

## 2022 Intersessional Governing Council Decisions

*(The following decisions were taken by correspondence during May 2022)*

**2022/S/1: Letter of recognition for an individual’s service to PICES.** Council reviewed the template and guidelines prepared by Science Board and approved these materials. They will enable an individual to request a letter from the Chair and Executive Secretary that indicates to their supervisor their participation in the organization. Council instructs that the template be made available by the Secretariat to all current and incoming Chairs.

### 2022/S/2: Publications

- i. The following publications have been produced in, or submitted to, primary journals in 2020/2021 and are to be noted on the PICES publication pages following publication:

S-CC (POC)	Jiang, L.-Q et al. (2021) Coastal Ocean Data Analysis Product in North America (CODAP-NA) – an internally consistent data product for discrete inorganic carbon, oxygen, and nutrients on the North American ocean margins, Earth Syst. Sci. Data, 13, 2777–2799, <a href="https://doi.org/10.5194/essd-13-2777-2021">doi.org/10.5194/essd-13-2777-2021</a>
WG46 (POC)	Jiao N et al. (2020) Microbes mediated comprehensive carbon sequestration for negative emission in the ocean. National Science Review 7: 1858-1860. <a href="https://doi.org/10.1093/nsr/nwaa171">doi: 10.1093/nsr/nwaa171</a>
WG46 (POC)	Jiao N et al (2021) Excessive greenhouse gas emissions from wastewater treatment plants by using the chemical oxygen demand standard Science China: Earth Science 65: 87-95 <a href="https://doi.org/10.1007/s11430-021-9837-5">doi.org/10.1007/s11430-021-9837-5</a>
WG46 (POC)	Jiao, N (2021) Developing Ocean Negative Carbon Emission Technology to Support National Carbon Neutralization, Bulletin of Chinese Academy of Sciences (Chinese Version) 36. DOI: <a href="https://doi.org/10.16418/j.issn.1000-3045.20210123001">https://doi.org/10.16418/j.issn.1000-3045.20210123001</a>
WG46 (POC)	Wang, F et al. (2021) Technologies and perspectives for achieving carbon neutrality, The Innovation <a href="https://doi.org/10.1016/j.xinn.2021.100180">doi.org/10.1016/j.xinn.2021.100180</a>

### 2022/S/3 Current Expert Groups

Council approved the following changes to existing Expert Groups:

- i. AP-ECOP (SB, FUTURE): Dr Hannah Lachance (USA) and Dr Minkyong Kim (Korea) are confirmed as co-Chairs of the AP-ECOP. Dr Raphael Roman is confirmed as a co-Chair pending his appointment by Canada to the AP.
- ii. AP-SciCom (SB, FUTURE): Dr Tammy Norgard (Canada) is confirmed as a co-Chair of AP-SciCom
- iii. The Human Dimensions (HD) Committee will become an additional Parent Committee of WG43: Joint PICES/ICES Working Group on small pelagic fish.
- iv. Rule 13.iv.d. in the Rules of Procedure will be changed to clarify the timing of disbandment of a Working Group. Rule 13.iv.d. will now read “shall be disbanded either after submission of its final report and review and approval of its Parent Committee, or, as determined by the Science Board, for inadequate progress in achieving its tasks.”
- v. The revised Action Plan for Section-Marine Birds and Mammals (S-MBM), as shown in Appendix A below, was approved.

- vi. The revised Terms of Reference for Section–Harmful Algal Blooms (S-HAB), as shown in Appendix B below, were approved.

**2022/S/4 New Expert Groups**

Council approved the establishment of the following new Advisory Panel with terms of reference as provided in Appendix C.

- i. AP-UNDOS – Advisory Panel on the United Nations Decade of Ocean Science for Sustainable Development

Council approved the establishment of the following new Study Group, with terms of reference as provided in Appendix D.

- ii. SG-GREEN - Study Group on Generating Recommendations to Encourage Environmentally-Responsible Networking.

