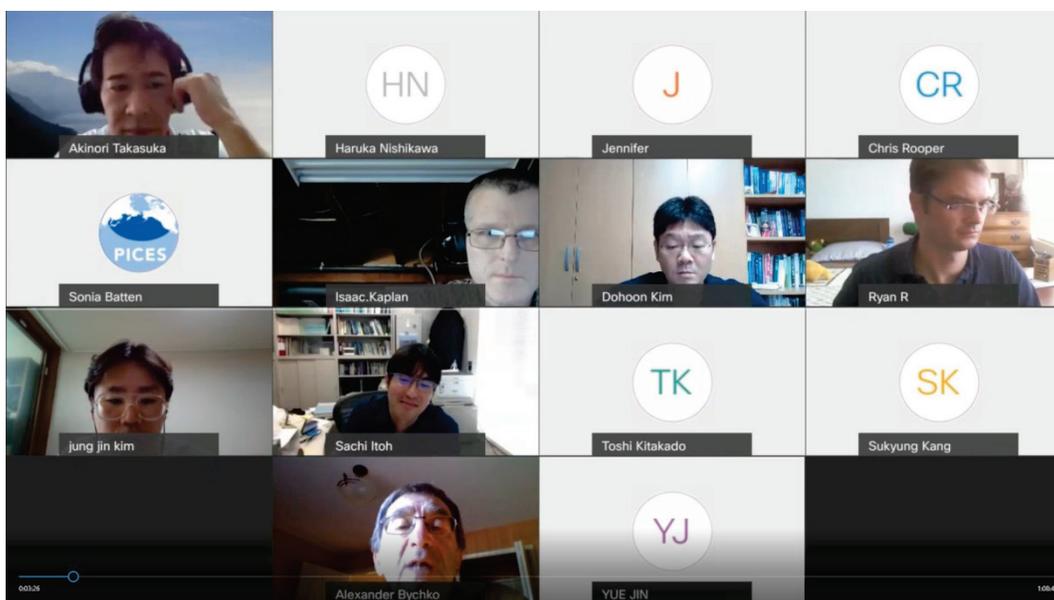


Report of Working Group on Small Pelagic Fish

PICES Working Group 43 (WG 43) on *Small Pelagic Fish* held its first business meeting over four hours spread across two days (September 8 and 9, 2020 in Eastern Pacific time zones). The virtual meeting was facilitated by the PICES Secretariat using WebEx. PICES WG 43 is one component of the joint ICES-PICES Working Group on Small Pelagic Fish (WGSPF). Dr. Ryan Rykaczewski and Dr. Akinori Takasuka presided over the meeting as Co-Chairs of the PICES portion of this Working Group. There were 17 participants on the first day of the meeting and 19 participants on the second day (*WG 43 Endnote 1*). Key discussion points during the two days of the meeting included further familiarizing everyone with the research of the WG and its members, the structure of the WG efforts and interaction with the ICES portion of the joint Working Group, and plans for an international symposium on small pelagic fish that is being planned for next winter. Below are notes summarizing key points from the agenda items (*WG 43 Endnote 2*).



A subset of the participants in a screenshot as the second day of the WG 43 business meeting got underway on WebEx.

AGENDA ITEM 2

Overview of joint WG and March 2020 meeting

Dr. Rykaczewski provided an overview of the motivations for proposing the new WG 43 through discussions with Dr. Alex Bychkov, Dr. Takasuka, and the ICES Co-Chairs of the WG (Dr. Myron Peck and Dr. Ignacio Catalan). Following a 2017 International Symposium on “*Drivers of dynamics of small pelagic fish resources*” and research publications produced in association with that symposium (*Mar. Ecol. Progr. Ser.*, 2019, [Vol. 617–618, pp. 1–376](#); *Deep-Sea Res. II*, 2019, [Vol. 159, pp. 1–182](#)) the value of collaborative research and cross-ecosystem comparison was evident. Parallel proposals for a new working group were submitted for consideration by the ICES and PICES communities in fall of 2019, and the Working Group received approval

in winter. A joint meeting was immediately planned for March 2020 at ICES headquarters in Copenhagen, Denmark. Despite the travel restrictions associated with the coronavirus pandemic, several PICES members were able to participate in person and remotely. Discussions at this initial meeting led to the identification of key areas of mutual research interest in the ICES and PICES communities (*i.e.*, task forces and their activities as noted in Agenda Item 5). A meeting summary was published in the [summer 2020 issue](#) of PICES Press. In addition to this initial meeting, several virtual meetings have been called (a few involving the complete ICES-PICES Working Group and others involving subsets of the Working Group members, depending on the topic of the conference call).

