

2023 Report of Marine Environmental Quality Committee

The 2023 Business Meeting of the PICES Marine Environmental Quality Committee (MEQ) was held in two parts: a virtual meeting (Day 1) that took place on October 10 (17:00-20:00 PDT) prior to PICES-2023, and a hybrid meeting (Day 2) that took place on October 22 (18:00-20:30) in Cascade Room 1-A at the Westin Hotel in Seattle, USA during PICES-2023. The agenda is found in *Endnote 2*.

Attendees included participants from all PICES member nations except Russia, although no MEQ members from China (or Russia) took part (see *Endnote 1*). The 14 participants on Day 1 included MEQ members (9) and co-chairs from AP-NIS, WG-42 (1) and S-HAB (1) as well as representatives from JANUS (2) and the PICES Secretariat (1). The 12 participants on Day 2 included MEQ members (8) as well as observers from S-HAB (1), China (1), JANUS (1 on-line), and the PICES Review Panel (1). A total of 9 participants including MEQ members (8) and an observer from JANUS (1) attended on both Day 1 and Day 2.

Day 1: Tuesday 10 October (17:00 – 20:00 PDT)

Meeting Chair: Andrew Ross (Canada - Acting Chair MEQ)

Agenda Item 1

Welcome, Introduction, and Adoption of Agenda

The Meeting Chair welcomed the participants, who briefly introduced themselves, and reviewed the agenda for both days of the meeting. He then reviewed the MEQ Mission Statement and current MEQ membership (see Endnote 1), affiliated Expert Groups, membership changes including vacancies within MEQ (1 each for the USA and China) and S-HAB (2 for Canada), and the list of invited observers (from JANUS and GESAMP).

Agenda Item 2

MEQ Best Oral Presentation award and Best Poster award for PICES 2023

The Meeting Chair reviewed the dates and times of the MEQ-sponsored sessions (S6, S8, MEQ-P, and W6 posters) eligible for awards at PICES-2023. Following a brief discussion about who would be available to attend the relevant presentations, a few MEQ members volunteered to judge these presentations and provide results to Dr. Ross (who also judged all the eligible talks) in time for him to inform Science Board before the Closing Ceremony on October 27th. The winners were Yaamini Venkataramen (S6, best talk) and Olivia Boisen (S8, best poster).

Agenda Item 3

Updates from MEQ Expert Groups

Each Expert Group (ExG) was asked to review their main activities in 2023 (i.e., since the last PICES meeting), identify high priority items that should be reported to Science Board, indicate

plans for 2023 and beyond (including possible extensions), and suggest new topics and directions for MEQ (including ideas for new Expert Groups). Dr. Mark Wells provided the update for S-HAB, Dr. Tom Therriault for AP-NIS, and Dr. Chengyun Sun for WG-42. Details are provided in the Annual Reports for each Expert Group.

During these updates both AP-NIS and S-HAB raised the issue of virtual vs. in-person Business Meetings, noting that productivity has been noticeably affected when unable to meet in person. It was pointed out that ExGs do have the option to request an in-person Business Meeting during each PICES Annual Meeting, in response to which it was suggested that perhaps the default position should be to schedule in-person business meetings for each ExG during every PICES Annual Meeting. The Chair subsequently agreed to add an agenda item (**Agenda Item 14**) to further discuss this issue during Day 2 of the Business Meeting.

Following the update from WG-42 there was an in-depth discussion about the draft Final Report from this working group. It was suggested that more details from the three cited review papers should be included in the report itself. The issue of re-using figures for the PICES Report was discussed with respect to copyright and it was noted that it should be relatively easy to get the necessary permissions from the publisher since all papers appear in the same journal (Environmental Pollution) and there are no economic considerations. WG-42 co-chair Dr. Chengjun Sun agreed to contact the publisher and revise the report while WG member Matt Savoca will prepare the proposal for a new Expert Group to continue work on marine plastic pollution under the auspices of PICES and the MEQ Committee. The Chair subsequently added another agenda item (**Agenda Item 12**) to review this proposal (including Terms of Reference) and any available updates to the WG-42 Final Report (which is not actually due until PICES-2024) during Day 2 of this Business Meeting. (There followed a short break before the Agenda was resumed at around 18:50).

