

2024 Report of Working Group on Sustainable Pelagic Forage Communities

The first business meeting of the joint PICES-ICES Working Group on Sustainable Pelagic Forage Communities ([WG53](#)) was held for one full day on October 25, 2024 at the Imin International Conference Center, University of Hawaii at Manoa, Honolulu, Hawaii. The meeting was co-chaired by Drs. Motomitsu Takahashi (PICES), Rebecca Asch and Susana Garrido (ICES). There were 51 participants – 25 in person and 26 online (*Endnote 1*).



Below are notes summarizing key points from the agenda items of the WG53 meeting (*Endnote 2*).

AGENDA ITEM 1 **Introductions**

The members in attendance online and in the room briefly introduced themselves and their interests in small pelagic fish (SPF). Each member contributed an introductory slide, describing their background and research ([now posted on the WG53 website](#)).

AGENDA ITEM 2 **Overall goals of the Working Group**

Dr. Chris Rooper (PICES co-chair) introduced the WG53 terms of reference. Since this was the first meeting of the group there was an emphasis on presenting [the deliverables and expected outcomes](#).

AGENDA ITEM 3

History of the SPF groups

Next, Dr. Ryan Rykaczewski (former PICES co-chair of WGSPF) presented [the history of international collaboration in SPF research](#), with an emphasis on outcomes from the International Symposium on “*Small Pelagic Fish: New Frontiers in Science and Sustainable Management*” ([SPF-2022](#)) held in Lisbon, Portugal.

AGENDA ITEM 4

Introduction of previous, ongoing and proposed activities

Dr. Rebecca Asch (ICES co-chair) provided [an overview of the accomplishments of the 12 activities from the first phase of the Working Group](#). Dr. Isaac Kaplan presented a paper in progress that is being led by him and Dr. Felipe Quezada (USA) and incorporates global data and 11 case studies on management responses, fisher responses, and socio-economic impacts of changes in SPF. Other papers that were initially proposed or developed after SPF-2022 were also discussed and members were updated on their status. This included a perspectives paper that integrated the results from the first iteration of the working group, which led to the introduction of ongoing and proposed activities that were put forward as useful for the working group. Some proposed activities were also introduced briefly and taken up under the following agenda item in more detail.

AGENDA ITEM 5

Discussion of proposed activities

Dr. Susana Garrido (ICES co-chair) led the discussion of ongoing and new activities that may be undertaken by the working group during its tenure. It was noted that PICES is interested in making “actionable” science (based on [the External Review Report](#)). So, a focus on issues that can be turned into management actions (or call to actions) might be useful for the organization. One idea related to this is to develop and conduct a survey of management and industry about their key needs for research. An interest was expressed in expanding projections of both biological and systems responses in the medium term since new climate data and projections are becoming available in recent/near future years. There was still high interest in keeping most of the existing activities going (and even expanding). Exception may be Activity 1 (*Critical review, evaluation and testing of classic hypotheses*), where the focus is the completion of the review paper. It was suggested though that Activity 1 could, possibly, be combined with Activity 5 (*Internal and external drivers of growth, reproduction, and survival*), since they both focus on testing hypotheses. We plan to revise the list of working group activities based on this feedback, present these ideas during an inter-sessional meeting to be held in February 2025 in Lisbon, and then modify/add activities and projects that will be suggested there.

AGENDA ITEM 6

Report back from breakout groups

The meeting did not include adequate time for breakout groups and because of its hybrid structure, having breakout groups during the meeting that allowed all people to participate was difficult. However, this agenda item was used to identify potential leaders of research and activities from the attending members.

AGENDA ITEM 7

Upcoming meetings and session proposals

The working group was reminded of the [WG53-sponsored Topic Session \(S3\)](#) on “*Advanced tools to monitor, observe, and assess small pelagic fish populations in support of ecosystem based fisheries management and maintaining ecosystem services*” that was held during the 2024 PICES Annual Meeting (see report on this topic session in [PICES Press, Winter 2025, Vol.33, No.1, pp. 16–17](#)).

Other upcoming meetings were then discussed as follows.

A joint PICES-ICES Working Group meeting will be held in hybrid format from February 25–27, 2025 in Lisbon, Portugal. It is anticipated that having the meeting occur in Europe will allow more participation from ICES members, so complementary ideas and activities to the Honolulu meeting can be generated.

A Topic Session proposal, led by Dr. Motomitsu Takahashi (PICES co-chair), was put forward for the 2025 PICES Annual Meeting (PICES-2025) to be held in Yokohama, Japan. The focus of this session would be on climate change impacts on small pelagic communities (*Endnote 3*). It was noted that there were two other related proposals for topic sessions at PICES-2025, including a proposal for a session examining the linkages between top predators (marine mammals and birds) and forage species.

A proposal for a Theme Session on “Adapting to Changes in Forage Species Communities” at the 2025 ICES Annual Science Conference (ASC) was submitted in summer 2024, but not approved. An interest was expressed to put forward another proposal for the 2026 ICES ASC, and a group of collaborators was assembled during the meeting.

Dr. Motomitsu Takahashi ended the meeting with a discussion of the plans for the International Symposium, on “*Navigating Changes in Small Pelagic Fish and Forage Communities: Climate, Ecosystems, and Sustainable Fisheries*”, to be convened from May 4–8, 2026 in La Paz, Mexico.