AGENDA ITEM 3

Introductions

For about half of the members of WG 43, this business meeting was their first involvement in the new group. Many participants had not yet met each other. All attendees briefly introduced themselves and their interests, and expertise.

AGENDA ITEM 4

Terms of Reference

The Terms of Reference and expected deliverables of WG 43 were discussed, and these are accurately reflected on the PICES [WG 43 website](#). Development of “task forces” on topical research questions is noted as the expected deliverable for the first year of WG 43’s tenure, and this deliverable addresses Term of Reference #2. These task forces have been formed (Agenda Item 5).

Identification of research activities associated with these task forces are facilitating collaboration within the joint Working Group, and the topics discussed are expected to guide the scientific program of the planned symposium.

The deliverable anticipated during the second year of WG 43 is a world-wide review of the responses of small pelagic fish to environmental change. Several of the joint Working Group members have already collaborated on such a review, and the manuscript has recently been submitted to a primary journal. However, we expect that reviews on more specific, disciplinary topics will also be generated because of discussions within the joint Working Group.

One important point to note is that Term of Reference #5 refers to the goal of organizing an ICES-PICES symposium on small pelagic fish “tentatively scheduled for late 2021.” Presently, we have reserved a venue for February of 2022 (see Agenda Item 7).

AGENDA ITEM 5

Terms of Reference #2

At the initial meeting of the joint ICES-PICES Working Group in Copenhagen, three broad “task forces” were discussed that help to focus investigation towards either basic biological and ecological knowledge, application of this knowledge for prediction and management, and the socio-economic and human dimension components of small pelagic fisheries. Within each of these three broad task forces, more specific “activity”

topics have been identified. Members of the joint Working Group are free to participate in as many of these task forces and activities as desired. Some of these activities are likely to merge over time—and others may emerge—as the interests and dedication of group members change.

The task forces and the more specific activities are listed below. The ICES-PICES lead or co-leads of each activity are also identified. This information is posted on the PICES WG 43 webpage to help facilitate communication by interested members of the community.

TASK FORCE ON ECOLOGICAL PROCESS KNOWLEDGE

- Activity 1: Critical review, evaluation and testing of classic hypotheses
Myron Peck (The Netherlands), Akinori Takasuka (Japan)
- Activity 2: Life cycle closures - bottlenecks and gaps in knowledge
Noelle Bolwin (USA), Ignacio Catalan (Spain)
- Activity 3: Drivers of spatial distribution and phenology
Rebecca Asch (USA), Marta Moyano (Norway)
- Activity 4: Food-web dynamics
Susana Garrido (Portugal)
- Activity 5: Internal and external drivers of growth, reproduction, and survival
Martin Huret (France)

TASK FORCE ON TRANSLATING PROCESS KNOWLEDGE

- Activity 6: Survey design and monitoring
Matthias Kloppmann (Germany), Chris Rooper (Canada)
- Activity 7: Improving short-term forecasts and/or long-term projections
Ryan Rykaczewski (USA)
- Activity 8: Improvements to management
Salvador Lluch-Cota (Mexico), Richard Nash (UK), Andres Uriarte (Spain)

TASK FORCE ON SOCIAL-ECOLOGICAL APPROACHES (Activity structure and leadership may be modified)

- Activity 9: Networks, vulnerability, and opportunities of dependent human communities
Myron Peck (The Netherlands)
- Activity 10: Quantifying trade-offs in goods and services
Cecilie Hansen (Norway), Isaac Kaplan (USA)
- Activity 11: Bioeconomic modeling
Myron Peck (The Netherlands)

New members to WG 43 were encouraged to consider which of the above activity groups they were interested in joining. The participants will be updated for a broader coverage of regions for each activity in progress.