Agenda Item 4

MEQ Meeting Decisions

Other than invited speakers and ECOP attendees for workshops or sessions proposed by MEQ (which are automatically considered for travel support upon approval by PICES) no requests with financial implications were made by any MEQ-affiliated Expert Group. However, there was a lively discussion surrounding the voting system adopted this year for prioritizing PICES-2024 session and workshop proposals. These included session proposals from AP-NIS and WG-42, along with one session and one workshop proposal from S-HAB which had not been submitted prior to this meeting but which were nevertheless approved by the PICES Secretariat for consideration by the MEQ Committee (although FUTURE and other Committees would not be able to vote for them). Having expressed general disapproval of the current voting system (despite the rationale presented by SB), MEQ representatives from each member nation present at the meeting agreed to take the 10 points available for allocation to MEQ-sponsored sessions and divide them equally (3.3 points each) amongst the sessions proposed by AP-NIS, WG-42 and S-HAB. Similarly, all 10 points available for allocation to MEQ-sponsored workshops were allocated to the workshop proposed by S-HAB as no other MEQ-affiliated ExG had submitted a

workshop proposal. The Chair subsequently completed the PICES-2024 proposals spreadsheet for MEQ and submitted to the PICES Secretariat.

Agenda Item 5

Nominations for new MEQ Committee Chair and Vice-Chair

Meeting Chair and Acting MEQ Chair Dr. Andrew Ross nominated Dr. Tom Therriault for the position of MEQ Chair. He also encouraged further nominations for Chair and Vice-Chair from the Eastern and Western North Pacific, respectively, pointing out that these can be made at any time until the election takes place during Day 2 of the Business Meeting on October 22.

Agenda Item 6

Other business

Regarding membership, it was pointed out that the last two MEQ Chairs have been from China and that there are significant benefits to having all 6 member nations (including China and Russia) actively represented on the MEQ Committee. It was suggested that members of MEQ-affiliated ExGs from RUS and CHN be asked to consider serving on the MEQ Committee (as is already the case with certain ExG members from other nations such as CAN and JPN). It was mentioned that NOWPAP activities are still on pause due to the current geopolitical situation, which may also be affecting participation in MEQ. The importance of leveraging expertise from all member nations was exemplified by AP-NIS plans to recruit new members from JPN and USA as well as new co-Chair Dr. Aibin Zhan (CHN) whose expertise in eDNA are of great value to AP-NIS but who has so far been unable to participate in ExG meetings. The Chair subsequently added a further agenda item (**Agenda Item 15**) to discuss Membership during Day 2 of the Business Meeting.

Agenda Item 7

Adjourn

Day 1 of the MEQ Business Meeting was adjourned at 17:50.

Day 2: Sunday 22 October (18:00 – 20:30)

Meeting Chair: Andrew Ross (Acting Chair MEQ)

Agenda Item 8

Welcome and Adoption of Agenda

The Meeting Chair welcomed participants including Observers Yuka Murayawa (JANUS, on-line), Ruijing Li (China), Chunjiang Guan (S-HAB) and Eileen Hofmann (PICES External Review Panel) before reviewing and adopting the Agenda for Day 2 of the Business Meeting.

Agenda Item 9

Relations with other groups/organizations

New MEQ member Dr. Takafumi Yoshida (JPN) provided a brief update on the United Nations Environment Program-Northwest Pacific Action Plan (UNEP-NOWPAP), mentioning that all current projects (since the last biennium 2020/21) are on hold but due to be reviewed next year (June 2024) although it is unclear when activities will resume. However, when they do, NOWPAP expects to continue strong collaborations with PICES and MEQ specifically, including its ExGs (S-HAB and AP-NIS). In the absence of a representative from the US Joint Group of Experts on Scientific Aspects of Marine Environmental Pollution (GESAMP), the Meeting Chair provided a brief review of the 50th Annual Session of GESAMP, which took place from 18–22 September 2023 and to which PICES was invited but did not attend. The Chair encouraged MEQ members to consider accepting similar invitations in future, particularly from organizations that are closely aligned with MEQ.

Agenda Item 10

GC Approval of ISB-2023 Decisions

The Meeting Chair reviewed Governing Council (GC) approval of decisions made during the 2023 Intersessional Science Board Meeting (ISB-2023) that have relevance for MEQ. These included the new PICES/MAFF Project “Creating a phytoplankton-fishery observing program for sustaining local communities in Indonesian coastal waters”, for which Dr. Mark Wells (S-HAB) is co-Chair of the Project Science Team (PST). They also included approval of in-person Business Meeting requests for AP-NIS and the new PICES/MAFF Project during the PICES-2023 Annual Meeting and acknowledgement of nominations for new members of S-HAB (Svetlana Esenkulova, Canada) and MEQ (Matthew Savoca, USA) as well as approval of 7 peer reviewed journal papers as S-HAB products to be posted on the PICES webpages.

Agenda Item 11

Main achievements of MEQ in 2022-2023

The Meeting Chair provided a summary of MEQ Achievements during the past year, including the Business Meeting that took place during the PICES-2022 Annual Meeting in Busan, South Korea as well as approval of 4 MEQ-sponsored sessions (S4, S6, S8, and MEQ-P) and 3 MEQ-sponsored workshops (W3, W5, and W6) during PICES-2023 in Seattle, USA. At this point, the Chair sought and received from MEQ members their support for a recent request from the convenors of W3 for PICES travel funding (\$7.5 K) to enable ECOP and/or Western North Pacific participants to attend an Intersessional Meeting in Seattle during February 2024 to complete two manuscripts arising from that workshop. The Chair subsequently presented this request to Science Board, along with a proposal from the convenors of S4 for a session during PICES-2024 (which was received after this Meeting).