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 (PICES, Canada)
Jaclyn Cleary (PICES, Canada)
Francis Juanes (PICES, Canada)
Brian Hunt (PICES, Canada)
Hannah Murphy (PICES, Canada)
Hui Zhang (PICES, China)
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)
Haeyoung Choi (PICES, Korea)
Dongwha Sohn (PICES, Korea)
Vladimir Radchenko (PICES, Russia)
Matthew Baker (PICES, USA)
Richard Brodeur (PICES, USA)
Brad Erisman (PICES, USA)
Timothy Essington (PICES, USA)
Isaac Kaplan (PICES, USA)
Ryan Rykaczewski (PICES, USA)
Margaret Siple (PICES, USA)
Maria Gasalla (ICES, Brazil)
June Dias (ICES, Brazil)
Peng Sun (ICES, China)
Anna Akimova (ICES, Germany)
Stefan Koenigstein (ICES, Germany)
Giannina Passumi (ICES, Germany)

Marta Moyano (ICES, Norway)
Jorge Tam (ICES, Peru)
Daniela Silva (ICES, Portugal)
Dorota Szalaj (ICES, Portugal)
Carryn de Moor (ICES, South Africa)
Marta Albo (ICES, Spain)
Ignacio Catalan (ICES, Spain)
Susan Kenyon (ICES, UK)
Nadine Heck (ICES, USA)
Kym Jacobson (ICES, USA)
Jim Ruzicka (ICES, USA)

Members unable to attend

China: Yue Jin, Shuyang Ma, Yongjun Tian, Wei Yu, Kui Zhang
Japan: Toshihide Kitakado
Korea: Minje Choi, Hwansung Ji, Heejoong Kang
Russia: Dmitriy Antonenko, Nikita Dederer

Observers

Lingyun Nie (China)
Yehui Wang (China)
Yutaka Hiroe (Japan)
Shin-ichi Ito (Japan)
Barbara Muhling (USA)
William Stanbury (NPAFC)
Robert Wildermuth (USA)

PICES

Alexander Bychkov

WG53 Endnote 2

WG53 meeting agenda

1. 0900-1000 - Introductions (Takahashi)
 - a. Chairs, PICES representatives, attendees
2. 1000-1030 - Overall goals of the WG (Rooper)
 - a. Terms of Reference
 - b. Deliverables
3. 1030-1100 – Coffee break
4. 1100 -1130 - History of the SPF groups (Rykaczewski)
 - a. Origin story
 - b. Brief summary of previous symposia
5. 1130 – 1230 – Introduction of previous, ongoing and proposed activities (Asch)
 - a. Activity 9 update (Quezada & Kaplan)
 - b. Other activity updates
6. 1230 – 1400 – Lunch Break
7. 1400 – 1500 – Discussion of proposed activities (Garrido)
 - a. Maybe breakout groups for activities with some brainstorming on potential directions/projects/collaborations
8. 1500 – 1530 – Coffee break
9. 1530 – 1600 - Report back from breakout groups (Garrido)
 - a. Potential interest in leading
10. 1600-1700 – Upcoming meetings and session proposals (Takahashi)
 - a. SPF Spring (February?) meeting in Lisbon/Copenhagen
 - b. PICES 2025 Annual Meeting
 - c. Symposium announcement (introduce time/place/themes/logistics/SSC)

WG53 Endnote 3

Proposal for a joint PICES-ICES Topic Session at PICES-2025 on “Responses of small pelagic fish communities to recent climate regime shifts and climate extremes”

Convenors:

Motomitsu Takahashi (Japan; takahashi_motomitsu30@fra.go.jp)
Akinori Takasuka (Japan; atakasuka@g.ecc.u-tokyo.ac.jp)
Chris Rooper (Canada; Chris.Rooper@dfo-mpo.gc.ca)
Rebecca Asch (USA; aschr16@ecu.edu)
Susana Garrido (Portugal; susana.garrido@ipma.pt)

Duration: 1-day

Description:

Forage communities including small pelagic fish and squid are key components that link plankton and predators in marine food webs. These species exhibit large fluctuations in abundance and the dominant species can alternate from one dominant species to another with changing environmental variables. Previous hypotheses, however, may not explain responses of small pelagic fish communities to the recent climate phases such as marine heat waves and unconventional regimes. Understanding the mechanisms of the population fluctuations and main drivers of the variability is essential to fill the gap of ecological knowledge on their critical role as consumers of plankton and the main prey for predators and to develop strategies for sustainable use of small pelagic fish species.

We invite contributions that investigate the drivers of recent dynamics, including the impacts of climate change, on small pelagic fish communities. We also welcome studies contributing to enhancing knowledge of the role of small pelagic fish on trophic webs, including modelling approaches that aim at better predicting the response of small pelagic fish communities to environmental changes. New advances in the assessment and monitoring of small pelagic fish species that aim at obtaining more accurate and efficient data are welcome, as well as advances of small pelagic fish species assessment, particularly those integrating Ecosystem-Based Fisheries Management. Finally, studies on the socio-economic impacts of small pelagic fish communities are welcome, including methodological advances in integrated biological-economic models, and models of fishing community response and adaptation to climate.