trans- and inter-disciplinary work, and improving communication strategies, PICES can better serve its member countries and other organizations with their resource management. A broader shift towards integrating scientific information with practical applications should ensure that PICES science serves as a valuable tool for decision-making in the face of climate change and resource challenges. As plans develop, we will be actively seeking further input of partners such as NPFC.