

Report of Working Group *Common Ecosystem Reference Points across PICES Member Countries*

The Working Group on *Common Ecosystem Reference Points across PICES Member Countries* (WG 36) held a virtual business meeting on September 15, 2020 at PICES-2020. The participants at the business meeting are listed in *WG 36 Endnote 1*. The agenda for the business meeting is presented in *WG 36 Endnote 2*. The objectives of the business meeting were to 1) discuss and summarize progress on WG 36 ToRs to date, 2) identify action items and develop revised timeline for the final report, and 3) discuss ideas for follow-up work and PICES working groups. WG 36 Co-Chair, Dr. Mary Hunsicker (USA), welcomed Working Group members and observers to the meeting.



Participants of the fourth meeting of WG 36, at PICES-2020. Top, left to right: Jennifer Boldt, Elliott Hazen, Mary Hunsicker; second row, left to right: Jongseong Ryu, Shion Takemura, Steven Bograd; third row, left to right: Jackie King, Vladimir Kulik, Kazumi Wakita; bottom row: Sonia Batten and Hal Batchelder.

AGENDA ITEM 2

Overview of WG 36 final report

WG 36 requested its parent, FUTURE SSC, for an extension for the report deadline, as progress has been delayed due to the impacts of COVID-19. This request was granted and will be presented at the Science Board meeting for approval. The WG aims to complete and submit the final report to the FUTURE SSC by March 31, 2021.

AGENDA ITEMS 3–6

Discussion of Terms of Reference

WG members reviewed progress on all ToRs. A full draft of ToR 1 is complete with contributions from all member countries. Jennifer Boldt provided an update on ToR 2, and WG members reported on their individual progress and plans for completing their contributions to this ToR. Mary Hunsicker provided updates on ToRs 3 and 4. She and other group members summarized their progress to date on regional analyses, outlined their plans for completing these analyses, and identified actions items and timelines to finish these ToRs.

The WG members also discussed ideas for modifying ToRs 5 and 6 for the final report based on ToR 4 results to date and new knowledge on leading indicators of ecosystem shifts. With helpful input from our FUTURE SSC liaison, Jackie King, the WG members have devised a plan for how to address these ToRs to ensure our efforts are worthwhile and can be completed in a timely manner. The WG members will flesh out these ideas over the coming weeks.

The WG is using Google Drive and Dropbox to organize the WG’s materials and text for the final report.

AGENDA ITEM 7

Plan for future meetings and sessions

FUTURE SSC Co-Chair, Steven Bograd, informed the meeting participants of a joint meeting between multiple FUTURE WGs that was held during PICES-2019 in Victoria, Canada. This meeting led to the development of a workshop proposal on climate extremes, the mechanisms and forcing of extremes on ocean ecosystems, and their impacts on biology and human services (titled “The social-ecological-environmental dynamics of climate extremes in Pacific coastal systems”). The session was approved at PICES-2019 but deferred to the 2021 PICES Annual Meeting due to COVID-19. In addition, WG 40 recently discussed proposing a new working group on climate extremes and suggested that one aspect would be predictability of extremes (*e.g.*, Marine Heatwaves) or predictability of response. This new working group could provide a good mechanism for integrating WGs 36, 40, and 41. The FUTURE SSC will discuss the potential for this working group during their meeting in October 2020. Dr. Bograd will follow up with our WG following their meeting and will help facilitate a discussion among members from WGs 36, 40, and 41 about pursuing a new study group or working group.

AGENDA ITEM 8

Reports

WG 36 members drafted and submitted the following reports and proposals:

- MS Powerpoint slides to FUTURE documenting the group’s activities to date;
- Request for a 6-month extension to complete WG ToRs and final report.

WG 36 Endnote 1

WG 36 participation list

Members

Mary Hunsicker (USA, Co-Chair)
 Jennifer Boldt (Canada)
 Vladimir Kulik (Russia)
 Elliott Hazen (USA)
 Shion Takemura (Japan)
 Jongseong Ryu (Korea)
 Kazumi Wakita (Japan)

Members unable to attend

China: Yanbin Gu, Xiujuan Shan
 Japan: Robert Blasiak
 Korea: Sangchoul Yi

Observers

Steven Bograd (USA, FUTURE SSC Co-Chair)
 Jackie King (Canada)
 Sonia Batten (PICES)
 Harold (Hal) Batchelder (PICES)

WG 36 Endnote 2

WG 36 meeting agenda

1. Welcome; goals for business meeting
2. Overview of WG final report to date
3. Discussion about ToR 2 – updates from member nations
4. ToR 3 update; discussion about ToR 4 – updates from member nations
5. Discussion about ToRs 5 and 6 and suggested changes
6. Discuss next steps and timelines for completing ToRs and final report
7. Discuss next steps for future related work and PICES working groups
8. Write up business meeting report and create slides for FUTURE SSC meeting