

## 2025 Report of FIS Committee

The Fisheries Science (FIS) Committee held two Business Meetings: October 22, 2025 (via Zoom) and November 8, 2025 (Yokohama, Japan at the PICES Annual Meeting, with Zoom options for non-travellers); agendas *FIS Endnote 2*. All PICES member nations, with the exception of China, were represented at the October 22, 2025 virtual meeting; at the November 6, 2025 meeting Russian Committee members could not attend, but PICES Russian delegates attended as observers to provide feedback as needed (*FIS Endnote 1*).

## FIS-SPONSORED EXPERT GROUPS

### Working Group 53: Joint PICES/ICES Sustainable Pelagic Forage Communities

Chris Rooper (Canada), Co-Chair provided an overview of activities completed in 2025 (*FIS Endnote 3*). The WG has organized itself with 11 activity Task Teams. Each team began holding quarterly meetings to pursue their named objectives and work towards completing deliverables under ToR objectives 1-5. This included a request for a topic session at the 2026 ICES Annual Meeting. Several publications (technical reports and peer-reviewed journal articles) were submitted or published by WG Members that resulted from collaborations/discussions among the WG (see list below for published articles). The WG and symposium steering committee members worked to finalize the scientific schedule and organization of the upcoming ICES/PICES/FAO symposium on forage species. Topic sessions and workshops were proposed, accepted, and finalized; abstracts submitted by October; awards and ECOP committees were struck and work continued on logistics (e.g., venues, schedules, contributions, etc.). Details can be found on the Symposium website (<https://meetings.pices.int/meetings/international/2026/pelagic/scope>). At the PICES 2025 Annual Meeting, the WG convened two Topic Sessions (Responses of Small Pelagic Fish Communities to Recent Climate Regime Shifts and Climate Extremes; Understanding the Linkages Between Forage Species and Top Predators and How They May Affect Resilience in North Pacific Ecosystems). The WG held a Business Meeting over two evenings (1800-2030 JST) on November 11 & 13, 2025 at the Workpia Conference Center, Yokohama, Japan (*FIS Endnote 4*).

- WG53 requested a 2-day business meeting (May 9-10, 2026) following the 2026 ICES/PICES/FAO SPF International Symposium in La Paz, Mexico.
- *FIS Committee supported the request for a 2-day intersessional meeting in LaPaz, Mexico.*

### Joint PICES/ICES Section on Climate Change and Marine Ecosystems (S-CCME)

Co-Chair Kirstin Holsman (USA) provided a pre-recorded overview of 2025 activities (*FIS Endnote 5*) and updated Phase V Implementation Plan. In 2025, Dongwha Sohn (Korea) was elected as a new Co-Chair. Dongwha Sohn attended the November 6 meeting to answer questions and receive feedback. S-CCME held an online Business Meeting on October 30, 2025. S-CCME sponsored many events at the 2025 PICES' Annual Meeting: Workshop on Climate-Ready Fisheries Management: Reviewing Effective Strategies for Developing Decision Support Tools; Topic Session on How Can Ecosystem-Scale Information be Used to Improve Our Understanding of Climate Change Impacts, and Support Management and Conservation in the North Pacific?; Topic Session on Incorporation of Climate and Ecosystem Impacts in Stock Assessment Advice: Discussion of Current Approaches and Challenges, and Charting a Path Forward; and a Topic Session on Changing Ecosystem Structure Under Global Climate Change: Monitoring, Detecting, Modelling, and Socio-Ecological Impacts.

The FIS Committee reviewed the Phase V Implementation Plan (IP), noting that the inclusion of table aligning Goals, Activities, Milestones and Progress Indicators is a useful tool for Parent Committees and should be provided as an example for all Expert Groups to include. The PICES' IP outlines activities for 2026-2030 (5

years), however the ICES Terms of Reference are only 3 years in duration (2026-2028) due to differences in PICES and ICES processes. Within ICES, Terms of Reference can be rolled over and need to be approved every 3 years. Within PICES, IP are typically 3 years, however previous S-CCME Chairs requested a change to 5 years because the development of IP on a 3-year rotation was too burdensome. FIS Committee expressed reservations of a current 5-year IP since S-CCME began as an alignment to the FUTURE Science Program which has ended and will be phased out within 3 years. The Committee decided that it would support a 5-year IP with the intent that a 3-year Interim Report would be required. Each year, the FIS Committee will request that S-CCME provide updates on Progress Indicators.

- S-CCME requested a 1-year extension for Co-Chair Kirstin Holsman (USA) to provide transitional mentoring to the new chair, Dongwha Sohn. Dr. Holsman's replacement will be elected in 2026.
- S-CCME requested that the Phase V Implementation Plan be accepted and put in place for 2026-2030.
- S-CCME requests a 1-day Business Meeting at the 2026 PICES Annual Meeting.
- *FIS Committee recommends a 1-year extension for Co-Chair Kirstin Holsman.*
- *FIS recommends acceptance of the proposed Implementation Plan, with an Interim Report presented in year 3 (2028).*
- *FIS Committee supported the request for a 1-day Business Meeting at PICES 2026.*

## ACTIVITIES TO ADDRESS FIS ACTION PLAN

The FIS Action Plan was updated in 2024, and many of the Activities outlined in the plan have been undertaken or are ongoing activities for FIS Committee either as a single committee or with contribution to PICES' efforts. FIS Committee discussed Goal 9: Create education and training opportunities; this Goal remains outstanding. The Committee discussed two options for a training focused workshop: Ecosystem-based Management & Climate Change /Ecosystem Integration; Sound use of AI in fisheries science. Given the fast-developing use of AI in science, the Committee agreed this topic was likely of high interest to students and ECOPs. Jessica Miller volunteered to develop a Workshop proposal for the 2026 Annual Meeting, which was accepted by Governing Council.

## OUTSIDE ORGANIZATIONS

### North Pacific Anadromous Fish Commission (NPAFC)

PICES and the NPAFC established a MoU in 1998 and a Framework for Enhanced Scientific Cooperation in the North Pacific Ocean in 2014. Yoshiaki Kondo (Executive Director, NPAFC) provided an overview of an upcoming NPAFC Workshop Interactions Between Salmon, Ecosystems, and Climate: From Mechanisms to Predictive Models" on May 16-17, 2026, in Vancouver, Canada. Major scientific topics of joint interest to NPAFC and PICES include: effects of climate change on the dynamics and production of Pacific salmon population; oceanographic properties and the growth and survival of Pacific salmon. PICES invited the NPAFC to nominate an *ex-officio* member to WG 53. NPAFC nominated Dr. Aleksei Somov (Russia) who is Chairperson of the NPAFC Science Sub-committee and Head of Laboratory, Pacific Branch of VNIRO (TINRO), Russia. PICES and NPAFC are co-sponsors of the UNDOS project Basin Events Coastal Impacts (BECI). NPAFC has not yet approved the BECI Science Plan, and at the NPAFC Annual Meeting in May 2025 a NPAFC Working Group to review and provide comments for revisions to the Science Plan was struck. The comments and recommendations have been provided to the PICES Secretariat. Finally, the NPAFC has provided \$7500 CDN in financial support as a co-sponsor of the upcoming ICES/PICES/FAO symposium on forage species to be held in La Paz, Mexico and organized by WG 53.

