



The 2012 Inter-sessional Science Board Meeting: A Note from Science Board Chairman

The 2012 inter-sessional Science Board meeting (ISB-2012) was held May 24–25, in Busan, Korea, back to back with a workshop to develop a roadmap for our integrative science program, FUTURE (Forecasting and Understanding Trends, Uncertainty and Responses of North Pacific Marine Ecosystems). I thank the Korean Government for hosting both these events. I also would like to welcome two new Science Board members, Dr. Elizabeth Logerwell (Chair of the Fishery Science Committee) and Dr. Igor Shevchenko (representative of Russia).

There were two important events during the first half of 2012 (see the articles in this issue for further details). The 2nd PICES/ICES Conference for Early Career Scientists on “Oceans of Change” (April 24–27, Majorca, Spain) was a huge success, with excellent presentations from 130 attendees selected from 550 applicants. The main objective of this conference series was to encourage the next generation of ocean scientists meet early in their career to share knowledge and to build networks across disciplines and international borders. The 2nd international symposium on the “Effects

of Climate Change on the World’s Oceans” was convened from May 13–20, in Yeosu, Korea, in conjunction with Ocean Expo-2012. As with the first version of this symposium (May 2008, in Gijón, Spain), PICES, ICES (International Council for the Exploration of the Sea) and IOC (Intergovernmental Oceanographic Commission of UNESCO) were the major sponsors. More than 300 scientists from 31 countries attended. Ten topic sessions and seven workshops dealt with various issues ranging from projections of climate change impacts on ecosystems and genetic and physiological responses to ocean observations and human dimensions. After having the first two symposia in Europe and Asia, planning has begun for the next symposium in this series to take place in 2015 or 2016 in South America.

Immediately after the Yeosu symposium, PICES moved down the coast to Busan for a FUTURE workshop from May 22–24. FUTURE is the central science program of PICES whose goals are to be achieved by 2019. Since inauguration of the program at PICES-2009, we have been building up its

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Group photo of ISB-2012 participants.

activity. At the request from Science Board, four new expert groups were approved at PICES-2011: Section on *Climate Change and Marine Ecosystems* (S-CCME), Section on *Human Dimension* (S-HD), Working Group on *Regional Climate Modeling* (WG 29) and Study Group on *Marine Pollutants* (SG-MP). This was a big breakthrough for FUTURE as the program is now equipped with expert groups that can undertake the tasks identified in the Science Plan and Implementation Plan. Together with the existing expert groups, FUTURE has enough power to move forward. However, with more “elements” comes a need for a better coordination. Complicated connections among expert groups require well-planned coordinated efforts with specified products and information flows. About 40 participants representing expert groups and member countries reviewed the plans of the existing expert groups, identified gaps and necessary actions to deal with these gaps, and discussed potential FUTURE products and their users, and communication strategy. A detailed workshop report is included in this issue of PICES Press.

At ISB-2012, the first agenda item was on interactions with other international organizations and programs that have steadily strengthened in the past years. This year is not an exception, and we have many excellent proposals on the table. Since PICES and ICES built a formal framework for cooperation in 2011, we are streamlining the Topic Session/Workshop submission-selection process for joint sessions and increasing joint activities.

Science Board discussed and approved joint activities and future plans for collaboration with SCOR (Scientific Committee on Oceanic Research) and IOC, among others. A 2-day SCOR/PICES workshop on “*Global patterns of phytoplankton dynamics in coastal ecosystems*” and a 1-day SCOR WG 137 meeting will be held in conjunction with PICES-2012. Planning is underway for a small workshop

in the spring of 2013 and a larger Open Science Meeting the following year to discuss linkages between harmful algal blooms and climate change. This effort is supported by ICES, IOC, SCOR and PICES.

It is known that the effects of climate change in the ocean were under-represented in previous assessment reports of the Intergovernmental Panel on Climate Change (IPCC). This was unfortunate because the ocean plays an important role in climate change. Changes in marine ecosystems affect society and have significant socio-economic implications. Starting from the IPCC 5th Assessment Report, PICES scientists are making contributions. Members of the Section on *Carbon and Climate* (S-CC) are the lead authors of Working Group 1 chapters 3 (Observations: Oceans) and 6 (Carbon and Other Biogeochemical Cycles). The Biological Oceanography Committee (BIO) recently reviewed an early draft of a section of the Working Group 2 chapter on “High latitude spring bloom systems.” PICES scientists were encouraged to register as reviewers of the draft WG 2 report. I expect that PICES’ contributions to future IPCC ARs will be greatly enhanced as FUTURE program advances.