**2022/S/5: Capacity Building Activities**

Council approved co-sponsoring the SOLAS Open Science Conference September 25-29, 2022 and allocated \$4,500 to partially support travel of PICES Early Career Ocean Professionals and/or an ECOP event scheduled during the conference.

**2022/S/6: Travel Support**

Council approved travel support requests for PICES members to attend joint expert groups activities as follows:

<b>Expert Group</b>	<b>Conference title / Date / Location</b>	<b>Recipient name / organization / country / contact</b>	<b>Amount and rational of fund request</b>
WG39	7 <sup>th</sup> ICES WGICA Annual Meeting, Oct 11-13 Copenhagen, Denmark	Sei-ichi Saitoh , WG39 Chair (ssaitoh@arc.hokudai.ac.jp), Hokkaido Unv, Japan	CA\$3,000 (Partial support)
WG45	WG45 organized session and Joint ICES/PICES WG-GRAFY meeting at ICES Annual Science Conference, Sept 19-22, Dublin, Ireland	Shuyang Ma (mashuyang@Ouc.edu.cn), Ocean University of China. WG45 member, ECOP, invited speaker.	CA\$3,500 (Partial support)

## **Appendix A: S-MBM Action Plan, 2022-2026.**

The S-MBM proposes to address the next stage of Climate and Trophic Ecology of Marine Birds and Mammals over the next 5 years. This program has been chosen because marine birds and mammals (MBMs) can have top-down effects on marine ecosystems and because MBMs respond to multiple scales of variability in the environment and their prey-base. We are completing our update of the 2000 report (Hunt et al., 2000) on diets and food consumption of marine mammals with case studies from seabirds as well based on additional datasets and improved bioenergetic models. Combining this information with data on prey quantity, quality, composition and distribution will further allow us to better understand and predict how variability in prey will impact MBMs. In particular, we plan on examining the influence of climate variability and change on trophic linkages and, ultimately, the distribution and abundance of MBMs in the North Pacific. In addition, our project will link directly with other PICES committees (e.g., BIO, FIS, POC, MEQ), provide improved data on energy flow needed for ecosystem models for PICES sub-regions and broader LMEs, and will address the goals of FUTURE to forecast ecosystem status and understand how marine ecosystems in the North Pacific respond to climate change and human activities.

Our project is premised on the fact that MBMs are important top predators that respond directly to changes in, and consume large amount of, forage species. It also recognizes that MBMs can induce trophic cascades, and that they are susceptible to changes in marine food web structure and productivity as a result of both natural and anthropogenic impacts. MBMs overlap directly with anthropogenic stressors, such as climate change, plastic and other pollutants, increased shipping, and fishery interactions. Finally, many MBMs are easily observed and highly mobile, and are considered sentinels of ecosystem status and health. As such, we believe the detailed analyses of MBMs that we are proposing will contribute significantly to meeting the objectives of FUTURE.

The following describes: 1) the rationale of our proposed project, and 2) describes potential activities or products to be accomplished by the S-MBM over these 5 years.

Our activity plan will focus on the “Interaction between MBMs and other ecosystem components and stressors.” This will include important sub-themes such as:

- Documenting, understanding, and potentially forecasting changes in forage species and response of MBMs to these changes.
- MBMs as ecological indicators of changing marine ecosystems using metrics such as population vital rates, spatiotemporal distributions and abundances, diet composition, body condition and stress hormones.

Phases:

1. Identification and assessment of important stressors (anthropogenic and environmental) on MBMs, developing Pathways of Effects (POE) models, and estimating potential impacts from these stressors.
2. Use of MBMs as indicators of impacts regionally and among regions.
3. Comparative synthesis of information from phase 1 and 2 across the PICES region.