- NPAFC requests \$7500 CDN in financial support from PICES for co-sponsorship of the upcoming Workshop “Interactions Between Salmon, Ecosystems, and Climate: From Mechanisms to Predictive Models” on May 16-17, 2026, in Vancouver, Canada.
- NPAFC nominates Dr. Aleksei Somov (Russia) as an *ex-officio* member of PICES Working Group 53.
- ***FIS Committee supported the request for \$7500 CDN in financial support for the upcoming NPAFC Workshop.***
- ***FIS Committee recommends the appointment of Dr. Aleksei Somov (Russia) as an ex-officio member of PICES Working Group 53.***

### **Pacific Salmon Commission (PSC)**

Fiona Martens (Director, Fisheries Management Programs) provided background on the bilateral commission between Canada and US. The PSC and PICES established a MoU in 2022 for cooperation and, to date, engagement has been through Secretariat liaison and annual PICES/PSC meeting attendance. PSC activities that may be of interest to PICES members include PSC Seminars which are regular online series of invited speakers on environmental variation and Pacific salmon management with recordings of presentations; an upcoming PSC workshop on genetic stock identification and supporting technical document; and recent MOU between U.S. Tribal and Canadian First Nations salmon was signed February 2025 to coordinate restoration and management efforts highlighting the use of Traditional Ecological Knowledge. The PSC has several areas where it would benefit from PICES’ actionable science. For example, the translation of ocean and climate knowledge into practical assessment tools could include regionally tailored indicators for ocean conditions affecting salmon, decision-support tools that integrate oceanographic data or predictive and scenario-based oceanographic and climate models that can be used by salmon managers for scenario-based assessment. Another area would be building capacity to interpret and apply climate science in PSC processes, such as workshops on interpreting climate data and climate impacts or emerging threats (e.g., marine heatwaves, shifting prey fields, and demographics). The PSC is also interested in user-friendly data platforms that would support joint research initiatives that align PICES science with PSC needs. The PSC is also interested in the use of Artificial Intelligence (AI), specifically how it is being used in oceanographic and fisheries science, to enhance analyses, visualization, and communication of complex oceanographic data, to detect anomalies or early warning signals in ocean conditions, or to support scenario planning and adaptive management under climate change. The FIS Committee invited the PSC to be a co-convenor for the proposed FIS Workshop on AI for 2026 Annual Meeting.

### **North Pacific Fisheries Commission (NPFC)**

An updated framework for collaboration between PICES and NPFC was approved in 2024. Aleksandr Zavolokin (Executive Secretary, NPFC) provided an overview of joint PICES-NPFC activities. NPFC and PICES representatives attended each other’s annual meetings (2024 PICES Annual Meeting and the NPFC’s 9th Scientific Committee meeting). The NPFC has representation on the new PICES-ICES joint Working Group on Sustainable Pelagic Forage Communities (WG 53, WGSPF). In addition to membership, the NPFC made a financial contribution of \$5000 to the Small Pelagic Fish International Symposium to be held in La Paz, Mexico on May 4-8, 2026. A new PICES Working Group on Seamount Connectivity has been proposed with FIS a co-parent; NPFC scientists were invited to join this initiative and are willing to participate. The Science Director of BECI (Basin-scale Events and Coastal Impacts) provided an update on the BECI project. The NPFC expressed its support for BECI.

## **WORKING GROUP PROPOSAL ON DEEP SEA CONNECTIVITY WITH FOCUS ON SEAMOUNT ECOSYSTEMS**

Donald Kobayashi (USA) proposed a new WG on Seamount Connectivity, with FIS and BIO as co-parents. The FIS Committee broadly supported the proposal but noted that, as written, there was no focus or mention of fishery science or seamount fisheries. Russian delegates provided examples of seamount fisheries that resulted

in depleted populations, and, after cessation of fishing, the catch rate again increased illustrating the connectivity importance between seamounts. The WG proposal has more of a focus on seamount ecology, so currently, the FIS Committee suggests that BIO serve as a single parent for this Working Group.

## **SMARTNET PROGRAM**

Steven Bograd (USA, SmartNet) provided an update on the 2025 Activities of SmartNet. Two publications were produced by SmartNet: Knowledge Sharing and Capacity Development to Promote Early Career Ocean Professionals in Small Island Developing States: The SmartNet Approach (Chiba et al., *Oceanography*); Advancing the climate-biodiversity-fisheries nexus in the UN Decade of Ocean Science for Sustainable Development (Bograd et al., *ICES Journal of Marine Science*). SmartNet convened a Town Hall Meeting “Moving towards integrated evaluation approaches in support of ocean policy” at the United Nations Ocean Conference (Nice, France 2025). Also at UNOC3, SmartNet members presented papers in Theme Sessions: Advancing the Climate-Biodiversity-Fisheries Nexus in the UN Decade of Ocean Science for Sustainable Development (Claire Enterline); The Ocean We Want International Survey Project: Season Two (Mitsutaku Makino). SmartNet convened two events at international venues on ‘Best Practices for Decision Support Tools to Support Climate-Ready Fisheries focusing on regional inventory of capacity and gaps (models, code, data streams, management frameworks) and mechanisms to integrate climate information into EBFM. First was an oral session at the ICES Annual Meeting (September in Lithuania), followed by a workshop at PICES Annual Meeting (November in Japan).

## **BASIN EFFECTS COASTAL IMPACTS (BECI) PROJECT**

Kathryn Berry (Science Director) provided an overview of the BECI project of UNDOS. In 2025, BECI developed a working demonstration of the North Pacific Ocean Knowledge Network platform. This platform is designed to connect, collate, and synthesize fragmented information across the Pacific Rim. Through seven integrated dashboards, the Knowledge Network provides fisheries managers, researchers, conservation planners, and coastal communities with organized access to environmental monitoring data, species climate vulnerability assessments, ecosystem health indicators, management tools, and collaborative networks spanning six Pacific nations. The FIS Committee appreciated the utility of the platform and supported the integration of the platform to support the next North Pacific Ecosystem Status Report.

## **FUTURE SCIENCE PROGRAM**

Sukjung Kang (Korea) provided an update on the FUTURE Science Program. In 2025, a synthesis paper by Takemura et al. "Lessons learned from the PICES FUTURE Program on development of an interdisciplinary international science program to advance ocean sustainability" was published in *ICES Journal of Marine Science*. In the upcoming year, FUTURE will be disbanded as PICES develops its new Science Plan.

## **CO-PRODUCING SCIENCE**

In Other Business, the FIS Committee took time to discuss aligning FIS activities and interests to the emerging PICES’ focus on actionable science. Actionable science requires a comprehensive approach and the first step in coproducing science for all member nations is to understand the different needs and viewpoints. The Committee decided that at the next FIS Committee Business Meetings associated with PICES 2026 Annual Meeting, there will be 5-10-minute presentations from designated FIS members on the aspect of fishery science that is important for their nation.

