



The 2011 Inter-sessional Science Board Meeting: A Note from Science Board Chairman

The inter-sessional Science Board meeting (ISB-2011) was held on April 29–30, 2011, in Honolulu, back to back with other three important meetings. These were: a FUTURE workshop on “*Indicators of status and change within North Pacific Marine Ecosystems*” (April 26–28), a meeting of the PICES/ICES Study Group on *Developing a Framework for Scientific Cooperation in Northern Hemisphere Science* (morning of April 29), and a meeting of the PICES Study Group on *Upgrading the PICES Strategic Plan* (May 1). I wish to thank Dr. Samuel Pooley, the former U.S. national delegate to PICES Governing Council, for inviting us to Honolulu. Thanks are also due to our colleagues from ICES (International Council for the Exploration of the Sea) and other guests who participated in the workshop, the Science Board meeting and Study Group meetings. I welcome new Committee Chairmen, Drs. Kyung-Il Chang (Physical Oceanography and Climate Committee, POC), Toru Suzuki (Technical Committee on Data Exchange, TCODE) and Atsushi Tsuda (Biological Oceanography Committee, BIO). Before continuing with my report on ISB-2011, I express my condolences to the Japanese people for the losses and damages incurred from the disastrous earthquake and tsunami that occurred on March 11. Some comfort can be drawn from the fact that all the PICES scientists and their families in Japan are safe and well.

This is an important time for FUTURE (*Forecasting and Understanding Trends, Uncertainty and Responses of North Pacific Marine Ecosystems*), the integrated science program of PICES, as it enters its second year. Last year we identified the gaps in advancing FUTURE science and planned new expert groups to fill some of these gaps. At the 2010 PICES Annual Meeting (PICES-2010), three new working groups were proposed but only one, the Working Group on *Jellyfish Blooms around the North Pacific Rim: Causes and Consequences*, was approved by Council. The other two groups were: the Working Group on *Ecosystem Responses to Multiple Stressors* and Working Group on *North Pacific Climate Variability and Change*. They aimed to tackle FUTURE Key Questions, which can be described by key words such as resilience and vulnerability of ecosystems, multiple stressors, ecosystem responses, and uncertainty in ecosystem assessment and forecasting. The reason why the proposals were turned down was that their scope and terms of reference were not clear enough. Under these circumstances, the purpose of the 3-day FUTURE Workshop, convened by Drs. Thomas Therriault (AICE-AP; Canada), Jacquelynne King (COVE-AP; Canada) and Sachihiko Itoh (Japan), was to clarify our understanding of ecological indicators as a common means to address the key words listed above. The workshop was well attended

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(55 invited participants from within and outside of the PICES community), and exciting talks and lively discussions were conducted. Through these discussions, some concepts were refined, which led to revising the terms of reference for the Working Group on *Ecosystem Responses to Multiple Stressors*. A framework was put in place to identify ecosystem indicators and to select criteria to be used in their identification for assessing and comparing changes/impacts in North Pacific ecosystems. On the other hand, the issue of ecosystem resilience and vulnerability turned out to be a difficult one to address at this stage. These concepts are poorly defined and may require intense research in the future. You can read a detailed report on the workshop from the convenors in this issue.

ICES and PICES are two major international marine science organizations in the Northern Hemisphere, sharing many common scientific issues. In the past 10 years, there have been significant increases in reciprocal exchanges, cooperative sponsorships of scientific meetings and projects, and deeper linkages that have often developed on a case-by-case basis. Now, there is a need to build a formal framework for cooperation between ICES and PICES to serve as the basis for linkages of our science plans and longer-term strategic planning. This has resulted in forming a joint PICES/ICES Study Group on *Developing a Framework for Scientific Cooperation in Northern Hemisphere Marine Science* (SG-SP). The Study Group met for the first time at the ICES Annual Science Conference in September 2010 to initiate the discussion. In Honolulu, all SG-SP members met again to discuss how to finalize the Group's activities. They discussed the problems of establishing joint expert groups under different organizational structures and reviewed, as a model case, the progress made by the joint PICES/ICES Working Group on *Forecasting Climate Change Impacts on Fish and Shellfish* (WG-FCCIFS). As the end of its term draws near, a proposal is being made to extend WG-FCCIFS's life span and scope (more about this later). Discussions also took place on the procedures of PICES/ICES cooperation in general and how to monitor these activities. A draft SG-SP report will be prepared this summer and presented at the Annual Meetings of each Organization later this year.

