

PICES–ICES Working Group 53 / WGSPF Business Meeting

May 9–10, 2026 | Hybrid (CICIMAR & Zoom)

1. Introduction

The PICES–ICES Working Group on Sustainable Pelagic Forage Communities (WG53/WGSPF) met on May 9–10, 2026 in La Paz, Mexico to review progress across its 11 scientific activities, discuss future meetings and publications, identify opportunities for collaboration, and set priorities for the coming year (see Agenda in Annex A). The meeting was held at the Centro Interdisciplinario de Ciencias Marinas (CICIMAR) and was attended by ~60 researchers, both in person (n ~ 40) and online (n ~ 20). Membership in the WG currently includes 166 individual researchers, representing 31 countries across from all continents (except Antarctica).



In person participants in the Working Group meeting in the courtyard at Centro Interdisciplinario de Ciencias Marinas (CICIMAR).

2. Review of Terms of Reference

During the meeting, the Terms of Reference (ToR) for the WG (Annex B) were reviewed, and the progress towards achieving the deliverables related to these ToRs was discussed. The major accomplishment in the past year was the successful convening of the joint ICES/PICES/FAO symposium titled “*Navigating Changes in Small Pelagic Fish and Forage Communities: Climate, Ecosystems, and Sustainable Fisheries*” ([SPF-2026](#)) held immediately prior to the business meeting (ToR#6). The symposium, business meetings and activity meetings throughout the year, and collaborative projects completed within the WG have also helped to foster a supportive and collaborative international network of scientists conducting research on forage species, their ecology and fisheries (ToR#1).

Progress on the remaining ToRs (#2–#5) continues within WG activities. Two manuscripts were recently published from the working group that directly address deliverables for synthesis papers on small pelagic fish:

Peck M., Catalan I., Rykaczewski R., Takasuka A., Garrido S., Asch R., Baker M., Bowlin N., Boldt J., Brodeur R., Hansen C., Lluch-Cota S., Huret M., Juanes F., Kaplan I., Koenigstein S., Moyano M., Rodriguez-Sanchez R., Rooper C., Sohn D., Takahashi M., Tommasi D., Wildermuth R. 2026. *Advancing ecological understanding and sustainable management of small pelagic fish*. *Fish and Fisheries* 27: 850–864. <https://doi.org/10.1111/faf.70086>

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*. *Reviews in Fisheries Science & Aquaculture*, 33(4): 497–558. <https://doi.org/10.1080/23308249.2025.2458869>

There have been 13 additional peer-reviewed publications from WG collaborations, as well as two technical reports and a PICES press article. Further synthesis and collaborative manuscripts are anticipated from the Special Issues arising from the Symposium.

3. Small Pelagic Fish (SPF) Symposium 2026

A brief recap of the joint ICES/PICES/FAO Symposium (May 4–8, 2026) was provided to the group. There were more than 200 participants at the symposium representing 31 countries and 130 organizations. Eight workshops and nine topic sessions were held, as well as plenary sessions and a poster session. About 46% of the Symposium participants were early career ocean professionals. A more detailed summary of the Symposium and summaries of individual workshops will be published in the summer edition of the PICES Press (anticipated in late July).

4. Summaries of WG53 Activities

Through its 11 activities, the WG continues to advance multiple collaborative research initiatives addressing key aspects of forage fish ecology and management. A representative from each of the ongoing activities (activities are listed in Annex C) provided an update and a series of slides (which can be found [here](#)). Each of the activity leaders reminded WG members of the topic/questions their activity hoped to address, themes that they were working on, and progress (meetings, analyses, reports) that had been made to date. Presenters also reported on publications arising from the activity and key messages from their work, and summarized relevant topics that were explored during the SPF Symposium through topic sessions or workshops. The presentations also provided a chance for activity leaders to make data requests to the group and also identify any potential points of collaboration with other activities.

5. Activity 11 – Small Pelagic Fish in 2050

Dr. Shin-Ichi Ito led a wide-ranging and interesting discussion of the activity on the state of small pelagic fish and their fisheries in 2050. This activity is meant to be a synthesis exercise, bringing together outputs from the other 10 activities. In anticipation of this synthesis the group discussed potential ecological, geographical, observational, technological, management and economic shifts that may occur for SPF and human-dependent systems by 2050. There was broad agreement among participants that technological advances in particular would change the way that we conduct our science on SPF and that climate change and its downstream oceanographic effects were likely to

have huge impacts on the abundance, distribution, availability and size of SPF in the future. An entertaining breakout group led by Dr. Ito provided participants a chance to visualize a “science fiction” view of what SPF populations, science and fisheries might look like in the future.

6. Future Plans and Action Items

The final topic of discussion at the WG meeting was future plans and action items. Across several activities, participants identified data availability as a limitation or an area where further progress could be made. The group emphasized that sharing datasets among activities can allow integrated analyses across multiple geographic regions and research themes. To promote data sharing the WG established an online list ([found here](#)) that can house existing and future data requests to support collaborative analysis.