***FIS Endnote 1*****FIS Committee participation list**

October 22, 2025 Participants	November 8, 2025 Participants
<b><i>FIS Committee Members</i></b>	<b><i>FIS Committee Members</i></b>
Jackie King (Canada)	Jackie King (Canada)
Chris Rooper (Canada)	Chris Rooper (Canada)
Nobuaki Suzuki (Japan)	Peng Sun (China)
Naoki Tojo (Japan)	Nobuaki Suzuki (Japan)
Hwansung Ji (Korea)	Naoki Tojo (Japan)
Sukgeun Jung (Korea)	Shiroh Yonezaki (Japan)
Sung-Il Lee (Korea)	Hwansung Ji (Korea)
Elena Dulepova (Russia)	Sukgeun Jung (Korea)
Mikhail Stepanenko (Russia)	Sung-Il Lee (Korea)
Jessica Miller (USA)	Jessica Miller (USA)
	<b><i>Observers</i></b>
	Sukyung Kang (Korea)
	Aleksandr Zavolokin (NPFC)
	Vladimir Kulik (Russia)
	Seokjin Yoon (Korea)
	Pavel Emelin (Russia)
	Fiona Martens (PSC)
	Dongwha Sohn (Korea, S-CCME)
	Yoshikiyo Kondo (NPAFC)
	Steven Bograd (USA, SmartNet)
	Kathryn Berry (PICES, BECI)

***FIS Endnote 2***  
**FIS Committee meeting agendas**

October 22, 2025 (via Zoom)

<b>East Pacific</b> October 22, 17:00-21:00 PDT	<b>Japan &amp; Korea</b> October 23, 09:00-13:00 JST & KST
<b>China</b> October 23, 08:00 – 12:00 CST	<b>Russia (Vladivostok)</b> October 23, 10:00-14:00 VLAT

- 1. Welcome and Introductions**
- 2. Adoption of Agenda**
- 3. Reports of FIS-sponsored Expert Groups**
  - a. Report from Working Group 53: Sustainable Pelagic Forage Communities (Chris Rooper)
- 4. Highlights of Upcoming 2025 Annual Meeting**
- 5. Assignment of FIS Members to ECOP Presentation Judging**
- 6. Review Progress on FIS Action Plan**
- 7. Review Draft Agenda for In Person (Hybrid) FIS Business Meeting, Saturday, November 8th**
- 8. Other Business**

November 8, 2025 (Hybrid meeting)

<b>Yokohama</b> Saturday, November, 18:00-20:30 Hawaii Convention Center, Room 305B Honolulu, USA	<b>Japan (Tokyo) &amp; Korea (Seoul)</b> Sunday, October 27, 13:00-15:30 JST & KST
<b>Russia (Vladivostok)</b> Sunday, October 27, 14:00-16:30 VLAT	<b>China (Beijing)</b> Sunday, October 27, 12:00-14:30 CST
<b>Canada (Vancouver)</b> Saturday, October 26, 2023, 21:00-23:30	

- 1. Welcome and Introductions**

2. **Adoption of Agenda**
3. **UNDOS SmartNet Programme** (Steve Bograd)
4. **UNDOS Project Basin-scale Events to Coastal Impacts (BECI)** (Kathryn Berry)
5. **FUTURE Science Program** (Sukyung Kang)
6. **Section on Climate Change and Marine Ecosystems (S-CCME) Annual Report & Phase V Implementation Plan** (Dongwha Sohn)
7. **Discussion of FIS 2026 Workshop Ideas for ECOP Training (FIS Action Plan Goal 9)** (Jessica Miller)
  - Ecosystem-based Management & Climate Change /Ecosystem Integration
  - Sound use of AI in fisheries science
8. **Working Group Proposal: Deep Sea Connectivity with Focus on Seamount Ecosystems (WGDSC)**
9. **Presentations from Other Organizations**
  - a) North Pacific Anadromous Fish Commission (Yoshikiyo Kondo)
    - Request from NPAFC to appoint Dr. Aleskei Somov (Russia) as *ex-officio* member of WG 53: Joint PICES/ICES Working Group on Sustainable Pelagic Forage Communities
    - Request from NPAFC for PICES to co-sponsor NPAFC Hybrid Workshop: Interactions Between Salmon, Ecosystems, and Climate: From Mechanisms to Predictive Models (May 2026, Vancouver, Canada)
  - b) Pacific Salmon Commission (Fiona Martens)
    - a) North Pacific Fisheries Commission (Aleksandr Zavolokin)
10. **Other Business**

**FIS Endnote 3**  
**WG-53 Annual Report**  
**EG Identification**

EG name	WG-53, Sustainable Pelagic Forage Communities
Chair name(s)	Chris Rooper (Canada), Motomitsu Takahashi (Japan), Rebecca Asch (ICES, USA), Susana Garrido (ICES, Portugal)
Date of group meeting after May 2025 (if any)	6/7 October

**The following information will be reviewed/approved by the Reporting Committee Chairs to present at the Science Board meeting at PICES-2025.**

**1. Bi-Annual Activity Update**

*Please very concisely describe up to three main activities of your group after May 2025 (ISB-2025) and identify which ToR items are addressed by the achievement. **Are there any notable scientific findings and news to share with the PICES community and beyond?***

Activities and Achievements		ToR No. to address
1	The 11 established activities began holding quarterly meetings to pursue their named objectives and work towards completing deliverables under ToR objectives 1-5. This included a request for a topic session at the 2026 ICES Annual Meeting.	1,2,3,4,5
2	A number of publications (technical reports and peer-reviewed journal articles) were submitted or published by WG Members that resulted from collaborations/discussions among the WG (see list below for published articles).	2,3,4
3	The WG and symposium steering committee members worked to finalize the scientific schedule and organization of the upcoming ICES/PICES/FAO symposium on forage species. Topic sessions and workshops were proposed, accepted and finalized, abstract submission was opened (and will close later in October), awards and ECOP committees were struck and work continued on logistics (e.g. venues, schedules, contributions, etc.). Details can be found on the Symposium website ( <a href="https://meetings.pices.int/meetings/international/2026/pelagic/scope">https://meetings.pices.int/meetings/international/2026/pelagic/scope</a> ).	6

*Please cut and copy of ToR which are addressed (only the ToR noted above).*

<ol style="list-style-type: none"> <li>1. Foster international and interdisciplinary collaboration to establish similar study frameworks and comparative analyses of forage species, their ecology, and fisheries.</li> <li>2. Assess recent progress on understanding fluctuations of forage species (abundance, distribution, diversity, and characteristics) and their impacts on the structure and function of ecosystems, particularly upper trophic levels including marine birds and mammals.</li> <li>3. Identify, prioritize, and recommend research most needed to advance our knowledge and capacity to forecast ecosystem responses to changes in forage species.</li> <li>4. Recommend strategies for studying and monitoring socio-ecological systems to improve ecosystem-based management for the sustainable harvest of forage species.</li> <li>5. Describe how climate change and other anthropogenic factors impact forage species and examine how these factors will affect economies, nutrition of human communities, aquaculture, fishery portfolios,</li> </ol>	
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<p>and/or transboundary management among countries with different levels of development in fisheries and recommend options for adaptation.</p> <p>6. Organize a joint ICES/PICES/FAO symposium on forage species that builds upon the Small Pelagic Fish symposia held in 2017 (March 6–11, 2017, Victoria, Canada) and 2022 (November 7–11, 2022, Lisbon, Portugal). The symposium, tentatively scheduled for 2026, will showcase integrative analyses of this Working Group. Working Group members will also propose and convene topic sessions and/or workshops at the PICES Annual Meetings and ICES Annual Science Conferences, as well as at FAO-sponsored meetings focused on key questions and recent advances in the dynamics of forage species in ecosystems and the impact of forage species on higher trophic levels.</p>
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Is your EG on track to meet your objectives/action plan?  
 (Please place an "X" where appropriate. If other, please explain).