The Science Board meeting dealt with various issues. The first agenda item was on interactions with other international organizations and programs that have steadily intensified in the past years. A good example is our collaboration with ICES, as mentioned above. We also discussed and approved joint activities and future plans for collaboration with IOC (Intergovernmental Oceanographic Commission of UNESCO), SCOR (Scientific Committee on Oceanic Research), IMBER (Integrated Marine Biogeochemistry and Ecosystem Research), LOICZ (Land-Ocean Interactions in the Coastal Zones), SOLAS (Surface Ocean – Lower Atmosphere Study) and GACS (Global Alliance of CPR Surveys). I expect that

cooperation with these and other international organizations and programs will continue to be strengthened.

PICES, jointly with ICES and IOC, is co-sponsoring the 2nd International Symposium on “*Effects of climate change on the world's oceans*” to be held May 15–19, 2012, in Yeosu, Korea (<http://www.pices.int/climatechange2012.aspx>). The Chairman of the Local Organizing Committee for the symposium, Dr. Dosoo Jang (KORDI), briefed Science Board on the status of preparations for this event. He also invited PICES to review and comment on the content of the Yeosu Declaration. This Declaration is an official statement of Yeosu Ocean Expo-2012 for which the above-mentioned symposium is an opening act. The comments gathered later from Science Board were passed to the International Review Committee for the Declaration and contributed significantly to its revision.

One of the routine, but important, agenda items of ISB-2011 was for the Committees to present reports on their activities since PICES-2010. We reviewed the pursuits of each Committee's subsidiary bodies on preparation of their work plans and reports, planning of workshops, sending representatives to outside meetings, and budgetary issues. I am happy to say that all the Committees are doing well, except for a few delays.



Sinjaee Yoo (back to the camera), wearing the hat of Co-Chairman at the meeting of the joint PICES/ICES Study Group on *Developing a Framework for Scientific Cooperation in Northern Hemisphere Marine Science*, Skyping with Anne Hollowed, Co-Chairman of the PICES/ICES Working Group on *Forecasting Climate Change Impacts on Fish and Shellfish*.

Capacity building has always been a high priority issue for PICES. Several events are to be sponsored by PICES in 2011–2012:

- The training workshop on “*Rapid assessment survey methodologies for detecting non-indigenous marine species*”, organized jointly with IOC/WESTPAC, will take place from July 19–21, 2011, in Phuket, Thailand. Funding for this workshop is from the PICES project on “*Development of the prevention systems for harmful organisms’ expansion in the Pacific Rim*”, supported by the Ministry of Agriculture, Forestry and Fisheries of Japan. More than 30 applications for participation have been received from 10 countries, mostly from Southeast Asia, and the list of attendees is being finalized.
- The 5th International SOLAS Summer School, a biennial, international event teaching a variety of fields, will be held from August 29 to September 10, 2011, in Corsica, France (<http://solas-int.org/summerschool/welcome.html>). PICES will sponsor three early career scientists (one from Canada, one from China and one from USA) to join the school.
- The NOWPAP/PICES/WESTPAC training course on “*Remote sensing data analysis*” will be organized from October 8–12, 2011, in Vladivostok, Russia (http://cearac.nowpap.org/monitoring/3rdRST/1st_Announcement.html). PICES will provide support for one guest lecturer and three trainees from the Northwest Pacific to attend the course.
- One important joint enterprise between PICES and ICES is the Early Career Scientist (ECS) conference. This is to encourage the next generation of ocean scientists from the North Atlantic and North Pacific meet early in their career to share knowledge and to build networks across disciplines and international borders. The first ECS conference was held in 2007 near Baltimore, USA. The second one titled “*Oceans of change*” will take place from April 24–27, 2012, in Majorca, Spain (<http://www.ices.dk/marineworld/oceans/index.asp>).

Science Board briefly discussed potential capacity building activities for 2013. In the past, PICES-sponsored summer schools have been organized in Asia (two in Korea and one in Japan), and discussions are being initiated on the possibility of holding one in North America in 2013. However, it is too early to say which side of the Pacific the school will take place, as proposals are being prepared for both sides. We will learn more about this at PICES-2011.