Tracking publications arising from WG activities was also discussed and it was suggested a standard acknowledgement be used to identify papers that have arisen from WG activity. Recommended text for acknowledging contributions should include: “*This paper is a contribution to the international ICES-PICES Working Group on Sustainable Pelagic Forage Communities (ICES WGSPF, PICES WG53).*”

The status and progress on special issues associated with SPF-2026 in *Canadian Journal of Fisheries and Aquatic Sciences* and *Marine Ecology Progress Series* was also presented. The deadline for submitting manuscripts to the special issues is August 1, 2026. (However, an extension is likely to be granted). More information on submitting manuscripts can be found at [publications page](#) on the [Symposium website](#).

Participants stressed the importance of expanding collaboration with other ICES and PICES expert groups where possible, including the PICES Section on Climate Change Effects on Marine Ecosystems (S-CCME), joint expert group with ICES Strategic Initiative on Climate Change Effects on Marine Ecosystems. Further work to collaborate with oceanographic research communities, particularly physical oceanographers, as well as stakeholders and fishing industry representatives, was also seen as important.

A number of action items was identified for the WG leads, including updating the membership email distribution list and, potentially, putting together a quarterly bulletin that could provide information to members on ongoing activities on a more regular basis.

Finally, upcoming meetings were discussed. The WG plans to hold business meetings during the 2026 PICES Annual Meeting in Nanaimo, BC, and encourages broad participation from members. Potential locations were also considered for an intersessional meeting in late winter 2027. A two-and-a-half-day meeting format was generally supported, likely in an ICES member country. Initial discussions also began regarding possible hosts and venues for a Small Pelagic Fish Symposium in 2030. Organizers emphasized the importance of identifying a local host early so that there is sufficient time for planning.

Annex A: PICES–ICES Working Group 53 / WGSPF Business Meeting Agenda

May. 09, 2026

1. Introductions
2. Review ToR (attached below)
3. SPF Symposium 2026 wrap up (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 3 - Growth, reproduction and survival (Florian, Martin H., Martin L., Motomitsu)
 - d. Activity 4 - Distribution, migration and connectivity (Naiara, Tatsuya)
 - e. Activity 5 - Non-climatic and non-fishery impacts (Francis, Patrick)
 - f. Activity 6 - Forage beyond boundary currents (Ryan, Chris)
5. Breakout Groups for activities (1+4+5; 2+3+6): Identify cross-links + planned joint analyses/papers

May 10, 2026

6. Reports from activities (continued - 10 mins each)
 - a. Activity 7 - Advanced tech (Maria, Dave, Chris)
 - b. Activity 8 - Short-term forecasts and long-term predictions (Stefan, Robert, Matt)
 - c. Activity 9 - Improving management with actionable science (Kym, Peng, Robert)
 - d. Activity 10 - Social-ecological analysis (Isaac, Mary, Nadine, Peng)
7. Breakout Groups (7-8; 9-10) Identify cross-links + planned joint analyses/papers
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

Annex B: Terms of Reference

1. Foster international and interdisciplinary collaboration to establish similar study frameworks and comparative analyses of forage species, their ecology, and fisheries.
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.
3. Identify, prioritize, and recommend research most needed to advance our knowledge and capacity to forecast ecosystem responses to changes in forage species.
4. Recommend strategies for studying and monitoring socio-ecological systems to improve ecosystem-based management for the sustainable harvest of forage species.
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, and/or transboundary management among countries with different levels of development in fisheries, and recommend options for adaptation.
6. Organize a joint ICES/PICES/FAO symposium on Small Pelagic Fishes in May 2026 (La Paz, Mexico).

Annex C: WG Activities and Leaders

Activity 1: Spatiotemporal processes affecting life history

Activity 2: Food-web Dynamics

Activity 3: Drivers of growth, reproduction, and survival

Activity 4: Distribution, migration and connectivity

Activity 5: Non-climatic and non-fisheries anthropogenic impacts

Activity 6: Forage beyond boundary currents

Activity 7: Advanced technologies and methodologies

Activity 8: Short-term forecasts and long-term projections

Activity 9: Improving management with actionable science

Activity 10: Social-ecological analysis

Activity 11: Future in 2050

R. Asch, D. Silva, B. Erisman

S. Garrido, B. Hunt

M. Huret, M. Lindegren, F. Berg, M. Takahashi

N. Rodriguez-Ezpeleta, T. Sakamoto

P. Polte, R. Asch, F. Juanes

R. Rykaczewski, C. Rooper

M.M. Angélico, C. Rooper, D. McGowan

S. Koenigstein, R. Wildermuth

K. Jacobson, P. Sun, R. Wildermuth

M. Gasalla, N. Heck, I. Kaplan, P. Sun

M. Peck, S.-I. Ito, C. Rooper