Yes      No (If no, please explain):

Other: *(Please explain)*:

**2. New Publications (don't report ones already posted on your EG's website)**

List the citation(s) of publications for each category and submit the required manuscripts/reprints if website link is not available with this form. Note that the requirement and reporting processes vary depending on the publication categories.

<b>A. PICES Official Publication</b> (report BEFORE publication) incl. WG Final Report <i>PICES Science/Technical Report (example), etc</i>	
<b>Required process</b>	Reviewed by Parent Committee(s) => Recommended by SB => Approved by Governing Council => Posted on PICES website when published
<b>What to submit</b>	A copy of “ <b>manuscript</b> ” to reporting Parent Committee and Secretariat
	(note)
<b>B. Products of collaboration with other organizations</b> (report AFTER published) <i>Booklet/Report published by collaboration with other organizations, e.g. IOC, SCOR (example)</i>	
<b>Required process</b>	Acknowledged by SB then Governing Council => Posted on PICES website
<b>What to submit</b>	A copy of the “ <b>product</b> ” to reporting Parent Committee and Secretariat
	(note)
<b>C. Peer-reviewed Journal Paper</b> (report AFTER published)	
<b>Required process</b>	Acknowledged by SB then Governing Council => Posted on PICES website
<b>What to submit</b>	A copy of the “ <b>PDF</b> ” reprint or “ <b>DOI</b> ” to reporting Parent Committee and Secretariat

<p>Jac, R., Piczak, M.L., Van Beveren, E. <i>et al.</i> Tracking the schools: a review of approaches to address knowledge gaps in the migratory ecology and habitat use of Canadian forage fishes. <i>Rev Fish Biol Fisheries</i> <b>35</b>, 1751–1780 (2025). <a href="https://doi.org/10.1007/s11160-025-09981-4">https://doi.org/10.1007/s11160-025-09981-4</a></p> <p>Boldt, JL, Rooper CN, Cleary JS, Fu C, Edwards, AM, Hourston RAS, Pena MA, Perry RI. 2025. Incorporating ecosystem information into science advice for fisheries management—a case study for Haida Gwaii Pacific herring Canadian Journal of Fisheries and Aquatic Sciences 82:1-26 DOI: 10.1139/cjfas-2024-0150</p> <p>Catalán, I. A., Bowlin, N. M., Baker, M. R., Berg, F., Brazier, A., Brochier, T., ... Ospina-Álvarez, A. (2025). Worldwide Appraisal of Knowledge Gaps in the Space Usage of Small Pelagic Fish: Highlights Across Stock Uncertainties and Research Priorities. <i>Reviews in Fisheries Science &amp; Aquaculture</i>, 33(4), 497–558. <a href="https://doi.org/10.1080/23308249.2025.2458869">https://doi.org/10.1080/23308249.2025.2458869</a></p> <p>Chen, K.S., Petrik, C.M., Asch, R.G., Thompson, A.R. and Auth, T.D. (2025), Continuing Long-Term Shifts in Larval Fish Phenology in the Southern California Current Ecosystem Are Matched by Rapid Advances in the North. <i>Glob Change Biol</i>, 31: e70141. <a href="https://doi.org/10.1111/gcb.70141">https://doi.org/10.1111/gcb.70141</a></p> <p>Warsha Singh, John T. Trochta, Hannah M. Murphy, David W. McGowan, Aaron T. Adamack, Mayumi L. Arimitsu, Birkir Barðarson, Höskuldur Björnsson, Bjarte Bogstad, Mathieu Boudreau, Catherine Chambers, Harald Gjøsæter, Teunis Jansen, Sigurður Þ. Jónsson, Sturla Kvamsdal, Ron S. Lewis, Nina Mikkelsen, Torstein Pedersen, Anna H. Olafsdottir, Maartje Oostdijk, Teresa Silva, Georg Skaret, Robert M. Suryan, and Sam Subbey. 2025. Small fish, big implications: considerations for an ecosystem approach to capelin fisheries management. <i>Reviews in Fish Biology and Fisheries</i> In press.</p> <p>Tran, B., A.D. Barton, B. Muhling, B.X. Semmens, B. Erisman, M.T. Craig, S.P.A. Jiménez-Rosenberg, G. Aceves-Medina, and A.R. Thompson. 2025. Temporal dynamics and distributions of sardine and anchovy in the southern California Current Ecosystems. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> 82: 1-15. <a href="https://doi.org/10.1139/cjfas-2024-0151">dx.doi.org/10.1139/cjfas-2024-0151</a></p> <p>Hinchliffe, C., P.T. Kuriyama, A.E. Punt, J.C. Field, A.R. Thompson, J.A. Santora, B.A. Muhling, S. Koenigstein, P.Y. Hervann, and D. Tommasi. 2025. Long-term population trend of northern anchovy</p>	(note)
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<p>(<i>Engraulis mordax</i>) in the California Current system. ICES Journal of Marine Science doi:10.1093/icesjms/fase177.</p> <p>Satterhwaite, E.V., J.C. Field, A.J. Fassbender, G. Aceves-Medina, S.J. Bograd, E.L. Hazen, N.V. Patin, Z. Gold, K.A. Barbeau, D. Kinkade, A. Shepherd, R. Swalethorp, A.R. Thompson, H.A. Ruhl, and B. Semmens. 2025. The essential role of large research vessels in marine ecosystem observations and ocean sustainability. <i>Limnology and Oceanography</i> doi:10.1002/lno.70110.</p> <p>Ahmed S. I., Z. Yu, T. Higuchi, J. Inoue, M. K. Wong, X. Wang, Y. Lin, S. Itoh, K. Komatsu, E. Tsutsumi, H. Fukuda, Susumu Hyodo, J. Morrongiello, E. M. Bendif, S. Ito, 2025, Patterns in marine surface fish biodiversity and community composition detected by different eDNA metabarcoding sampling methods. <i>Journal of Oceanography</i>, in press. <a href="https://doi.org/10.1007/s10872-025-00771-x">https://doi.org/10.1007/s10872-025-00771-x</a></p> <p>Yoshikawa C., N. O. Ogawa, R. N. F. Ishikawa, M. Yoneda, R. Yukami, S. Ito, N. Ohkouchi, 2025, Nitrogen and carbon isotopic relationships in the diet and eye lenses of chub mackerel revealed in a laboratory rearing experiment. <i>Progress in Earth and Planetary Science</i>, 12, 57. <a href="https://doi.org/10.1186/s40645-025-00731-5">https://doi.org/10.1186/s40645-025-00731-5</a></p> <p>Enomoto M., S. Ohshimo, S. Ito, 2025, Geographical Variation in Carbon and Nitrogen Stable Isotope Ratios and Feeding Habits of Japanese Jack Mackerel (<i>Trachurus japonicus</i>). <i>Fisheries Oceanography</i>, 34, e12722. <a href="https://doi.org/10.1111/fog.12722">https://doi.org/10.1111/fog.12722</a></p> <p>Mondal S., A. Ray, S. Ito, K. E. Osuka, M. Lee, Q.-H. Lu, 2025, Nonunidirectional Habitat Changes Associated with Global Climate Change: The Example of the Indo-Pacific King Mackerel (<i>Scomberomorus guttatus</i>) in the Taiwan Strait. <i>Fisheries Oceanography</i>, 34, e12718. <a href="https://doi.org/10.1111/fog.12718">https://doi.org/10.1111/fog.12718</a></p>	
<p><b>D. Any other publication</b> (report AFTER published)</p>	
<p><b>Required process</b></p>	<p>Acknowledged by SB then Governing Council =&gt; Posted on PICES website</p>
<p><b>What to submit</b></p>	<p>A copy of the “PDF” reprint or “DOI” to reporting Parent Committee and Secretariat</p>
<p>Burbank, J., Debertin, A., Boldt, J.L., Boudreau, M., Boudreau, S., Bourne, C., Cadigan, N.G., Cleary, J., DeJong, R.A., Gauthier, S., Lewis, K., Lewis, R., Maynard, L.D., Murphy, H.M., Rolland, N., Rooper, C.N., Rousseau, S., Small, T., Turcotte, F., Zabihi-Seissan, S. 2025. Proceedings of the Technical Expertise in Stock Assessment (TESA) national workshop on ' Assessment and Monitoring of Small Pelagics', 21 November to 23 November, 2023 in Moncton, New Brunswick. <i>Can. Tech. Rep. Fish. Aquat. Sci.</i> 3672: v + 34 p. <a href="https://doi.org/10.60825/3vrk-bs15">https://doi.org/10.60825/3vrk-bs15</a></p>	<p>(note)</p>

