

SCOR and PICES Collaborative Activities
Report from PICES for the 2021 Virtual SCOR Annual Meeting
(26-28 October 2021)
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PICES: What We Are

The North Pacific Marine Science Organization (PICES) is an intergovernmental scientific organization established by an international convention in 1992, in order to promote and coordinate marine scientific research in the North Pacific and adjacent seas. Our current member countries are Canada, Japan, People's Republic of China, Republic of Korea, Russian Federation and the United States of America. PICES' goals are to (1) advance scientific knowledge and capacity available for the member countries, including information on human activities affecting, and affected by marine ecosystems, and (2) provide a mechanism for collaboration among scientists in addressing timely and critical scientific questions about the North Pacific. In the 29 years since its establishment, PICES has become a major forum for the discussion and sharing of marine science in the North Pacific. Information on the Organization and its activities is available on the PICES website at <http://www.pices.int>.

SCOR – PICES Collaboration in the Recent Years

SCOR and PICES have demonstrated a cooperative model for an international non-governmental organization and a regional intergovernmental organization to share their strengths in championing ocean science. **Continuing and expanding collaboration between PICES and SCOR is based on the recognition that PICES can play an important role in bringing a North Pacific perspective to the global activities of SCOR, and that by participating in and implementing these activities in the region, PICES can advance its own scientific agenda.** The collaboration is implemented through the activities in the following areas:

- i. Contribution of scientific expertise to the relevant international scientific projects
- ii. Reciprocal representation of the SCOR and PICES Executives at annual meetings
- iii. Capacity development

i. Contribution of scientific expertise to the relevant international scientific projects

PICES contributes scientific expertise to SCOR-sponsored international large-scale ocean research projects e.g., Harmful Algal Blooms [GlobalHAB], IMBeR, SOLAS, GACS [Global Alliance of Continuous Plankton Recorder Surveys]), and to SCOR-supported projects e.g. (IOCCP [International Ocean Carbon Coordination Project]).

For the PICES 2019 Annual Meeting in Victoria, BC, **SCOR provided substantial funding (\$10,000 USD) from the GlobalHAB program budget to support a 2.5 day Workshop** (17-19 October 2019) titled “W18: GlobalHAB: Evaluating, Reducing and Mitigating the Cost of Harmful Algal Blooms: a Compendium of Case Studies”, which was co-sponsored by SCOR, ISSHA, NOWPAP, Greig Seafood Ltd., IOC UNESCO, GlobalHAB, and AXA XL Insurance. The link to the Workshop report is here: <https://meetings.pices.int/publications/annual-reports/2019/2019-Session-Workshop-Summaries.pdf#page=116>

PICES also have supported several **SCOR Working Groups** (Table 1) by sending experts to WGs and funding their activities such as summer schools (see the section iii. Capacity Development for an example).

Table 1. SCOR WGs which the PICES community has contributed to.

	Title	Period of Activities
WG125	Global Comparisons of Zooplankton Time Series	2005-2008
WG134	The Microbial Carbon Pump in the Ocean	2009-2012
WG137	Patterns of Phytoplankton Dynamics in Coastal Ecosystems: Comparative Analysis of Time Series Observation	2010-2014
WG146	Radioactivity in the Ocean, 5 decades later	2015-2017
WG149	Changing Ocean Biological Systems (COBS): how will biota respond to a changing Ocean	2016-2018
WG154	Integration of Plankton-Observing Sensor Systems to Existing Global Sampling Programs (P-OBS)	2018-
WG155	Eastern Boundary Upwelling Systems (EBUS): diversity, coupled dynamics and sensitivity to climate change	2018-

ii. Reciprocal representation by the SCOR and PICES Executives at annual meetings

To discuss on-going and future collaborations, SCOR and PICES have regularly exchanged observers to each other's annual/executive meetings in the past several years, and PICES representatives have presented activity updates at the SCOR annual meeting. The SCOR President (2020-2022), Dr. Sinjae Yoo, who is also the former PICES Science Board Chair, officially represented SCOR at the PICES-2019 annual meeting in Victoria, BC, Canada (16-27 Oct 2019). The former PICES Deputy Executive Secretary, Dr. Harold Batchelder, acted as the liaison member to the SCOR Capacity Building Committee and regularly attended the SCOR Executive Committee Meeting since 2013. To further enhance the collaboration in the area of capacity development, the current **PICES Deputy Executive Secretary, Sanae Chiba will become a full member of the SCOR Capacity Development Committee from 2021.**

iii. Capacity development

SCOR and PICES are both strong proponents of capacity building. PICES has appreciated the funding support of SCOR for early career scientists and scientists from developing countries to attend PICES sponsored international conferences. Examples of such sponsored activities in recent years are shown in Table 2. PICES also supports some SCOR activities such as the SCOR WG155 Eastern Boundary Upwelling Systems (EBUS) Summer School due to be held in Senegal in May 2020 but unfortunately cancelled due to the Covid-19 pandemic.