Skip McKinnell (PICES Secretariat) and Atsushi Tsuda (BIO Chairman, Japan) discuss the IPCC 5th Assessment Report.

PICES scientists also attended the meeting of the Pacific Implementation Panel of CLIVAR (Climate Variability and Predictability Program) held from April 28–29, 2012, in Noumea, New Caledonia, to speak about PICES activities and seek closer collaboration with CLIVAR as it widens its scope on issues relevant to PICES. CLIVAR is co-sponsoring (along with ICES) a Topic Session (S3) on “*Challenges un understanding Northern Hemisphere ocean climate variability and change*” at PICES-2012.

The Working Group on *North Pacific Climate Variability and Change* (WG 27) and the FUTURE Advisory Panel on *Climate, Oceanographic Variability and Ecosystems* (AP-COVE) are organizing, jointly with US-GLOBEC and ICES, an international workshop on “*Forecasting ecosystem indicators with climate-driven process models*” to be held September 8–10, 2012, in Friday Harbor, USA.

The Technical Committee on Data Exchange (TCODE) is participating in the International Oceanographic Data and Information Exchange of IOC (IODE) activities. I can foresee that cooperation with these and other international organizations and programs will continue to be stronger.

A significant part of ISB-2012 was dedicated to reports from the Chairmen of all PICES Scientific and Technical Committees about their activities since PICES-2011. Science Board reviewed the plans of each Committee’s subsidiary bodies for publications, workshops, participation at other meetings, and budgetary issues. I am pleased to report that all Committees are doing well, except for a few delays. Two long-standing expert groups are re-energizing their activities for the future. The Advisory Panel on *Marine Birds and Mammals* (AP-MBM) is planning a workshop to evaluate the feasibility of updating a report on prey consumption by marine birds and mammals (and now predatory fishes) that was published 12 years ago. The Section on *Ecology of Harmful Algal Blooms in the North Pacific* (S-HAB) is revising its terms of reference to be more in line with FUTURE objectives.

It was good news to learn that a 5-year PICES project on “*Marine ecosystem health and human well-being*” will be funded by the Japanese Ministry of Agriculture, Forestry and Fisheries (MAFF). The overall goal of the project is to identify the relationships between sustainable human communities and productive marine ecosystems in the North Pacific under the concept of fishery social-ecological systems. It is linked directly with the FUTURE Key Scientific Question 3 “How do human activities affect coastal ecosystems and how are societies affected by changes in these ecosystems?” The project will integrate, support and expand the activities of several PICES expert groups, including the Section on *Human Dimensions*, Working Group on *Development of Ecosystem Indicators to Characterize Ecosystem Responses to Multiple Stressors*, Working Group on *Non-indigenous Aquatic Species* and Section on *Ecology of Harmful Algal Blooms*

in the North Pacific. Science Board agreed that the project would make a very important contribution to FUTURE and approved the proposed outline and principles of the project. Drs. Ian Perry (Canada) and Mitsutaku Makino (Japan) were appointed as the Principal Investigators. Their first job is to select a project team and initiate preparations for its first meeting at PICES-2012.

Science Board reviewed capacity building activities, another high priority issue for PICES. Several events will be supported in 2012–2013 and beyond:

- PICES will co-sponsor the IMBER ClimECO3 Summer School on “*A view towards Earth System models: Human-natural system interactions in the marine world*” (July 23–28, 2012, Ankara, Turkey) by providing travel funds and arranging additional support (through national programs/agencies) for 5 early career scientists from PICES member countries.
- The first PICES Summer School in North America on “*Ocean observing systems and ecosystem monitoring*” will be held in August 2013, in Newport, Oregon, USA. This 5-day course will consist of classroom lectures, laboratory demonstrations of interdisciplinary ocean sensors, an introduction to ocean observing platforms and fieldwork on a research vessel to deploy ocean observing equipment at sea. Techniques of data quality control and data processing of time series will also be demonstrated. A willingness was expressed to host a PICES Summer School in Korea in 2014.
- China successfully hosted the first UNESCO/IOC Ocean Dynamics and Climate training course in 2011, in Qingdao, and is planning to host the next course in 2013, tentatively on air–sea interactions. PICES was invited co-sponsor this effort, and Science Board agreed to discuss the proposal at PICES-2012 when more details are known.
- Science Board continues to strongly support the series of PICES/ICES Conferences for Early Career Scientists. Given that previous conferences took place in North America and Europe, perhaps the next one could be held in Asia. It was agreed to look into the matter at PICES-2012.