Upcoming possible workshop themes:

1. Anthropogenic stressors, mechanisms and potential impacts on MBMs (led by M Kim, P O’Hara and Y Watanuki)
2. Climate change (including Marine Heat Waves) associated changes in migration patterns/distribution of MBM (led by W Sydeman, K Hattori and P O’Hara)
3. Predicting changes in small pelagic prey fish and potential impacts on MBMs (led by H W Kim and E Hazen)
4. MBMs as indicators of impacts (led by R Ream and W Sydeman)

## **Appendix B: Section on Ecology of Harmful Algal Blooms in the North Pacific**

### Terms of Reference (2021-2025)

1. Guide ongoing deliverables to address the goals of IOC's UN Decade of Ocean Science for Sustainable Development (UNDOS) and the FUTURE science program of PICES.
2. Contribute to the development of the PICES North Pacific Ecosystem Status Report.
3. Produce summary reports on east-west and north-south occurrence (similarities and differences) of selected HAB species and new species of concern.
4. Developing guidelines for quantifying changes in the character, magnitude and frequency of HAB events in PICES Nations related to expected and measured trends of climate change.
5. Contributing to the development of global HAB research activities including the GlobalHAB status report (ICES, PICES, IOC) and the UN Decade of Ocean Science for Sustainable Development.
6. Continuing PICES member country data entry into the joint ICES-PICES Harmful Algal Event database (HAE-DAT) to allow global comparison of changes in harmful algal blooms.

## Appendix C: PICES Advisory Panel on the UN Decade of Ocean Science (AP-UNDOS)

**Parent Committee:** PICES Science Board

**Term:** April 2022 – TBD

**Proposed Chairs:** Steven Bograd (USA; FUTURE SSC), Sanae Chiba (Secretariat)

### Background

The UN Decade of Ocean Science for Sustainable Development (UNDOS) provides an unprecedented opportunity to strengthen and expand PICES science and outreach in collaboration with ICES and other partner organizations. At PICES-2019 in Victoria, Canada, an ad-hoc group of ICES and PICES scientists began bilateral discussions on joint activities in support of the UNDOS. The strategic plans and objectives of PICES and ICES are well-aligned with UNDOS objectives, positioning our organizations and their associated networks to play a leading role in addressing UNDOS priorities and societal outcomes. Coordination between PICES and ICES led to the formation of the Joint ICES/PICES Study Group/Strategic Initiative on UN Decade of Ocean Science (SG-UNDOS; <https://meetings.pices.int/members/study-groups/SG-UNDOS>), which was formed in October 2020 and approved for a 6-month extension by PICES Governing Council in October 2021. Parallel with the creation and activities of SG-UNDOS, the team proposed a UN Ocean Decade Programme, Sustainability of MARine ecosystems Through knowledge NETworks (SmartNet; <https://www.ices.dk/about-ICES/global-cooperation/Pages/Smartnet.aspx>), which was endorsed as a Decade Programme by the IOC in June 2021. SmartNet is the primary venue for ICES and PICES to play a leading role in advancing and communicating scientific understanding of marine ecosystems for societal outcomes in support of UNDOS; to bring together diverse networks to increase capacity to conduct ocean science in support of sustainable development; and to foster the range of skills necessary to support broad and overarching marine science goals, with particular emphasis on cross-cutting inclusivity themes relating to gender equality, early career ocean professional engagement, and significant involvement of indigenous communities and developing nations.

SmartNet will support and leverage ICES, PICES, and member countries' priorities and initiatives related to UNDOS, by emphasizing areas of mutual research interest and policy needs, 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 (Figure 1).



Figure 1: Activities and objectives of SmartNet.

### Rationale for an Advisory Panel

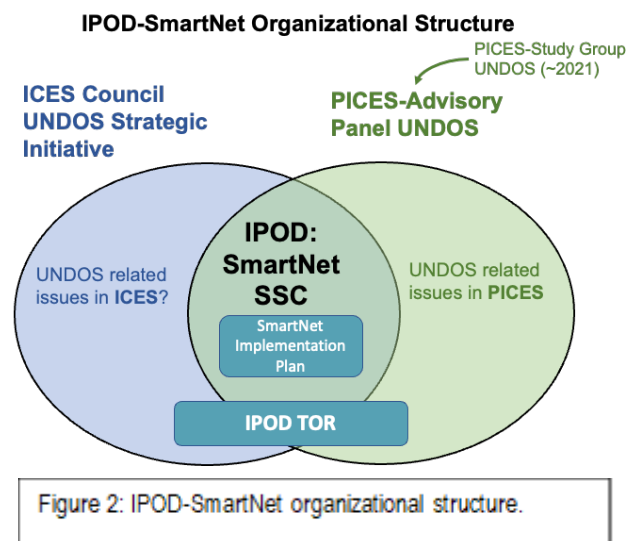
PICES is expected to play a large role in facilitating transformational science during the UN Decade of Ocean Science for Sustainable Development (2021-2030). While the SmartNet Programme will

