

## 2021 Report of the Human Dimensions Committee

The Human Dimensions Committee (HD) meeting took place virtually from 17:00–20:00 h, October 4, 2021, Pacific Daylight Time. The meeting was organized using Zoom, under the chairmanship of Prof. Mitsutaku Makino (Japan). Twelve Committee members and 8 observers, including 3 from the PICES Secretariat, attended the meeting (*HD Endnote 1*). The agenda was reviewed and adopted unanimously by the Committee (*HD Endnote 2*).



Participants of the HD meeting at PICES-2021. Not shown: Sanae Chiba, Alexander Bychkov, Saeseul Kim (PICES Secretariat); Dan Lew, Wenwen Li, Jingzhu Shan, Libby Logerwell, Sarah Wise.

### AGENDA ITEM 3

#### Reconfirmation of our tasks

Dr. Makino provided an overview of PICES as an organization, including the tasks of the Human Dimensions Committee.

AGENDA ITEM 4

**Reports from Science Board and FUTURE SSC**

Dr. Makino provided members with an update related to Science Board activities:

- FUTURE SSC and Science Board will each have a 3-day meeting, October 5–7 and October 11–13, respectively;
- Several expert groups are expected to be proposed to Science Board for establishment;
- The third North Pacific Ecosystem Status Report (NPESR3) was published as PICES Special Publication 7, <https://meetings.pices.int/publications/special-publications/NPESR/2021/>. The Committee thanked Dr. Keith Criddle for authoring the Human Dimensions chapter.
- The next PICES Annual Meeting will take place in Busan, Korea; in 2023 the first joint PICES/ICES Annual Meeting will take place in the USA, with the city still to be determined.

Questions and comments

For the new FUTURE program Study Groups, how can researchers become involved?

- If interested in being a member of PICES, you can join a SG; contact your national committee delegate. See PICES website for Study Groups parented by the FUTURE SSC for a list of current members.
- Initial duration of a Study Group is one year (as it the case for all study groups). In the case of SG-UNDOS, it will for a 1-year extension so it can complete the development of a SMARTNET Implementation Plan. Input is welcome.

AGENDA ITEM 5

**Reports from the existing expert groups**

*Working Group on Marine Ecosystem Services (WG 41)*

- WG 41 Co-Chair, Dr. Dan Lew, reported that the WG held its final meeting over two days, from September 8–9, 2021. Its activities were focused on two main projects:
  - A review of MES in PICES member countries. Dr. Lew showed an outline of the resulting report. Much of it is drafted, and the aim is to finish the report in the coming year. Dr. Lew briefly showed key information in each of the sections, including: the bibliographic analysis, which indicates the fast growth of MES literature, what are MES, and MES assessment (ecological, economic, socio-cultural);
  - MES valuation survey (how agencies and decision-makers in the member countries view MES). China, Canada, and the US are conducting surveys. WG 41 is aiming to submit a PICES Press article, and a PICES Scientific Report.

Comments and questions

- Excellent work.
- There is a new proposal for a WG on Climate Extremes and Coastal Impacts in the Pacific. If interested, HD members can contact the representatives listed in the proposal. The proposal includes some ideas that we, as the HD committee, have talked about in the past. Lots of people were interested at the meeting that came up with the proposal, but Dr. Lew was the only social scientist there. It needs more involvement by social scientists.
- Question about case studies on aquaculture, and whether a publication will result.
  - Some countries only had very few studies related to aquaculture, so Dr. Lew did not know if they have enough information for a peer-reviewed publication. A common ecosystem service was denitrification; a few studies used a cost-per-pound of nitrogen removal.

*Joint PICES/ICES Working Group on Integrated Ecosystem Assessment for the Northern Bering Sea - Chukchi Sea (WG 44)*

- Co-Chair/PICES, Dr. Libby Logerwell, provided an overview of Year 1 activities. No upcoming publications are planned for now.
- WG 44 has submitted a proposal for a workshop on “*Bridging multiple ways of knowing within an Integrated Ecosystem Assessment to understand the social and ecological changes in the Northern Bering and Chukchi Seas*” for PICES-2022, lead convenor: Sarah Wise.
- WG 44 has resubmitted its proposal for a joint WG 39/44 workshop on “*Integrated Ecosystem Assessment (IEA) to understand the present and future of the Central Arctic Ocean (CAO) and Northern Bering and Chukchi Seas (NBS-CS)*” for PICES-2022.
- WG 44 requests a 1-day business meeting at PICES-2022.

*Study Group on Science Communications (SG-SciCom)*

SG-SciCom Chair, Dr. Aoi Sugimoto, reported on the major achievements of the SG.

