

## 2025 Report of Working Group on Sustainable Pelagic Forage Communities (WG53)



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 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 person 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 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 and outlined the work of

activity 10 ([Socio-ecological analysis](#)). This activity has been focused 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 socioeconomics-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 (e.g., 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, Canada. In addition, members of Activity 6 agreed to submit a workshop proposal on mesopelagic fishes.

***WG53 Endnote 1*****WG53 participation list (both online and in-person meetings)**Members

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

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

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

WG53 PICES members unable to attend

Canada: Jaclyn Cleary (PICES), Francis Juanes (PICES)  
 China: Yue Jin, Shuyang Ma, Yongjun Tian, Wei Yu, Kui Zhang, Hui Zhang (PICES)  
 Japan: Toshihide Kitakado (NPFC)  
 Korea: Haeyoung Choi (PICES), Heejoong Kang (Korea)  
 Russia: Dmitriy Antonenko, Nikita Dederer  
 USA: Brad Erisman (PICES), Timothy Essington (PICES), Isaac Kaplan (PICES), Ryan Rykaczewski (PICES), Margaret Siple (PICES)

**WG53 Endnote 2**  
**WG53 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.)