continue to function throughout the Decade, the SG-UNDOS has completed its objectives to: (a) establish a common strategy for joint activities and provide regional leadership in support of UNDOS; (b) identify and strengthen relationships with partner professional and multilateral organizations to facilitate UNDOS engagement; and (c) develop an UNDOS Programme for endorsement by the IOC. A new PICES Expert Group, with a sufficient lifetime, is needed to continue planning, communicating and exercising PICES engagement through the extent of the Ocean Decade. This engagement will include, but is not limited to, SmartNet activities.

**AP-UNDOS Terms of Reference:**

1. Define and promote the joint scientific activities of PICES and partner organizations (including ICES) that will contribute to UN Ocean Decade societal outcomes.
2. Implement the SmartNet Programme (in partnership with ICES), organize its activities and partnerships, monitor its progress, and communicate updates to the PICES community.
3. Implement a strategy that prioritizes engagement with early career ocean professionals, indigenous communities, developing nations, and recognizes the importance of promoting diversity and gender equity in our activities; Coordinate with FUTURE SSC, AP-ECOP and AP-SciCom to develop these strategies.
4. Develop recommendations for new UN Ocean Decade activities for endorsement by UNESCO-IOC, with new and existing partners, allowing for participation of additional partners throughout the Decade.
5. Develop recommendations for new and existing PICES Expert Groups to implement and maintain SmartNet and UN Ocean Decade activities, and encourage and support Expert Group participation in all aspects of the UN Ocean Decade.

AP-UNDOS will be the primary body to facilitate PICES engagement with the UN Decade of Ocean Science through the lifetime of the Decade. We expect that the initial primary activity of AP-UNDOS will be the implementation of SmartNet (ToR 2). This activity necessitates close coordination with the ICES-PICES Ocean Decade (IPOD), which serves as the Scientific Steering Committee for SmartNet (Figure 2). We emphasize that AP-UNDOS will provide the broader function of planning and implementing PICES engagement in all UNDOS activities, beyond the scope and purview of SmartNet/IPOD. In this capacity, AP-UNDOS will coordinate with PICES Science Board, the FUTURE Scientific Steering Committee, and other Expert Groups engaged in UNDOS-related activities. In the short-term, we anticipate a significant role in planning the ICES-PICES 2023 Joint Meeting and participating in other international symposia.



**Proposed Membership and Chairs**

Given the effectiveness of SG-UNDOS, we propose to maintain the same PICES members in AP-UNDOS. In addition, the SG-UNDOS Chairs received expressions of interest from several PICES ECOPs, and would recommend that these individuals become AP-UNDOS members.

## Chairs

Steven Bograd (USA) – [steven.bograd@noaa.gov](mailto:steven.bograd@noaa.gov)

Sanae Chiba (PICES Secretariat) - [Sanae.Chiba@pices.int](mailto:Sanae.Chiba@pices.int)

## Full Members

Jennifer Jackson (Canada) - [jennifer.jackson@hakai.org](mailto:jennifer.jackson@hakai.org)

Andrea White (Canada) – [andrea.white@dfo-mpo.gc.ca](mailto:andrea.white@dfo-mpo.gc.ca)

China members TBD

Mitsutaku Makino (Japan) – [mmakino@aori.u-tokyo.ac.jp](mailto:mmakino@aori.u-tokyo.ac.jp)

Hiroaki Saito (Japan) – [hsaito@aori.u-tokyo.ac.jp](mailto:hsaito@aori.u-tokyo.ac.jp)