<p>Craig, Matthew T., Brad E. Erisman, Ella S. Adams-Herrmann, Kelsey C. James, and Andrew R. Thompson. 2025. The subpopulation problem in Pacific sardine, revisited. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-SWFSC-713. <a href="https://doi.org/10.25923/zzvw-x557">https://doi.org/10.25923/zzvw-x557</a></p>	
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**3. List of Participants at the Pre-PICES-2025 Online Business Meeting**

<p>EG Members (name only)</p>	
<p>Chris Rooper                  Susana Garrido                  Motomitsu Takahashi                  Mikio Watai                  Jennifer Boldt                  Rebecca Asch                  Daniela Silva                  Jacob Burbank                  Shin-ichi Ito                  Sachi Itoh                  Tatsuya Sakamoto                  Jorge Tam                  Kazuhiro Oshima                  Hiroomi Miyamoto                  Tim Ward                  Aaron Adamack</p>	
<p>Observers = non-EG members</p>	
<p>Name</p>	<p>Affiliation</p>
<p>Alex Bychov</p>	<p>PICES</p>

**4. Requests for SB Recommendation**

**4.7. Request for Travel Support in 2026**

We have a travel request for 2026 business meeting in La Paz, Mexico for 2 EG members in the linked worksheet.

**4.9 Any other Proposals for SB Discussion/Recommendation**

*We request for 2-day business meeting (May 9-10, 2026) following the 2026 ICES/PICES/FAO SPF International Symposium in La Paz, Mexico.*



***FIS Endnote 4*****WG53 Business Meeting Report**

The semi-annual business meeting of the joint PICES-ICES Working Group on Sustainable Pelagic Forage Communities (WG53) was held over two evenings (1800-2030 JST) on November 11 & 13, 2025 at the Workpia Conference Center, Yokohama, Japan. The meeting was co-chaired by Drs. Motomitsu Takahashi (PICES), Chris Rooper (PICES), Rebecca Asch (ICES) and Susana Garrido (ICES). There were 41 participants – 25 in person and 16 online (*Endnote 1*).

Below are notes summarizing key points from the agenda items of the WG53 meeting (*Endnote 2*). Due to time constraints during the business meeting, the breakout groups for individual activities (Agenda Items 5 and 7) were not able to be conducted. However, each of the activities has been self-organizing meetings of the members of their groups throughout the past year.

**AGENDA ITEM 1****Introductions**

The members in attendance online and in the room briefly introduced themselves and their interests in small pelagic fish (SPF).

**AGENDA ITEM 2****Review of Terms of Reference**

Dr. Chris Rooper (PICES co-chair) introduced the WG53 terms of reference and led a brief discussion on the deliverables and expected outcomes and progress towards achieving the objectives.

**AGENDA ITEM 3****SPF Symposium in 2026**

Next the working group discussed updates regarding the progress in planning the upcoming SPF Symposium to be held in La Paz, Mexico (May 4-8, 2026). The International Symposium, “*Navigating Changes in Small Pelagic Fish and Forage Communities: Climate, Ecosystems, and Sustainable Fisheries*” (SPF-2026) will feature a plenary session, eight ½ day workshops and nine focused sessions addressing science of small pelagic communities. In addition, a business meeting has been requested (and now approved) to be held following the Symposium on May 9-10.

**AGENDA ITEM 4****Reports from activities on day 1 (1-2, 4-6)**

Rebecca Asch and Daniela Silva provided an update on activity 1 (Spatial processes affecting life history). They highlighted linkages to the upcoming SPF symposium (workshops and sessions) and their progress on five sub-activities (manuscripts and analyses), as well as bringing forward some data requests to support their analyses. Susana Garrido and Brian Hunt provided updates for activity 2 (Food web dynamics). Key outcomes from this group included a proposed session to the SPF Symposium, a review paper on SPF nutrition, outreach to scientists in under-represented regions (Africa and South America) and updates from additional sub-activities. Tatsuya Sakamoto presented an update of activity 4 (Distribution, migration and connectivity). He highlighted a collaborative project examining the cross-Pacific migration and origins of Japanese Sardine using otoliths, muscles and eye lenses, as well as the methods application to sardine on the Iberian Peninsula. Rebecca Asch updated the status of activity 5 (Non-climatic and non-fisheries anthropogenic impacts). This group is planning a workshop during the SPF Symposium that will address this topic and are working toward a “best practices” type document that could be used to facilitate providing information on other anthropogenic stressors relevant to forage species. Chris Rooper presented an update on activity 6 (Forage beyond boundary currents). This activity planned to submit a workshop proposal for the PICES Annual Meeting in 2026

(Nanaimo, Canada) addressing forage species outside of boundary currents, with a particular emphasis on mesopelagics.