Another annual routine for Science Board is to decide on the recipients for PICES awards. Science Board met *in camera* to select a recipient for the 2011 Wooster Award (http://www.pices.int/Wooster_Award/default.aspx) and for the 2011 PICES Ocean Monitoring Service Award (POMA; http://www.pices.int/awards/POMA_award/POMA_award.aspx). The decisions were made, but we cannot reveal the names until the Opening Session at PICES-2011.

Science Board also discussed the feasibility of having a FUTURE Open Science Meeting (OSM) in the spring of

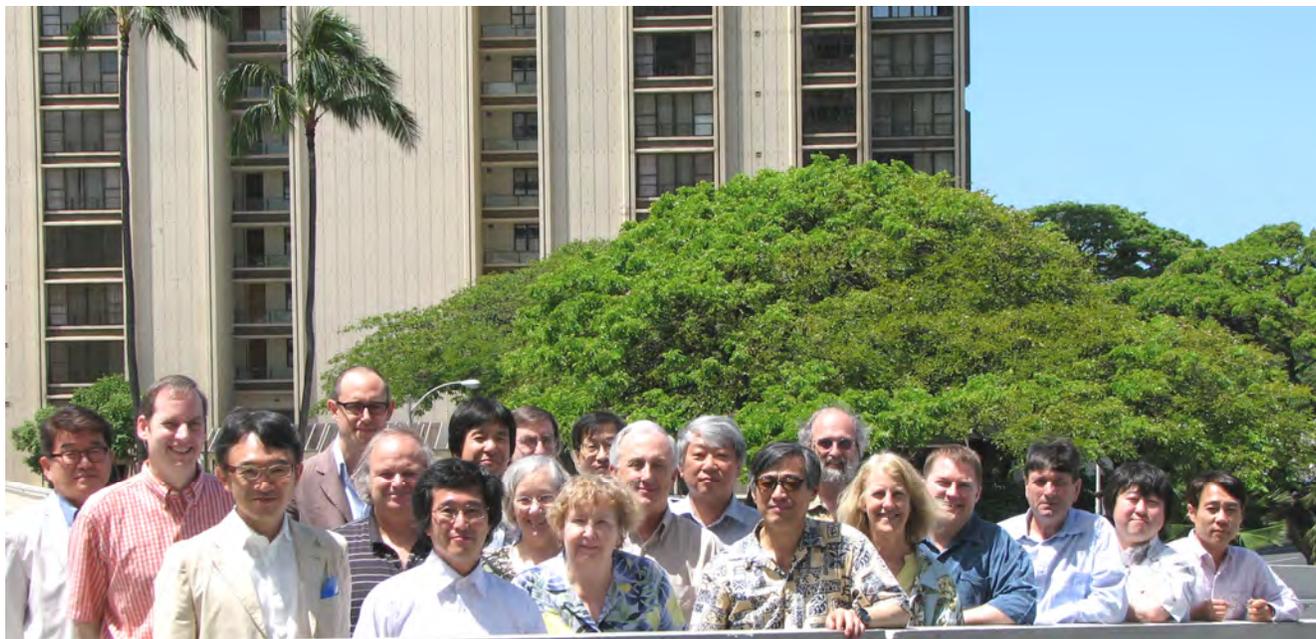
2013 as FUTURE will be nearing its mid-life by that time. It was agreed that the FUTURE Advisory Panels will look into potential themes and format for the OSM.



The Science Board meeting in session.

