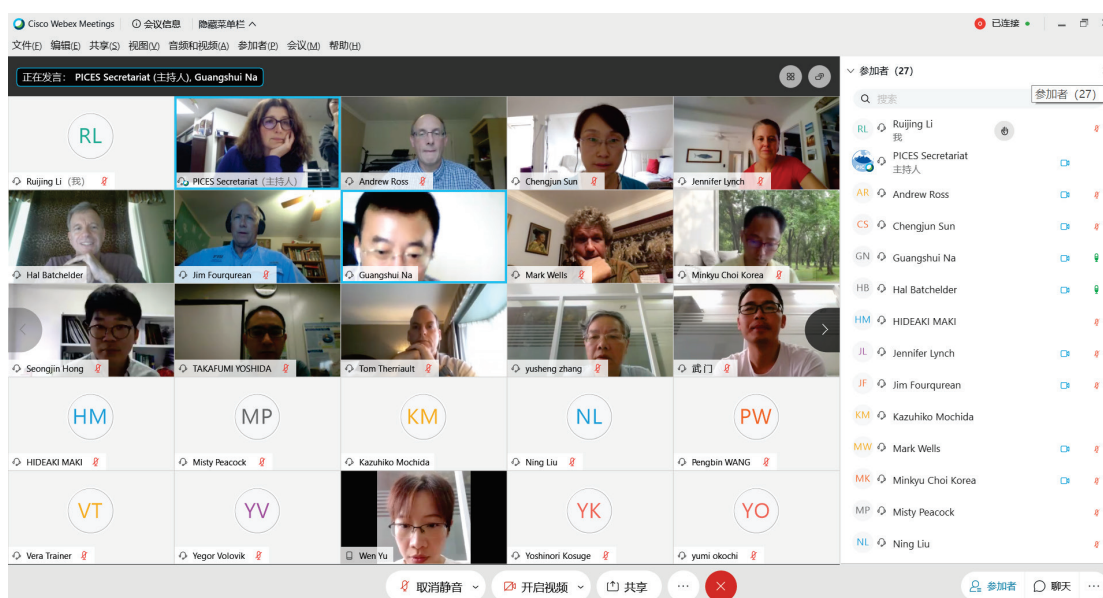


Report of the Marine Environmental Quality Committee

A WebEx meeting of the Marine Environmental Quality Committee (MEQ) was held on September 22, 2020 (16:00–19:00) (Eastern Pacific Time). Six member countries, except Russia, sent members to the meetings. Twenty-five participants attended (*MEQ Endnote 1*).

Experts Groups (S-HAB, AP-NIS, WG 42) reported their progress and requests. Dr. Yegor Volovik and Takafumi Yoshida representing NOWPAP, James Fourqurean and Hideaki Maki representing Coastal and Estuarine Research (CERF) and Environmental Management of Enclosed Coastal Seas (EMECS), respectively, introduced their organization and the collaboration with PICES. Based on a review of the main achievements of MEQ in 2020, ideas/proposals for new topics and direction, and items with financial implications for 2021 were discussed. The details were reported as follows.



AGENDA ITEM 1

Welcome and adoption of agenda

MEQ Chair Guangshui Na called the meeting to order and welcomed all participants. MEQ members and observers were asked to give self-introduction and to provide a brief statement about their interests and expertise. All participants reviewed the agenda which was adopted without revisions (*MEQ Endnote 2*).

AGENDA ITEM 2

Main achievements of MEQ 2019–2020

Guangshui Na introduced the progress made by MEQ in the past year, including the topic sessions, workshops and MEQ-P session in PICES-2019, and the important decisions in ISB-2020. Moreover, one topic session will be held on October 28.

At PICES-2020, MEQ sponsored the following topic session:

- VS3(S13): MEQ Topic Session, “Using eDNA to assess and manage non-indigenous species in the North Pacific”. (October 28, 18:00–21:00).

Co-Convenors: Jeanette Davis (USA) corresponding Keun-Hyung Choi (Korea); Thomas Therriault (Canada). Session co-sponsored by NOWPAP.

AGENDA ITEM 3

Updates from MEQ Expert Groups

Each MEQ ExGs reported their progress in this part.