#### **AGENDA ITEM 6**

##### **Reports from activities on day 2 (3, 7-10)**

On the second evening of the business meeting, Martin Huret, Florian Berg and Motomitsu Takashima updated the group on the progress of activity 3 (Drivers of growth, reproduction and survival). This group has been examining SPF traits, in particular growth, across multiple regions, species and populations focusing on three approaches; experimental, statistical, and modeling. Chris Rooper then presented a summary of activity 7 (Advanced technologies). There will be a ½ day workshop on this topic during the SPF Symposium and in advance of this, the group is working on a draft manuscript describing the current state of knowledge of pelagic surveys and case studies of incorporating advanced technologies into new and existing surveys. The leaders of activity 8 (Short-term forecasts and long-term objectives) and activity 9 (Improving management with actionable science) were unable to attend the PICES meeting, but members of these activities updated the group on their progress. One important task that they are working on is a survey of managers and industry to identify SPF research needs and the group is planning a workshop on this topic. Additionally, the group is working on a global synthesis of how ecosystem indicators are included into fisheries management using examples that range from simple to fully developed. Templates for inclusion of additional examples were provided to widen the geographic scope of this study if possible. Finally, a presentation prepared by Isaac Kaplan (who was unable to attend the meeting) was presented by Rebecca Asch that outlined the work of activity 10 (Socio-ecological analysis). This activity has been focusing on a project looking at the resilience of fisheries (especially small scale fisheries) and developing a database describing small scale fisheries. In addition, the activity will have two socio-economics related sessions at the SPF Symposium.

#### **AGENDA ITEM 8**

##### **Activity 11 – Small Pelagics in 2050**

Chris Rooper presented an update on the planning for activity 11 (Small Pelagics in 2050). This activity is meant to integrate contributions of activities 1-10 into a picture describing where the WG sees the status of small pelagic fish stocks, their fisheries and the related human dimensions in a future under climate change. During the business meeting the group discussed approaches that have been used in similar exercises around the world. The group agreed to develop scenarios that will be mapped to each of the activities (for example, how projected changes in distribution of small pelagics (Activities 1, 3, 4 and 9) such as Pacific saury, will impact the distribution of fisheries (Activities 10, and 11), in the case of Pacific saury potentially moving the fishery northward and offshore into international waters). One important conclusion of this discussion was that the group should keep in mind the outcomes of this activity to guide potential priorities for future research and management.

#### **AGENDA ITEM 9**

##### **Upcoming meetings and session proposals**

The working group was reminded that there were four sessions at the 2025 Annual Meeting that included members of the WG as session convenors and encouraged people to attend these sessions where possible. These sessions were:

- S2: Changing Ecosystem Structure Under Global Climate Change: Monitoring, Detecting, Modelling, and Socio-Ecological Impacts
- **S4: Responses of Small Pelagic Fish Communities to Recent Climate Regime Shifts and Climate Extremes**
- S11: Applying Innovative and Established Approaches to Assess the Resilience of the Early life Stages of North Pacific Fishes to Changing Oceanographic Conditions

- S12: Understanding the Linkages Between Forage Species and Top Predators and How They May Affect Resilience in North Pacific Ecosystems

with S4 a direct submission from the PICES-ICES Working Group. Members also discussed the upcoming individual activity meetings which are generally held quarterly and the SPF Symposium in La Paz.

For future meetings, the working group agreed to submit one or more topic sessions to the ICES Annual meeting in 2027. To facilitate admission of the proposal working group members were encouraged to reach out to other working groups within ICES who have an interest in small pelagic communities to generate some joint ideas to put forward.

The group also agreed to submit one topic session proposal regarding small pelagic communities to the upcoming PICES Annual Meeting in 2026 in Nanaimo BC. In addition members of Activity 6 agreed to submit a workshop proposal on mesopelagic fishes.

#### **Working Group meeting participation list (both online and in-person meetings)**

##### Members in Attendance

Rebecca Asch (USA, ICES, Chair)  
 Susana Garrido (Portugal, ICES, Chair)  
 Chris Rooper (Canada, PICES, Chair)  
 Motomitsu Takahashi (Japan, PICES, Chair)  
 Jennifer Boldt (PICES, Canada)  
 Brian Hunt (PICES, Canada)  
 Hannah Murphy (PICES, Canada)  
 Sachihiko Itoh (PICES, Japan)  
 Hiroomi Miyamoto (PICES, Japan)  
 Tatsuya Sakamoto (PICES, Japan)  
 Akinori Takasuka (PICES, Japan)  
 Mikio Watai (PICES, Japan)  
 Kazuhiro Oshima (PICES, Japan-NPFC)  
 Dongwha Sohn (PICES, Korea)  
 Minje Choi (PICES, Korea)  
 Hwansung Ji (PICES, Korea)  
 Vladimir Radchenko (PICES, Russia)  
 Matthew Baker (PICES, USA)  
 Richard Brodeur (PICES, USA)

Florian Berg (ICES, Norway)  
 Daniela Silva (ICES, Portugal)  
 Dorota Szalaj (ICES, Portugal)  
 Carryn de Moor (ICES, South Africa)  
 Aitor Albaina (ICES, Spain)  
 Chris Lynam (ICES, Denmark)

Jacob Burbank (ICES, Canada)  
 Aaron Adamack (ICES, Canada)  
 Peng Sun (ICES, China)  
 Marta Moyano (ICES, Norway)  
 Niels Hintzen (ICES, Netherlands)  
 Laura Wise (ICES, Portugal)  
 Ines Martins (ICES, Portugal)  
 Martin Huret (ICES, France)  
 Aleksei Somov (NPAFC)

##### Observers in Attendance

Luke Bobay (Canada)  
 Iára Torres Cabrera (Japan/Peru)  
 Ines Pereira (Portugal)  
 Gael Grand Garcia (Portugal)  
 Szymon Smoliński (Poland)  
 Yuan Lin (Japan)  
 Ira Gomez  
 Honoka Ito (Japan)

##### WG53 PICES members unable to attend

Jaclyn Cleary (PICES, Canada)  
 Francis Juanes (PICES, Canada)  
 Haeyoung Choi (PICES, Korea)  
 Yue Jin (China)  
 Shuyang Ma (China)  
 Yongjun Tian (China)  
 Wei Yu (China)

Kui Zhang (China)  
 Toshihide Kitakado (Japan-NPFC)  
 Hui Zhang (PICES, China)  
 Heejoong Kang (Korea)  
 Dmitriy Antonenko (Russia)  
 Nikita Dederer (Russia)  
 Brad Erisman (PICES, USA)  
 Timothy Essington (PICES, USA)

Isaac Kaplan (PICES, USA)  
 Ryan Rykaczewski (PICES, USA)  
 Margaret Siple (PICES, USA)

### **Working Group meeting agenda**

PICES-ICES WG53/WGSPF Business Meeting

November 11 & 13, 2025 - Hybrid

1800-2030 (JST)

#### **Nov. 11, 2025**

1. Introductions
2. Review ToR (attached below)
3. SPF Symposium 2026 update (15 mins)
4. Reports from activities (10 mins each)
  - a. **Activity 1 - Spatiotemporal processes** (Rebecca, Brad, Daniela)
  - b. **Activity 2 - Food Web Dynamics** (Susana, Brian)
  - c. **Activity 6 - Forage beyond boundary currents** (Ryan, Chris)
  - d. **Activity 4 - Distribution, migration and connectivity** (Naiara, Tatsuya).
  - e. **Activity 5 - Non-climatic and non-fishery impacts** (Francis, Henn, Patrick)
- ~~5. Breakout Groups for activities (1-2, 4-6)~~