Agenda Item 12

Review WG42 Proposal for new Expert Group

Dr. Matt Savoca (WG-42) presented a proposal for a new Advisory Panel (AP) on Plastic Pollution and Emerging Contaminants, emphasizing the need for such an ExG to interface with GESAMP

and other organizations involved in similar work internationally, as well as with representatives from PICES groups and member nations. It was pointed out that the scope of the proposed AP is very broad and that it is doubtful that it would be able to cover all topics related to pollution, especially considering the related interests of all 6 PICES Nations. In response, it was suggested that if the proposed AP were to focus on plastics only then future consideration should be given to creating an ExG for other pollution-related issues.

Although some doubt was expressed as to which agencies are responsible for marine plastic pollution in Canada, it was noted that proposed AP membership includes representatives from Fisheries and Oceans Canada (DFO) and Environment and Climate Change Canada (ECCC). It was noted that plastic pollution is also a serious issue in South Korea but that an AP may not necessarily be the most appropriate type of ExG, whereas a succession of PICES Working Groups related to harmful algal blooms led to the creation of a Section (S-HAB) able to work on such a major issue for a longer period, albeit with a finite term. However, there was support for an AP covering plastics and associated contaminants (which were identified as an emerging issue in the draft WG-42 final report) and for such an ExG contributing to international conventions such as the UN Plastics Treaty. Regarding membership it was noted that ExGs normally have two co-chairs (i.e., Matt Savoca and Chengjun Sun for the proposed AP) although there is no minimum or maximum number of members (up to GC to approve) and that the proposed membership includes ECOPs from Canada, Korea, and China. The Meeting Chair then sought and received support from MEQ members for a proposal to create a new Advisory Panel on Plastic Pollution and Associated Contaminants, to be presented to Science Board on October 27 following updates by Dr. Savoca based on these discussions.

Agenda Item 13

Election of new MEQ Committee Chair and Vice Chair

Election of a new MEQ Chair and Vice-Chair was presided over by PICES Deputy Executive Secretary Sanae Chiba. Dr. Tom Therriault, who had been nominated for MEQ Chair during Day 1 of the Business Meeting, nominated Dr. Takafumi Yoshida for Vice-Chair of MEQ. With no other nominations received, Drs. Therriault and Yoshida were unanimously elected as Chair and Vice-Chair, respectively, of MEQ. Dr. Ross will continue to serve as Acting Chair of MEQ until the 2023 MEQ Annual Report has been submitted and approved by PICES.

Agenda Item 14

Discussion of virtual Business Meeting

As mentioned on Day 1 (see **Agenda Item 3**) AP-NIS and S-HAB members have significant concerns about virtual business meetings, including the limited duration (no more than 2.5 hours) imposed by time differences between participating nations and the difficulty in scheduling a time that works for all EG members (which often results in S-HAB members being unable to present their own country reports). As a result, S-HAB virtual business meetings are often rushed with no time for meaningful discussion of country reports nor of proposals for PICES sessions or workshops, which can result in missed deadlines (as was the case this year). Virtual meetings require a great deal of forward planning and tend to be less well attended than in-person meetings,

especially by ECOPs for whom PICES Annual Meetings, with all their different aspects, are a bigger draw (whereas virtual meetings are isolated events). It was understood that the COVID pandemic necessitated the idea/need for virtual meetings; however, the current scheduling of PICES activities does not work well with virtual meetings, even though they do have some advantages (e.g., reduced costs and carbon footprint). There is a need to look more closely at the scheduling of ExG, Committee, Science Board, and GC meetings. For example, the earlier submission of session and workshop proposals by ExGs effectively circumvents the role of Committees in further developing and refining these proposals. Alternatively, prior submission of such proposals to the parent Committee would allow members to review and discuss them (virtually) before forwarding to Science Board. It was decided that some combination of virtual and in-person meetings could work (assuming technical needs are met), subject to a critical review of current scheduling, but that in-person meetings are valuable and preferable.

Agenda Item 15

Discussion of MEQ Membership

It was noted that participation in MEQ meetings by Russia and China has become variable to non-existent. A suggestion was made to establish whether the current MEQ members from Russia are still active or whether other members should be nominated. As mentioned on Day 1 (see **Agenda Item 6**) active members of MEQ-affiliated Expert Groups from Russia and China might also be asked to consider serving on the MEQ Committee, in which case their names could be forwarded, via SB, to their country's GC members for consideration.