- Preparation of a draft of the terms of reference for an Advisory Panel on Science Communications;
- A draft PICES communications strategy and Implementation Plan;
- Submission of a SciCom training workshop proposal on “*Learn how to share our PICES science with the world in an engaging way*” for PICES-2022.
  - Initially the SG was challenged because none of its members are experts in science communications. The SG started by thinking about the key audiences and core messages (vision and mission of PICES science). This allowed them to list the most important and realistic communication activities to be implemented by a proposed Advisory Panel.
  - If accepted, the 1-day workshop will include training and on-the-job practice. Stories created will be shared with the broader community through various channels, such as PICES Twitter.
- HD supports the proposal for an Advisory Panel and workshop.

AGENDA ITEM 6

**Updates of recent HD-related activities or issues from each member country**

*Canada*

- Fisheries and Oceans Canada (DFO) has a new Social Sciences and Humanities Network
- Work on climate change considerations in Marine Protected Areas (MPA) management plans is now published in *Frontiers in Marine Science*, <https://doi.org/10.3389/fmars.2021.711085>.
- DFO has an Ocean Account system to integrate and harmonize information on activities that occur on and in the ocean; it is working with Statistics Canada
- Steven Alexander is leading a project on bridging Indigenous and Western sciences in aquatic research and monitoring in Canada. The objective is to look at published case studies that bridge knowledge systems across Canada’s aquatic systems. The project involves exploring ethical space through case studies.
- Canada is hosting the next International Marine protected Area Congress (IMPAC5) in Vancouver in September 2022, <https://www.impac5.ca/>. Abstracts are due soon.

*China*

- China has a new environmental policy: ecological product value-realization.
  - Ecological products include fresh air, clean water, pleasant climate, *etc.*
  - It is similar to ecosystem services, and includes concepts of regionality

- It is difficult to measure, and can be intangible. Some ways to realize the value of ecological products could be through transfer of payments from the central government to ecological function zones; value exchange of ecological products between regions; establishing initial rights distribution system; developing a rights policy market; pilot ecological banks.
- For marine ecological products, some examples are eco-labels for fishery products, subsidies to fishery carbon sinks, and ecotourism.

### *Japan*

- The MSEAS Conference, originally planned for 2020 in Yokohama but postponed due to COVID-19, is holding a one-day free virtual teaser event in December 2021.
- The Japan Fisheries Agency released a Commission Report about decreasing catches such as for Pacific saury, common squid, salmon, mainly related to climate change. The conclusion is that we should change the targets from single-species to multi-species catches; we should develop new technologies for multi-species catches, stop fossil fuel vessels, and have more value-added products.
- A new MPA, the Offshore Seabed Nature Conservation Area, has been established in Japan's offshore area to protect hydrothermal vents, trenches, seamounts. Japanese MPAs now cover 13.3% of its waters.
- Japan has a future vision of an off shore windfarm industry. By 2040, Japan is going to install 30–45GW offshore windfarms, and will invest in floating type windfarm technology.

### Comments and questions

Regarding decreasing catches, what is the reason for a decrease in common squid?

- Several reasons, but mainly changes in water temperature, so areas suitable for reproduction of squid have decreased. Thus they have less and less recruitment. Good fishing grounds are further offshore. We do not have a good international framework for joint management of squid shared stocks.

### *Korea*

Three key news items:

- The Korean government has passed new legislation on net-zero carbon emissions;
- Korean tidal flats are now listed as a UNESCO world natural heritage site;
- There is a new national plan for tidal flats management and restoration.

### *Russia*

- COVID-19 has affected Russian life and economy.
- In 2020 compared to 2019, there were no changes to fishing catches.
- 2021 it is expected that total Russian catch will be at the level of the previous year.
- Commercial aquaculture is expected to grow.
- Fish processing also showed slight positive trends due to building new production capacity.
- Fish product exports have undergone restructuring because some countries have banned the import of Russian fish, but there are new markets in such countries as Japan, Korea, European Union, *etc.* Adaptations under new conditions have given rise to new activities, which has stimulated diversification of the fishing industry.

### *USA*

- In the Pacific, many species on the overfishing and overfished list that NOAA keeps are salmon. Blockages are one reason for the decline. The US Infrastructure Bill being considered in Congress includes a Culvert Grant Program to improve fish passage and habitat restoration (\$2.855 billion).

- Seafood mislabeling is a problem in the US. There is a new paper that looks at the US seafood supply chain to consider the extent of the problem
- A research plan for Human Integrated Ecosystem Based Fishery Management is available online at <https://www.fisheries.noaa.gov/human-integrated-ecosystem-based-fishery-management-research-strategy-2021-2025-executive-summary>.