#### **Nov. 13, 2025**

6. Reports from activities (continued - 10 mins each)
  - a. **Activity 3 - Growth, reproduction and survival** (Florian, Martin H., Martin L., Motomitsu)
  - b. **Activity 7 - Advanced tech** (Maria, Dave, Chris)

- c. **Activity 8 - Short-term forecasts and long term predictions** (Stefan, Robert, Matt)
  - d. **Activity 9 - Improving management with actionable science** (Kym, Peng, Robert)
  - e. **Activity 10 - Social-ecological analysis** (Isaac, Mary, Nadine, Peng)
- ~~7. Breakout Groups (3, 7-10)~~
- 8. **Activity 11 - Small Pelagics in 2050** (Shin-ichi, Myron, Chris)
    - a. Description of activity
    - b. Discussion of contributions from other activities
    - c. Action items
  - 9. Future plans/action items (e.g. session submissions to PICES or ICES, etc.)

**FIS Endnote 5**  
**S-CCME Annual Report**  
**EG Identification**

EG name	S-CCME (ICES–PICES Strategic Initiative on Climate Change Impacts on Marine Ecosystems, SICCME)
Chair name(s)	<i>PICES</i> : Dr. Dongwha Sohn (Korea), Dr. Kirstin Holsman (USA) <i>ICES</i> : Dr. Kathy Mills (USA), Dr. Bryony Townhill (UK)
Date of group meeting after May 2025 (if any)	Oct. 30, 2025

**The following information will be reviewed/approved by the Reporting Committee Chairs to present at the Science Board meeting at PICES-2025.**

**1. Bi-Annual Activity Update**

*Please very concisely describe up to three main activities of your group after May 2025 (ISB-2025), and identify which ToR items are addressed by the achievement. **Are there any notable scientific findings and news to share with the PICES community and beyond?***

Activities and Achievements		ToR No. to address
1	<p>S-CCME continues to serve as the primary coordination mechanism between ICES and PICES on climate change impacts and adaptation in marine systems. During 2025, the group advanced integration of climate information into Ecosystem Overviews, strengthened cross-basin synthesis, and began transition planning for Phase V. S-CCME remains on track to complete Phase IV objectives in 2025, providing a strong foundation for continued ICES–PICES collaboration on climate-ready advice and ecosystem-based management.</p> <p>S-CCME continued to identify emerging gaps in climate–ecosystem integration and develop pathways for operationalizing climate-informed advice. Key achievements include:</p> <ul style="list-style-type: none"> <li>• Collaboration with ICES leadership and ACOM on incorporating climate information into Ecosystem Overviews (EOs).</li> <li>• Development of a pilot framework for climate sections in EOs at WKEO4 (June 2025), including standardized content on observed and projected changes, socio-economic implications, and knowledge gaps.</li> <li>• Coordination with Integrated Ecosystem Assessment (IEA) groups to embed climate signals and risk-based methods into advice frameworks.</li> </ul>	1
2	<p>S-CCME advanced synthesis and communication of climate-related knowledge and co-organized sessions and workshops throughout 2025, including:</p> <ul style="list-style-type: none"> <li>• ICES ASC 2025 Theme Session H on ‘Managing for species distribution shifts’.</li> <li>• Collaboration or contribution to PICES 2025 workshops and sessions (S6; S8, and W1) on climate-ready fisheries management and ecosystem-scale information for conservation.</li> <li>• Continued engagement with UNDOS programs (SMARTNET, SUPREME, FISHSCORE) and WMO initiatives to link observing networks and advisory applications.</li> <li>• Leadership on ESSAS annual Meeting (Mueter) The ESSAS Open Science Meeting 2025, titled “Past, Present and Future of Marine Biodiversity and Ecosystems,” was</li> </ul>	2, 3

	<p>an international scientific conference organized by the Ecosystem Studies of Subarctic and Arctic Seas (ESSAS) program. It took place June 24–26, 2025, at the National Institute of Polar Research (NIPR) in Tokyo, Japan.</p> <ul style="list-style-type: none"> <li>● Presenting synthesis outcomes to SCICOM–ACOM joint sessions on integrating climate change information into advice.</li> <li>● Compiling inventories of climate-relevant projects (ACTNOW, MeCCAM, Blue Carbon, Fish Carbon, ACLIM/CEFI, FISHSORE) to identify linkages.</li> <li>● Planning a survey of Working Groups to catalog products and contacts for the S-CCME/SICCME network.</li> </ul>	
3	<p>A road-mapping discussion at SCICOM 2025 and the S-CCME 2024 in-person business meeting focused on defining SICCM’s future role—leadership, collaborative, or supporting—in supporting PICES actionable advice and implementing ICES’s new climate strategy. Outcomes included:</p> <ul style="list-style-type: none"> <li>● Agreement to maintain ICES–PICES collaboration under a new S-CCME 5-year plan/ 3 yr ICES SICCM ToR</li> <li>● Prioritization of operationalization, shifting from synthesis to delivery of products supporting advice.</li> <li>● Plans for a second ICES WKCLIMAD workshop to guide development of climate-ready advice.</li> <li>● Plans for a Spring S-CCME workshop to identify actionable advice and S-CCME themes</li> </ul>	4

Please cut and copy of ToR which are addressed (only the ToR noted above).

- |  |
|--|
| <ul style="list-style-type: none"> <li>● ToR 1: Define, coordinate and integrate the research activities needed to understand, assess and project climate change impacts on marine ecosystems;</li> <li>● ToR 2: Plan strategies for sustaining the delivery of ecosystem goods and services, and when possible predictions should include quantifying estimations of uncertainty;</li> <li>● ToR 3: Define and quantify the vulnerability and sustainability of marine ecosystems to climate change, including the cumulative impacts and synergetic effects of climate and marine resource use;</li> <li>● ToR4: Build global ocean prediction frameworks, through international collaborations and research, building on ICES and PICES monitoring programs.</li> </ul> |
|--|

Is your EG on track to meet your objectives/action plan?  
 (Please place an "X" where appropriate. If other, please explain).

Yes     No (If no, please explain) :

Other: (Please explain) :

**2. New Publications (don’t report ones already posted on your EG’s website)**

List the citation(s) of publications for each category and submit the required manuscripts/reprints if website link is not available with this form. Note that the requirement and reporting processes vary depending on the publication categories.