Table 2. SCOR Funding Support to PICES

Date/Place	Conference title	SCOR funding support
April 24-26, 2018, La Paz, Mexico	International Symposium on Understanding Changes in Transitional Areas of the Pacific	Travel fund for early career scientists (3000 USD)
2-9 June 2018, Washington, DC, USA	the 4th Effects of Climate Change on the World's Oceans Symposium	Travel fund for scientists from developing countries (3000 USD)
2-9 June 2018, Washington, DC, USA	the 4th Effects of Climate Change on the World's Oceans Symposium	(On behalf of SOLAS) Travel fund for scientists from developing countries (5200 USD)

PICES Activities Relevant to SCOR: Update for 2020-2021 and Beyond

Since early 2020, typical collaboration between SCOR-PICES have largely been suspended due to the global COVID-19 pandemic. **PICES Annual Meeting 2020** was held virtually for the first time, and resulted in the substantial reduction of the PICES carbon footprint. That experience brought us the benefits of the environmentally sustainable, cost-effective, and less exhaustive standard in the meeting structure: a combination of virtual and in-person conference style will likely replace the conventional almost two-week annual meeting. With China as the local host this year PICES holds its **2021 Annual Meeting** October 18-29 (coincides with the timing of the SCOR Annual Meeting) as a virtual event again.

Upon the launch of the United Nations Decade of Ocean Science for Sustainable Development (UNDOS), ICES/PICES submitted the joint programme proposal “**Sustainability of Marine Ecosystems through global knowledge networks (SMARTNET)**” which leverages existing ICES/PICES collaboration on marine science to address UNDOS’s seven societal outcomes. SMARTNET was officially endorsed as one of the first batch of UNDOS Programmes in June 2021, and the detailed action plan will be developed in due course. Here is the short description of SMARTNET. <https://www.oceandecade.org/ocean-science>

Sustainability of Marine Ecosystems through global knowledge networks (SMARTNET)

Lead institution(s): International Council for the Exploration of the Sea (ICES), The North Pacific Marine Science Organization (PICES)

SMARTNET will establish a global knowledge network (GKN) for ocean science by strengthening and expanding the collaboration of ICES/PICES and partner organizations. It will support and leverage ICES/PICES member countries' activities related to UNDOS, by emphasizing areas of mutual research interest including climate change, fisheries and ecosystem-based management, social, ecological and environmental dynamics of marine systems, coastal communities and human dimensions, and communication and capacity development. It also incorporates strategies to facilitate UNDOS cross-cutting inclusivity themes relating to gender equality, early career engagement, and involvement of indigenous communities and developing nations in the planning and implementation of joint activities.

Another new initiative of the PICES is the **emphasis on Science Communication** and promotion of its relevant activities/projects. The Study Group on Science Communication (SG-SciCom) report will likely recommend a permanent Advisory Panel (AP-SciCom) to help the PICES community develop better strategies and practices for interdisciplinary, inter-sectoral and public communications.

SCOR Relevant International Meetings Supported by PICES in 2021 and beyond.

In 2020, many international meetings were either held on virtual platforms or postponed. Among the list of upcoming events (Table 3), the American Geophysical Union: Ocean Science Meeting in February 2022 will be the long-awaited first partially face-to-face meeting for the North Pacific marine science communities in nearly two years.

SCOR has committed 5000 USD to support the participation of scientists from developing countries to the conference “Small Pelagic Fish: New Frontiers in Science for Sustainable Management” in Portugal in November 2022. ICES and PICES will jointly organize the 4th Early Career Scientist Conference in May 2022, that will be the first fully in person meeting [since 2020](#).

We seek travel fund resources to invite younger scientists from the developing countries to this conference, and plan to submit a funding request to the SCOR Capacity Development Committee.

Table 3. SCOR Relevant International Meeting Supported by PICES in 2021 and beyond.

Date (initial)	Conference Title	Place	Note/website
May 2020	MSEAS Marine Socio-Ecological System Symposium	-	Postponed to 2022/23 PICES co-sponsors the meeting https://meetings.pices.int/meetings/international/2020/MSEAS/Background
June 2021	SOLAS Summer School	-	Postponed to 2023 PICES participants expected
Oct 2021	IMBeR IMBIZO 6	Virtual	https://imber.info/event/imbizo-6-buoyant-solutions-for-ocean-sustainability/ PICES participants expected
Feb 2020	AGU Ocean Science Meeting (OSM)	Partly virtual, Honolulu, USA	https://www.aslo.org/osm2022/ PICES co-sponsors the meeting.
May 2022	4th ICES / PICES Early Career Scientist Conference	Newfoundland, Canada	https://www.ices.dk/events/symposia/ccsc4/Pages/default.aspx ICES/PICES seek SCOR's funding support
Nov 2022	ICES/PICES Small Pelagic Fish (SPF)	Lisbon, Portugal	https://meetings.pices.int/meetings/international/2022/pelagic/scope SCOR has committed 5000 USD.

SCOR – PICES Collaboration in the Decade of Ocean Science

The launch of UNDOS and the coincident impacts of the COVID pandemic brought the ocean science community numerous challenges to tackle, but also have produced the opportunities to establish a new paradigm in promoting international collaboration.

Based on the legacy of the past and existing collaboration scheme, PICES hopes to explore the opportunities to further synergise the activities of two organizations. An opportunity lies in the UNDOS cross-cutting challenges such as capacity development in developing countries, promotion of activities of early career professionals and empowering women in ocean science. To ensure that regional scientific knowledge can be fed by international communities to address the global environmental and socio-economic challenges, PICES will be expanding its science network beyond the North Pacific to the communities in Southern Hemisphere and Pacific Small Island Developing States (SIDS), and via our partner organization, ICES, to other ocean regions.