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Hanna Na (Korea) - [hanna.ocean@snu.ac.kr](mailto:hanna.ocean@snu.ac.kr)

Yuri Zuenko (Russia) - [zuenko\\_yury@hotmail.com](mailto:zuenko_yury@hotmail.com)

\*Evgeniia Kostianaia (Russia; ECOP) - [evgeniia.kostianaia@gmail.com](mailto:evgeniia.kostianaia@gmail.com)

Emanuele Di Lorenzo (USA) – [edl@gatech.edu](mailto:edl@gatech.edu)

Kirstin Holsman (USA) – [kirstin.holsman@noaa.gov](mailto:kirstin.holsman@noaa.gov)

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Erin Satterthwaite (USA; ECOP) – [esatterthwaite@ucsd.edu](mailto:esatterthwaite@ucsd.edu)

Vera Trainer (USA) - [Vera.L.Trainer@noaa.gov](mailto:Vera.L.Trainer@noaa.gov)

\*Raphael Roman (Ex Officio; UNESCO-IOC ECOP Programme) - [raph.genf@gmail.com](mailto:raph.genf@gmail.com)

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\*Not original SG-UNDOS members

#Will be SB Chair, 2022-2025

## **Appendix D: Proposal for a Study Group on Generating Recommendations to Encourage Environmentally- Responsible Networking (SG-GREEN)**

**Parent Committee:** PICES Science Board

**Term:** For one year from June 2022

**Proposed Chairs:** TBC

### **Background**

The CoVID-19 pandemic has accelerated the need for and expansion of remote conferencing capability worldwide. While there may never be a complete replacement for the social events and serendipitous brainstorming provided by in-person meetings, the urgency of climate change impacts of global travel has highlighted the importance of a balanced approach to sharing scientific knowledge through a combination of remote conferencing and in-person meetings. Similarly, a targeted focus on the UN Decade of Ocean Science for Sustainable Development (UNDOS) has brought to light the importance of remote conferencing as a platform which can provide increased opportunities for under-represented people and countries to be heard, despite economic, travel, or other limitations. Also, several EU countries are now limiting scientist's travel in recognition of the urgent need to address the climate crisis. PICES has the opportunity to play a leadership role in exploring the appropriate balance of in-person and remote meetings, providing an example for the international community. This will create a lasting positive legacy for PICES well into the future, that helps improve environmental justice, equity, and diversity in planning its engagement with the worldwide scientific community.

### **Terms of Reference**

The main objectives of the proposed SG-GREEN are to:

- Identify a mechanism agreeable to all PICES member countries for sustained green meetings within the PICES scientific structure. In particular, to establish a mechanism that is inclusive to under-represented people and communities, early career ocean professionals, etc.
- Create recommendations for PICES on best practices to reduce GHG emissions and waste relative to meetings
- Establish organization-wide green initiatives, such as: eliminating single use plastics, reduced printing, reduced purchases of single use or limited use items at meetings, including meeting gifts.
- Exploration of PICES investment in climate-responsible industries.
- Provide recommendations for best practices in purchasing carbon offsets for members for face-to-face meetings, including suggestions for including offsets as part of the conference registration fees
- Provide suggested actions to promote PICES green initiatives and climate change information.

### **Expected Deliverables/Products**

- Conduct a survey of other organizations to determine the best practices for e-meetings, virtual collaboration and hybrid meetings.
- Conduct targeted consultations of PICES members regarding carbon offsets and hybrid meetings.
- Develop a communications piece to help facilitate further carbon reduction initiatives, specifically highlighting SG findings.
- Publication of PICES green initiatives in PICES Press and other literature, such as ECO magazine, to set an example and investigate the value of environmentally-friendly policies.
- -Work towards setting carbon budgets and targets for decreasing carbon emissions related to PICES activities over time.



**Proposed SG members**

Vera Trainer (USA)

Lori Waters (Secretariat)

Phoebe Woodworth-Jefcoats

Sukyung Kang (Korea)

Erin Satterthwaite (USA) (suggested at ISB)