#### Questions and comments

Regarding improving fish passages, what are the major areas where improvements (*e.g.*, fish ladders) will be made, and can you measure the effect of the changes?

- There are thousands of culverts in the State of Washington alone. There are also some dams that block fish passage. Culverts that block fish passage violate tribal fishing rights.

#### AGENDA ITEM 7

##### **Report of PICES Network Analysis**

Dr. Hunter and Dr. Shion Takemura reported on identifying changes of research focuses and potential collaborations of PICES for UN Decade on Oceans for Sustainable Science (UNDOS).

- The objective was to develop a methodology to identify changes in research focuses over time, and potential collaborations in PICES towards UNDOS.
- A comparison was done on PICES abstract books between years and between committees.
- Selecting examples of key words, results show changes in topics and key areas of research.
- The past focused more on accumulating observation data, then on understanding mechanisms, and now more on ecosystem management (*e.g.*, adaptation of climate change).
- A number of joint sessions sponsored by FUTURE is increasing.
- TORs of expert groups in PICES were compared with UNDOS challenges. PICES has been contributing mainly to groups 1, 3, 5.
- Conclusion: PICES has contributed to many themes. This analysis could be a useful way to design and plan for FUTURE's phase 3.

#### Questions and comments

Good to understand the landscape of what we are currently doing as the HD Committee. What are some of the areas of overlap? How do we uncover gaps so we can move forward?

- Appreciation shown of the hard work that went into this. The UNDOS includes “sustainable development” – this is likely where the HD Committee can help to bridge work that PICES is doing.
- Idea of citizen science is interesting. Much is happening in USA.
- Not capturing Indigenous knowledge.
- Collaboration with industry is very important.

#### AGENDA ITEM 8

##### **Report of PICES-MAFF project on Ciguatera Fish Poisoning**

Dr. Makino, Co-Chair of the project reported that the project started in April 2020, and the objective is to build capacity of local small-scale fishers and communities to monitor their coastal ecosystem to benefit human health, and to gain knowledge about ciguatera fish poisoning. Due to COVID, no one had a chance to visit Indonesia for field work. However, 4 project science team meetings took place, and the smartphone app was updated. Team members, Drs. Takemura and Naoki Tojo, have developed a project design matrix (PDM), a useful theoretical framework for developing the project. The next steps are to do data mining on knowledge about HABs, establish special task teams of fishers, and plan a workshop and training course.

Questions and comments

If you didn't go to Indonesia, how did you do training?

- We didn't do training yet, but are hoping to be there in person next year; otherwise, we will have to do online training.

AGENDA ITEM 9

**Plan for 2021 onward**

Some of these items were discussed under agenda item 7.

- Topic session/Workshop proposals for the next Annual Meeting 2022 (All)
  - Workshop on Science Communications (Aoi)
  - Others (WG 44)
- New expert group proposals, if any (All)
- COVID-19 mini report?
- Expected role of the HD Committee (how to promote HD scientific representation at PICES meetings? What are the right topics to be covered? How to facilitate deeper engagement? *etc.*)

***HD Endnote 1***

**HD participation list**

Members

Mitsutaku Makino (Chair)  
Karen Hunter (Canada, Vice-Chair)  
Natalie Ban (Canada)  
Shang Sunny Chen (China)  
Aoi Sugimoto (Japan)  
Shion Takemura (Japan)  
Tae-Goun Kim (Korea)  
Jongseong Ryu (Korea)  
Oleg Katugin (Russia)  
Sunny Jardine (USA)  
Keith R. Criddle (USA)  
Minling Pan (USA)

PICES

Sanae Chiba (Deputy Executive Secretary)  
Alexander Bychkov (Past Executive Secretary)  
Saeseul Kim (Intern)

Observers

Dan Lew (USA, WG 41 Co-Chair)  
Wenwen Li (China)  
Jingzhu Shan (China)  
Libby Logerwell (USA, WG 44 Co-Chair)  
Sarah Wise (USA)

Members unable to attend

China: Yang Han, Jingmei Li  
Korea: Dohoon Kim  
Russia: Ekaterina Kurilova, Anna Skvortsova  
USA: Ron Felthoven

*HD Endnote 2*

**HD meeting agenda**

1. Self-introductions (All)
2. Adoption of the agenda and appointment of rapporteur (All)
3. Reconfirmation of our tasks (Makino and Hunter)
4. Reports from SB and FUTURE SSC (Makino)
5. Reports from the existing expert groups
6. Updates of recent HD-related activities or issues from each member country
7. Report of PICES Network Analysis (Takemura and Hunter)
8. Report of PICES-MAFF project on Ciguatera Fish Poisoning (Makino)
9. Plan for 2021 onward
10. Others