A PICES Visiting Scientist Program was approved in 2001 but never used. With the implementation of FUTURE, the plan is to resurrect the Visiting Scientist Program to provide additional resources in developing FUTURE products. Science Board is receptive to the idea, and discussed such issues as defining explicit tasks, advertizing, and selecting agencies to be approached. Science Board will revisit this matter at PICES-2012.

Now is the time to write your proposals for scientific activities at PICES-2013 in Nanaimo, Canada. A new web-based system to manage PICES topic session and workshop proposals has been developed to streamline the process of submitting, reviewing and, ranking all the proposals. The goal is to provide an open and transparent

process that will improve the efficiency of developing a scientific program for an Annual Meeting. Science Board fully endorsed the pilot, and offered some suggestions for improvement. The pilot will run for one year to evaluate its effectiveness. Submissions for PICES-2013 will close September 7, 2012, to be followed by a period of about 3 weeks to allow Committee members and FUTURE Advisory Panel members to evaluate (vote on) the proposals. Results will be available for comparison.

As is normal practice at the ISB, Science Board met *in camera* to decide on the recipients for PICES awards for 2012. The Wooster Award is given annually to an individual who has made significant contributions to North Pacific marine science, and the PICES Ocean Monitoring Service Award (POMA) is to acknowledge monitoring and data management activities that contribute to the progress of marine science in the North Pacific. The recipients will be announced during the Opening Session at PICES-2012.

Russia offered to host an inter-sessional Science Board meeting in 2013. Potential venues in eastern and western Russia were considered. If the latter is chosen, it will provide an opportunity to hold a joint PICES/ICES workshop to stimulate activity under the new Framework for PICES-ICES Scientific Cooperation. Discussions are underway with ICES leaders about topics of shared interest with PICES.

Science Board will recommend to Governing Council that it convene a FUTURE Open Science Meeting in 2014. It

will provide a mid-term opportunity for the FUTURE Scientific Steering Committee to review the progress made to date in answering the Key Scientific Questions and, by opening the event to the general marine science community, to get input on filling gaps in the program and making mid-course corrections FUTURE's future.

Finally, the next Annual Meeting (PICES-2012) will be held from October 12–21, 2012, in Hiroshima, Japan. The overall theme of PICES-2012 is “*Effects of natural and anthropogenic stressors in North Pacific ecosystems: Scientific challenges and possible solutions*”. Many interesting sessions and workshops, covering a wide range of topics, are planned. In addition to these scientific attractions, there will be lots of interesting sights to enjoy. Hiroshima is known as the City of Water, with six rivers flowing through it. I hope to see you all in the City of Water!



Sinjae Yoo, Science Board Chairman

PICES Interns



We offer sincere thanks to Ms. Jeongim Mok (left), the 2011 PICES intern, who completed her term at the PICES Secretariat last April and is now with the Department of Marine Policy at the Ministry of Land, Transport and Maritime Affairs (MLTM), in Seoul, Korea. Many of you had an opportunity to communicate with Jeongim at the 2011 ESSAS Open Science Meeting in Seattle (USA), PICES-2011 in Khabarovsk (Russia) and in the PICES Secretariat office. It was easy

and enjoyable working with Jeongim, and we appreciate her dedicated efforts during this past year and wish her a very successful career. We do hope to see her again at various PICES events in Korea.

We are pleased to announce that Dr. Zhuojun Ma (right) joined the Secretariat in July as the 2012 PICES Intern. He obtained his PhD in Biology from the Tsinghua University in Beijing. Zhuojun has worked as a project manager and deputy director in the Division of Academic Exchange and Cooperation at the Chinese Academy of Fishery Science (CAFS). Besides his research interests in biomineralization and in marine biology, Zhuojun is fascinated by the science of fish behavior and has years of experience in tropical freshwater fish breeding, especially in breeding African cichlid and stingray. He is also a good swimmer and likes to spend his spare time in Nature. We look forward to Zhuojun's involvement in PICES activities.