There were presentations on the damages from the March 11 great earthquake and tsunami in northeastern Japan and early monitoring activities on radioactive contamination. Dr. Tokio Wada, Past-Chairman of PICES, expressed his deepest thanks to all PICES member countries, PICES scientists and the Secretariat for their support in the aftermath of the destructive tsunami. He also thanked PICES and ICES for their joint donation of \$55,000, and informed Science Board that the Japanese Society of Fisheries Oceanography (JSFO) was identified as the recipient of the donation that will be used as a core contribution for a PICES/ICES/JSFO fund to support the fisheries and oceanographic research in the areas affected by the Great East Japan Earthquake. Dr. Wada also stated that there was great concern about the environmental degradation in the area impacted by the tsunami, and of radioactive leakage from the Fukushima nuclear power plant into the atmosphere and ocean. Although Japanese scientists were actively monitoring the affected area, the understanding of the impact of radioactivity in the ocean and what mitigation measures to take was limited at this time. The four presentations made by Drs. Taro Ichii (Fisheries Agency of Japan), Hiroaki Saito (Fisheries Research Agency of Japan), David Detlor (NOAA, USA), and Oleg Katugin (TINRO, Russia), based on *in-situ* surveys and modeling efforts, indicated that the level of contamination in seawater and fish was insignificant at this stage, except in the vicinity of the nuclear plant. During the discussion that followed, suggestions were made for the Marine Environmental Quality (MEQ) and MONITOR Committees to consider if it is desirable/feasible to launch a coordinated monitoring of impacts of various stressors related to tsunami and radioactive contamination. We will re-visit this issue at PICES-2011.

With Science Board being the Steering Committee for FUTURE, a half day of ISB-2011 was dedicated to various



Participants on the last day of the Science Board meeting, from left: Chul Park, Thomas Therriault, Hiroaki Saito, Emanuele Di Lorenzo, Robin Brown, Hiroya Sugisaki, Atsushi Tsuda, Alex Bychkov, Laura Richards, Vera Alexander, Tokio Wada, John Stein, Kyung-Il Chang, Sinjae Yoo (author of this article), Steve Rumrill, Pat Livingston, David Detlor, Mikhail Stepanenko, Toru Suzuki and Taro Ichii.

issues related to the program. From the FUTURE perspective, the major outcome from ISB-2011 is that the recommendation of Science Board, Governing Council approved the two new expert groups, Working Group on *North Pacific Climate Variability and Change* and Working Group on *Development of Ecosystem Indicators to Characterize Ecosystem Responses to Multiple Stressors* (note that the title has changed slightly), to support activities of the program. The membership for these groups is now being finalized.

I am pleased to say that there are possibly two more expert groups on the way. The first one is the joint ICES/PICES Strategic Initiative on *Climate Change and Marine Ecosystems* (SICCME). This is a sequel to the very successful WG-FCCIFS which I mentioned earlier. We envision a longer life span and a wider scope for this expert group, covering basic FUTURE elements such as the forecasting of ecosystem change and response of human society. As such, it is likely to become a Section within the PICES structure. This group will not only foster our collaboration with ICES, but will also contribute to FUTURE. One concern is how to juxtapose this group with other expert groups, maximizing complementariness while avoiding overlaps. To resolve the issue, the FUTURE Advisory Panel Chairmen will work with SICCME leadership on preparing its implementation plan. The second potential new group is the Working Group on *Human Dimensions for Environmental Change*. The Study Group on *Human Dimensions* has done a pilot study by reviewing the role of social science practices applied for decision-making in PICES member countries' marine sectors, focusing on ecosystem-based fisheries management.

Based on this, they will recommend the terms of reference for the new Working Group to deal with, among other things, conducting long-term engagement and communication activities between scientists, decision makers, stakeholders, and across sectors. I expect that these two expert groups can be approved at PICES-2011 and with this, FUTURE will have a good number of workhorses.

On May 1, the Study Group on *Updating the PICES Strategic Plan* (SG-USP) met to draft revisions to the Strategic Plan. This Plan was developed and approved in 2004, and there has been an urgent need to update it in the light of changes that have taken place since then, such as the implementation of FUTURE, and to ensure that the Plan reflects the vision of all Contracting Parties for the direction of PICES over the next 5–10 years. At the end of the day, the Group nailed down most of the paragraphs. The revisions to the Plan will be finalized at PICES-2011.

Finally, PICES-2011 will be held from October 14–23, 2011, in Khabarovsk, Russia. Many interesting sessions and workshops, covering a wide range of topics, are planned. I have never visited Khabarovsk but heard it is a picturesque city at the confluence of the Amur and Ussuri Rivers in the Russian Far East. I would like to remind you that everyone needs an invitation letter from the government of Khabarovsk to obtain a Russian visa, and it is best to start the process soon. You can find information on visa and other logistics for the meeting on the PICES website. See you all in Khabarovsk!

Sinjae Yoo
Science Board Chairman