AGENDA ITEM 6

2021 PICES Annual Meeting

Participants at the meeting discussed the potential for the group to convene sessions and/or workshops at the PICES Annual Meeting in 2021. Several points were raised that led us to decide against submitting new

proposals for 2021. First, there are several relevant sessions on small pelagic fish that were approved for the 2020 meeting and have been deferred until the PICES-2021 (including at least two convened by WG 43 members). Second, the international symposium is planned for February 2022, shortly after the 2021 Annual Meeting. We feel it prudent to dedicate any new effort and time to the organization of sessions at the symposium as opposed to splitting effort between the Annual Meeting and the symposium.

AGENDA ITEM 7

Planning for an ICES/PICES International Symposium on SPF

The Co-Chairs of the joint ICES-PICES Working Group have been working with the help of Dr. Bychkov, Dr. Susana Garrido, and several others to plan for an internal symposium on small pelagic fish (in the same format as the 2017 PICES-ICES symposium in Victoria). A venue has been secured in Lisbon, Portugal thanks largely to the efforts of Dr. Garrido. The International Symposium on “*Small pelagic fish: New frontiers in science for sustainable management*” will be held at the Calouste Gulbenkian Foundation from February 21–25, 2022, with ICES and PICES as the primary international sponsors. Potential co-sponsoring organizations are currently being approached. Thus far, Fisheries and Oceans Canada, the General Fisheries Commission for the Mediterranean, the North Pacific Fisheries Commission, the North Pacific Research Board, and the Scientific Committee on Oceanic Research have noted their intention to provide some support for the symposium.

The potential structure of the symposium was discussed during the WG 43 meeting. The duration of the venue reservation was initially (as of the WG 43 business meeting) only four days, and this raised some concerns regarding whether community-proposed workshops would be possible in addition to the scientific topic sessions. WG 43 members felt that workshops (particularly when discussion and debate occur rather than a series of scheduled talks) are an essential component of symposia, and so we resolved to explore options for other meeting locations in Lisbon if necessary for days preceding or following the symposium. Since the business meeting, we were able to extend the reservation of the venue for one day, partially alleviating concerns about workshop locations.

WG 43 members briefly discussed the potential scientific program for the symposium and its alignment with the “activities” of the joint Working Group task forces. While we felt it possible that all activity groups would propose a scientific session at the symposium, it is more likely that some may not propose a session given different degrees of progress on topics over the next year. Further planning of the scientific program will be discussed by the Scientific Steering Committee.

AGENDA ITEM 8

Other business

Some of the current cross-task-force data requirements were introduced and discussed. The early research efforts of the activity groups have highlighted the needs for similar data and points-of-contact regarding data availability from various ecosystems. The leaders of the activity groups are planning to share survey and stock assessment data (or at least metadata) from different regions and species, as this information will be useful to many. It was also noted that several of the activities need increased participation from the PICES community. This has been partially remedied by identifying individuals in the community who have now agreed to participate in the Working Group.

WG 43 Endnote 1

WG 43 participation list

Members in attendance

Ryan Rykaczewski (USA, Co-Chair/PICES)
 Akinori Takasuka (Japan, Co-Chair/PICES)
 Jennifer Boldt (Canada)
 Francis Juanes (Canada)
 Chris Rooper (Canada)
 Xianshi Jin (China)
 Hui Zhang (China)
 Sachihiko Itoh (Japan)
 Toshihide Kitakado (Japan)
 Haruka Nishikawa (Japan)
 Sukyung Kang (Korea)
 Dohoon Kim (Korea)
 Jung Jin Kim (Korea)
 Matthew Baker (USA)
 Noelle Bowlin (USA)
 Isaac Kaplan (USA)

Members unable to attend

China: Fei Chai, Yongjun Tian, Kui Zhang
 Japan: Shinichiro Nakayama, Motomitsu Takahashi
 Russia: Oleg Katugin

Observers

Yue Jin (China)
 Eunjung Kim (Korea)

PICES

Sonia Batten (Executive Secretary)
 Harold (Hal) Batchelder (Deputy Executive Secretary)
 Alex Bychkov (past Executive Secretary)

WG 43 Endnote 2

WG 43 meeting agenda

1. Adoption of agenda
2. Overview of the formation of the joint WG and March 2020 meeting in Copenhagen
3. Brief individual introductions
4. Discussion of Terms of Reference
5. More discussion on Term of Reference #2 – Formation of task forces to facilitate collaboration on key small pelagic issues
6. Discussion of potential organizing sessions at the 2021 PICES Annual Meeting
7. Planning for an ICES/PICES International Symposium on SPF
8. Miscellaneous other business