<p><b>A. PICES Official Publication</b> (report BEFORE publication) incl. WG Final Report  <i>PICES Science/Technical Report (example), etc.</i></p>
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<b>Required process</b>	Reviewed by Parent Committee(s) => Recommended by SB => Approved by Governing Council => Posted on PICES website when published	
<b>What to submit</b>	A copy of “ <b>manuscript</b> ” to reporting Parent Committee and Secretariat	
		(note)
<b>B. Products of collaboration with other organizations</b> (report AFTER published) <i>Booklet/Report published by collaboration with other organizations, e.g. IOC, SCOR (example)</i>		
<b>Required process</b>	Acknowledged by SB then Governing Council => Posted on PICES website	
<b>What to submit</b>	A copy of the “ <b>product</b> ” to reporting Parent Committee and Secretariat	
		(note)
<b>C. Peer-reviewed Journal Paper</b> (report AFTER published)		
<b>Required process</b>	Acknowledged by SB then Governing Council => Posted on PICES website	
<b>What to submit</b>	A copy of the “ <b>PDF</b> ” reprint or “ <b>DOI</b> ” to reporting Parent Committee and Secretariat	
Lin Z., S. Ito, A. Baudron, C. Stawitz, T. Tomiyama, K. Fujiwara, P. D. Spencer, J. Mor-rongiello, in press, A state-space approach reveals that competition drives variation in fish body weight, with influences from environmental conditions and fishing pressure, Progress Oceanography, <a href="https://doi.org/10.1016/j.pocean.2025.103582">https://doi.org/10.1016/j.pocean.2025.103582</a>		(note) Corresponds to ToR1 collaboration between ICES-PICES and ToR3 identifying multi-stressors by density effect, climate change and fishing pressure.
Ahmed S. I., Z. Yu, T. Higuchi, J. Inoue, M. K. Wong, X. Wang, Y. Lin, S. Itoh, K. Komatsu, E. Tsutsumi, H. Fukuda, Susumu Hyodo, J. Morrongiello, E. M. Bendif, S. Ito, 2025, Patterns in marine surface fish biodiversity and community composition detected by different eDNA metabarcoding sampling methods. Journal of Oceanography, in press. <a href="https://doi.org/10.1007/s10872-025-00771-x">https://doi.org/10.1007/s10872-025-00771-x</a>		Correspond to ToR3 identifying methods to observe biodiversity using eDNA.
<b>D. Any other publication</b> (report AFTER published)		
<b>Required process</b>	Acknowledged by SB then Governing Council => Posted on PICES website	
<b>What to submit</b>	A copy of the “ <b>PDF</b> ” reprint or “ <b>DOI</b> ” to reporting Parent Committee and Secretariat	
		(note)

**3. List of Participants at the Pre-PICES-2025 Online Business Meeting**

EG Members (name only)	
TBD	
Observers = non-EG members	
Name	Affiliation

#### 4. Requests for SB Recommendation

(NEW!) Please input information on the following items into the **respective sheets of the shared file (Link Here)** and submit the required additional documents (when applicable) with this form. Carefully read the guide/criteria on the spreadsheets before you do.

**4.1. Proposal for New Expert Groups** (Study Group, Working Group, Advisory Panel, Section)  
*(Go to the Link)* Fill in the information of the proposal of the new Expert Group or its idea for seeking SB recommendation at the following Annual Meeting.  
*Additional document required:* the Full Proposal of the new Expert Group with this form

**4.2. Membership Requests**  
*(Go to the Link)* List suggested additional members to ask National Delegates (GC members) to officially appoint them. The appointment process will be quicker if you identify the candidate(s).

**4.3. Change of Chairs**  
*(Go to the Link)* Fill in the information on the stepping-down and replacing chair(s)

**4.4. Extension of Term**  
*(Go to the Link)* Request the extension of the term of your EG.

We request extension to 2030 via the Phase V implementation plan

**4.5. Change of ToR**  
*(Go to the Link)* Fill in the information on the revised ToR.

S-CCME requests endorsement of continued S-CCME activity under the proposed Phase V implementation plan (2026-2030) to ensure continuity and interdisciplinary and cross regional coordination on advancement of cutting-edge climate change science and effective adaptation responses.

Note the upcoming planned revision of ICES ToRs to align with ICES Climate Strategy and the PICES 2026–2030 Science Plan.

**4.6. Proposal for Capacity Development Events, e.g. Summer School, Training Workshop**  
*(Go to the Link)* Fill in the information of the proposed event(s), e.g. summer school, training sessions, workshop etc., and  
*Additional document required:* Proposal with detailed information.  
 Request support for a 1–2-day S-CCME Spring workshop: “S-CCME Spring Workshop: Towards actionable climate change advice”. Hybrid working meeting with mix of discussions and breakout groups (as well as an

author coordination meeting) to be held in conjunction with either the Wakefield symposium (Kodiak Alaska, May) or PICES small pelagics meeting in La Paz (May)

#### **.7. Request for Travel Support in 2026**

***(Go to the Link)***

***This is NOT for the travel support of Invited Speakers or ECOPs to attend the PICES Annual Meeting***

***Applicable ONLY for:***

- *EG members (Chairs and ECOPs are prioritized) who convene or are invited to the sessions/workshops relevant to EG activities at an international conference other than the PICES Annual meeting.*
- *ECOPs from PICES member countries who attend at an international conference other than the PICES Annual meeting.*

Request added for 2 Support request for travel for 2 S-CCME members to the Spring 2026 workshop

#### **4.8. Request of Open Access Fee of Peer-reviewed Journal Paper**

***(Go to the Link)***

***Request only after submission to the journal. GC approval will be void If the manuscript is not accepted.***

*Limited funds are available for the papers which are most relevant to EG achievement, e.g. synthesis of the group's study.*

***Additional document required: a copy of the "manuscript"***

#### **4.9 Any other Proposals for SB Discussion/Recommendation**

***(Go to the Link)***

***Additional document required, e.g. Proposal of the request***

Request support for the ICES/PICES S-CCME Phase 5 Implementation Plan (2025-2026)

<b>Reporting Committee</b>	<b>Will Report on These EGs at SB-2024</b>	<b>Other Parent Committee(s)</b>
<b>FUTURE</b>	AP-ECOP: Early Career Ocean Professionals	SB
	WG49: Climate Extremes and Coastal Impacts in the Pacific	
<b>BIO</b>	S-MBM: Marine Birds and Mammals	
	WG54: ICES/PICES Best Practices for Using Deep Learning in Processing Plankton Images	
	Final Report Progress only, WG47: Ecology of Seamounts	
	Final Report Progress only, WG48: Towards best practices using Imaging Systems for Monitoring Plankton (WGISMP)	
<b>FIS</b>	S-CCME: Climate Change Effects on Marine Ecosystems	BIO, POC
	*WG53: PICES/ICES- Sustainable Pelagic Forage Communities	BIO, HD
<b>HD</b>	WG51: Exploring Human Networks to Power Sustainability	
<b>MEQ</b>	S-HAB: Ecology of Harmful Algal Blooms in the North Pacific	
	AP-NIS: Marine Non-indigenous Species	
	S-MPP: Marine Plastic Pollution	
<b>POC</b>	S-CC: Carbon and Climate	BIO
	*WG50: Sub-mesoscale Processes and Marine Ecosystems*	
<b>MONITOR</b>	AP-CREAMS: CREAMS/PICES Program in East Asian Marginal Seas	POC
	AP-NPCOOS: North Pacific Coastal Ocean Observing Systems	TCODE
<b>TCODE</b>	WG52: Data Management	
<b>SB</b>	AP-SciCom: Science Communications	FUTURE
	AP-ARC the Arctic Ocean and the Pacific Gateways	