1. Section on *Ecology of Harmful Algal Blooms in the North Pacific (S-HAB)*

- Dr. Mark Wells introduced the main activities of S-HAB in 2020, including two papers published, and the final report of MAFF project as well as work on articles for PICES Press arising from the MAFF project and the GlobalHAB workshop (W18) on economics and HABs during PICES-2019;
- At PICES-2021, S-HAB plans to convene 1 session and 1 workshop postponed from PICES-2020, modifying the title of the session to include climate change stressors as well as ocean acidification.

S-HAB requests:

- 1-day S-HAB meeting at PICES-2021;
- ½-day Topic Session on “The effect of ocean acidification on harmful algal species growth and toxicity” at PICES-2021 (postponed from PICES-2020);
- 1-day Workshop on “*The Expansion of Harmful Algal Blooms (HABs) from lower to higher latitudes*” at PICES-2021 (postponed from PICES-2020);
- Travel support for 1 PICES representative to attend the IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB) in 2021 (\$3,000);
- Addition of Dr. Yoichi Miyake (Japan) to membership.

2. Advisory Panel on *Marine Non-indigenous Species (AP-NIS)*

- Dr. Therriault reported the main activities of AP-NIS in 2020, especially eDNA activities. Dr. Therriault participated in a workshop on “Biodiversity of coastal seas and restoring environment: new problems and the latest monitoring methods” where NIS monitoring methods were discussed (Kobe, Japan, February 2020). AP-NIS intends to host planned session on eDNA and NIS at PICES-2021 to complement the virtual session this year.

AP-NIS requests:

- 1½-day AP-NIS meeting at PICES-2021;
- 1-day Workshop on “*Using eDNA to assess and manage non-indigenous species in the North Pacific*” at PICES-2021;
- Travel support for an ECS or session/workshop convenor at ICMB-XI (Washington, DC, USA, May 2022 – delayed due to COVID-19).

3. Working Group on *Indicators of Marine Plastic Pollution (WG 42)*

- WG 42 members met via Skype on Feb 25, 2020;
- WG 42 plans to write 3–4 companion review articles for *Environmental Pollution*.

WG 42 requests:

- 1-day meeting at PICES-2021;
- 1-day Topic Session on “*Using environmental indicators to assess baselines, targets, and risk of plastic pollution in the North Pacific*” at PICES-2021 (postponed from PICES-2020);
- Addition of Dr. Yana Blinovskaya (Russia) to membership.

AGENDA ITEM 4

Update from disbanded MEQ Expert Groups

Dr. Yusheng Zhang, Co-Chair of Working Group on *Assessment of Marine Environmental Quality of Radiation around the North Pacific (WG 30)*, introduced progress on the WG 30 Final Report and Brochure. Dr. Hal Batchelder reviewed the Brochure, which has been published at

<https://meetings.pices.int/publications/other/members/WG-30-Brochure-2020.pdf>. A revised version of the Final Report was submitted on September 11 to MEQ, and the Secretariat for technical editing and publication. Dr. Therriault asked about recommendations from WG 30 (these can be found in the WG 30 Brochure and include continued surveillance of FDNPP radionuclides in the North Pacific, monitoring of Cs radioisotopes in seawater and biota until they fall to pre-2011 levels, engagement of the public in future monitoring and surveillance operations, and continued collaboration to examine the influence on fisheries and marine ecosystems of long-term, low-level radioactive waste from coastal nuclear facilities).

AGENDA ITEM 5

Proposals for new MEQ Expert Groups

A new Expert Group to consider the potential utility of eDNA for the North Pacific (AP-NIS) was proposed for discussion by Dr. Thomas Therriault (AP-NIS Chair, and possible co-chair for this new ExG) who noted that eDNA had many applications beyond NIS detection, including biodiversity assessment/monitoring, tracking species of conservation concern, *etc.* Dr. Misty Peacock mentioned an existing project that uses eDNA to track forage fish. Dr. Mark Wells noted there was a group in Maine that is looking at the strengths and weaknesses of this approach for HABs research and suggested a PICES workshop to bring eDNA experts together. A new Study Group to look at the (cumulative) effects of multiple stressors (*e.g.*, pollution, heavy metals, noise, shoreline damage) on the marine environment in high-use coastal seas and port areas was also proposed.