Agenda Items 16

Other Business

Dr. Therriault (who attended W1) mentioned that PICES Working Groups, Sections, and Advisory Panels have been asked to produce Fact Sheets describing their activities and that Committees (including MEQ) will be asked to do the same in the future, based upon a template developed at PICES-2023.

Agenda Item 17

Adjourn

The 2023 MEQ Business Meeting was adjourned at 20:25.

MEQ Committee Endnote 1**List of 2023 MEQ Business Meeting Participants**Members

Andrew R.S. Ross (Canada, Acting Chair)
 Thomas W. Therriault (Canada)
 Satoshi Nagai (Japan)
 Takafumi Yoshida (Japan)
 Tae-Hoon Kim (Korea)*
 Dong-Hun Lee (Korea)
 Jeong Hee Shim (Korea)
 Misty Peacock (USA)
 Matthew Savoca (USA)

Members unable to attend

Canada: Peter S. Ross
 China: Chuanlin Huo, Chunhou Li
 Japan: Akihide Kasai
 Russia: Tatyana Belan, Elena Maximovna
 Latkovskaya

Observers

Mark Wells (USA, S-HAB co-Chair)*
 Chunjiang Guan (China, S-HAB member,
*National Marine Environmental Monitoring
 Centre, MEE*)**
 Chengyun Sun (China, WG-42 co-Chair,
*Marine Bioresources and Environmental
 Research Centre, MNR*)*
 Ruijing Li (China, *National Marine
 Environmental Monitoring Center
 (NMEMC), MEE*)**
 Iwao Fuji (Japan, JANUS, reporting to
MoE)*
 Yuka Murayawa (Japan, JANUS, reporting
 to *MoE*)
 Eileen Hofmann (USA, *PICES Review
 Panelist, University of Virginia*)**

PICES Secretariat

Sanae Chiba (*PICES Deputy Executive
 Secretary*)

* Day 1 only

** Day 2 only

MEQ Committee Endnote 2**Agenda for the 2023 MEQ Committee Business Meeting**

DAY 1 (Virtual, Pre-PICES): Tuesday, October 10, 2023 (17:00 – 20:00 PDT)

Join Zoom Meeting: <https://us02web.zoom.us/j/5130095105> Meeting ID: 513 009 5105

1. Welcome, Introduction, and Adoption of Agenda (A. Ross) **[20 min]**
 Welcome members and review the agenda of MEQ meeting.
2. MEQ Best Oral Presentation award and Best Poster award for PICES 2023 (A. Ross) **[10 min]**
 Discuss approach for judging MEQ Best Oral Presentation award and Best Poster award.
3. Updates from MEQ Expert Groups **[60 min]**
 Reports and discussion from S-HAB, AP-NIS and WG-42 **[20 min each]** including:
 - Review of main activities in 2023 and plans for 2024 and beyond.
 - High priority items that need to be reported to SB

- New topics and directions for MEQ development, including proposals for new MEQ-parented EGs.

BREAK [10 min]

4. MEQ Meeting Decisions [60 min]
 - Requests to Science Board (Travel, Business Meetings, other requests with financial implications)
 - Ranking of Proposed Topic Sessions and Workshops for 2024.
5. Nominations for new MEQ Committee Chair and Vice-Chair (to be elected on DAY 2) (10 min)
6. Other business (All) (10 min)
General discussion
7. Adjourn

DAY 2 (In-Person, Seattle): Sunday, October 22, 2023 (18:00 – 20:30) Cascade 1-A

Join Zoom Meeting: <https://us02web.zoom.us/j/5130095105> Meeting ID: 513 009 5105

8. Welcome and Adoption of Agenda (A.Ross) [10 min]
9. Relations with other groups/organizations (All) [20 min]
Discuss MEQ-related work with other groups or organizations (e.g. NOWPAP, GESAMP).
10. GC Approval of ISB-2023 Decisions (A. Ross) [10 min]
Review relevant content from the 2023 Intersessional Science Board Meeting Report.
11. Main achievements of MEQ in 2022-2023 (A. Ross) [10 min]
Summarize the progress, activities and main achievements of MEQ during the past year.
12. Review WG42 Proposal for new Expert Group (All) [20 min]
Discuss plans for initial Study Group and/or AP or other EG to continue marine plastics work within PICES.
BREAK [10 min]
13. Election of new MEQ Committee Chair and Vice Chair [20 min]
Candidates nominated during Agenda item 5 (Day 1) and/or Agenda Item 13 (Day 2).
14. Discussion of virtual Business Meeting (All) [20 min]
Review impacts and possible ways to address these while meeting PICES needs re. scheduling and reporting.
15. Discussion of MEQ Membership (All) [20 min]
Review current status and consider ways to increase membership and/or participation for some PICES nations.
16. Other business (All) [10 min]
Discussion of PICES-2024 including MEQ-P session and MEQ Business Meeting next year.
17. Adjourn