AGENDA ITEM 6

Relations with other groups/organizations

Dr. Yegor Volovik and Dr. Takafumi Yoshida reported on behalf of NOWPAP. They introduced the main activities of NOWPAP and mentioned that, with new people in senior positions at both organizations, it was a good time to start discussion on future collaboration with PICES. Areas of collaboration between NOWPAP/CEARAC and PICES include HABS (S-HAB), eDNA (AP-NIS) and remote sensing (AP-CREAMS). Dr. James Fourqurean and Dr. Hideaki Maki introduced CERF and EMECS, respectively, and looked forward to cooperating with PICES through MEQ (and, possibly, the 2023 CERF meeting in Portland).

AGENDA ITEM 7

Other business

None

MEQ Endnote 1

MEQ participation list

Members

Guangshui Na (China, Chair)
Andrew Ross (Canada, Vice-Chair)
Minkyu Choi (Korea)
Seongjin Hong (Korea)
Weol-Ae Lim (Korea)
Hideaki Maki (Japan)
Kazuhiko Mochida (Japan)
Misty Peacock (USA)
Thomas Therriault (Canada)

Members unable to attend

Canada: Peter Ross
China: Chuanlin Huo, Chunhou Li
Japan: Akihide Kasai
Russia: Tatyana A. Belan, Elena
Maximovna Latkovskaya
USA: Staci Simonich, Gina Ylitalo

Observers

Cheng Sun (WG 42 Co-Chair/China)
Jennifer Lynch (WG 42 Co-Chair/USA)
Mark Wells (S-HAB Co-Chair/USA)
Pengbin Wang (S-HAB Co-Chair/China)
Yusheng Zhang (WG 30 Co-Chair/China)
James Fourqurean (CERF)
Ning Liu (NOWPAP)
Takafumi Yoshida (NOWPAP)
Yegor Volovik (NOWPAP)
Yoshinori Kosuge (Japan NUS Co., Ltd.)
Yumi Okochi (Japan NUS Co., Ltd.)
Ritsuko Minegishi (MoE/Japan)
Ruijing Li (MEE/China)
Wen Yu (MNR/China)

PICES

Vera Trainer (Science Board Chair)
Harold (Hal) Batchelder (Deputy Executive Secretary)

MEQ Endnote 2

MEQ meeting agenda

Eastern Pacific, Tuesday, September 22, 2020, 16:00-19:00

1. Welcome and adoption of agenda (Guangshui Na) (10 min)
Welcome members and review the agenda of MEQ meeting.
2. Implementation of PICES-2019 decisions (Guangshui Na) (10 min)
Review the relevant content on Reports of SB Meeting 2019 & ISB Meeting 2020, and summarize the progress/activities of MEQ.
3. Reports from MEQ Expert Groups and discussion (S-HAB, AP-NIS, WG 42) (Andrew Ross)(30 min including report and discussion for each group, total 1.5 h)
 - High priority items (things that need to be reported to MEQ & SB) from each ExG
 - Main activities of each ExG in 2020 and plans for 2021 and beyond.New topics and direction should be discussed for the development of MEQ.
 - Statement about sessions and workshops for PICES 2021 (Sponsors or other delegates)
 - Items with financial implications for 2020 (Topic sessions, Workshops, etc.) (All)All ExGs to identify items with financial implications (meeting travel, workshops, etc.). This meeting will form the document about financial implications conveyed to Science Board.
4. Update on disbanded MEQ Expert Groups (WG 30, Yusheng Zhang) (10 min)
Progress on the Brochure and final reports of WG 30.
5. Proposals for new MEQ-parented Expert Groups (Andrew Ross) (20 min)
6. Relations with other groups/organizations (All) (30 min)
Discuss MEQ-related work with other groups or other organizations. [NOWPAP, CERF, EMECS] (Takafumi Yoshida, Yegor Volovik, Ning Liu, James Fourqurean, Hideaki Maki)
7. Other business (All) (20 min)