



The 2010 Inter-sessional Science Board Meeting: A Note from the Science Board Chairman

Our annual inter-sessional Science Board (ISB) meeting was held from April 23–24, 2010, in Sendai, Japan, immediately prior to the international symposium on “*Climate change effects on fish and fisheries: Forecasting impacts, assessing ecosystem responses and evaluating management strategies*”. This was a special ISB meeting because it was the first time that we formally met as both the Science Board and as the Scientific Steering Committee of FUTURE (*Forecasting and Understanding Trends, Uncertainty and Responses of North Pacific Ecosystems*), PICES’ new integrative science program. So it is important that I formally welcome the three new Science Board members who will serve as Chairmen of the FUTURE Advisory Panels (APs), Dr. Thomas Therriault (Canada), *Anthropogenic Influences on Coastal Ecosystems* (AICE-AP), Dr. Hiroaki Saito (Japan), *Climate, Oceanographic Variability and Ecosystems* (COVE-AP) and Mr. Robin Brown (Canada), *Status, Outlooks Forecasts, and Engagement* (SOFE-AP).

Before reviewing the highlights of ISB-2010, I would like to thank our Japanese colleagues for doing an outstanding job of hosting both our meeting and the symposium. Special thanks to Drs. Yukimasa Ishida and Shin-ichi Ito and all the staff of the Tohoku National Fisheries Research Institute of the Fisheries Research Agency who assisted both Ishida-san and Ito-san. We enjoyed our stay in Sendai, which was filled with first-rate science, and fruitful interactions and new connections with scientists from regions that we do not usually have contact with.

On the first day of the meeting, the agenda addressed progress reports from our Scientific and Technical Committees, status of inter-sessional events and publications, preparations for PICES-2010 and plans for the Annual Meeting in 2011, which we can now report will be in Khabarovsk, Russia. We also welcomed Dr. Steven Rumrill (U.S.A.) to his first meeting as Chairman of the Marine Environmental Quality Committee (MEQ). As is our normal practice, we made selections for this year’s recipients of both the Wooster Award and PICES Ocean Monitoring Service Award (POMA), but you will have to wait to hear who the recipients are at our Annual Meeting in Portland this fall.



Sendai International Center where the inter-sessional Science Board meeting and the symposium on “*Climate Change Effects on Fish and Fisheries*” were held in April 2010.

In This Issue

The 2010 Inter-sessional Science Board Meeting: A Note from the Science Board Chairman	1	2010 Sendai Workshop on “ <i>Networking across Global Marine Hotspots</i> ”	26
2010 Symposium on “ <i>Effects of Climate Change on Fish and Fisheries</i> ”	4	The Ocean, Salmon, Ecology and Forecasting in 2010	29
2009 Mechanism of North Pacific Low Frequency Variability Workshop	12	The State of the Northeast Pacific during the Winter of 2009/2010	30
The Fourth China-Japan-Korea GLOBEC/IMBER Symposium	15	The State of the Western North Pacific in the Second Half of 2009	32
2010 Sendai Ocean Acidification Workshop	18	The Bering Sea: Current Status and Recent Events	34
2010 Sendai Coupled Climate-to-Fish-to-Fishers Models Workshop	20	PICES Seafood Safety Project: Guatemala Training Program	36
2010 Sendai Salmon Workshop on Climate Change	22	The Pacific Ocean Boundary Ecosystem and Climate Study (POBEX)	40
2010 Sendai Zooplankton Workshop	24	PICES Calendar	44

Concerning this year's Annual Meeting, Science Board agreed to pursue a special issue of *Deep-Sea Research II* to publish papers that address the PICES-2010 theme "*North Pacific ecosystems today, and challenges in understanding and forecasting change*". I encourage all who are presenting at the Annual Meeting and in particular, those presenting in the Science Board Symposium and in the Topic Sessions on "*Observations of ecosystem mixing under climate change*", "*Impact of climate variability on marine ecosystems: Understanding functional responses to facilitate forecasting*" and "*Anthropogenic forcing in North Pacific coastal ecosystems: Understanding changes in ecosystem structure and function*", to consider submitting a paper. As you know, the process has started for developing the 5th Assessment Report (AR-5) of the Intergovernmental Panel on Climate Change (IPCC), and PICES and others are working to insure that internationally we have relevant papers on marine ecosystems published, or in press, in 2011 so that they can be considered for AR-5 to substantively bolster the section on climate change and marine ecosystems.

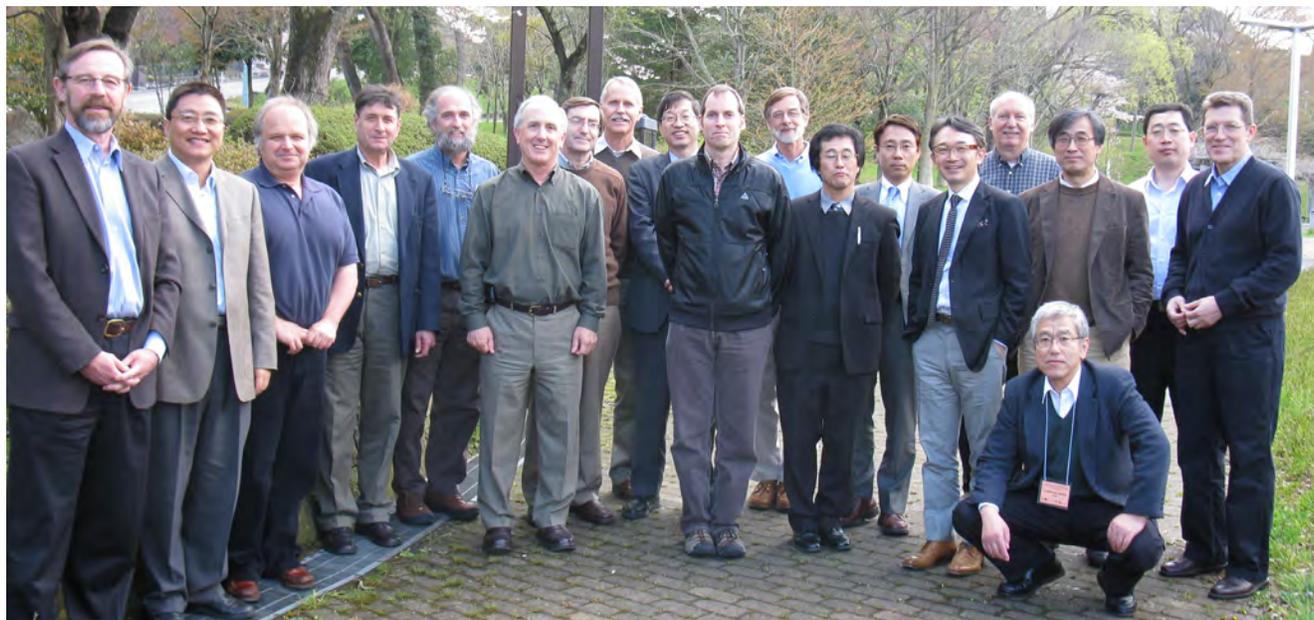
A couple of items on the expert groups are worth noting. Dr. Kevin Amos (U.S.A.) has stepped down as Co-Chairman of Working Group (WG 24) on *Environmental Interactions of Marine Aquaculture*, and Science Board recommended Dr. Brett Dumbauld (U.S.A.) as his replacement. We welcome Brett and know that he will be ably assisted by two other Co-Chairmen Drs. Katsuyuki Abo (Japan) and Ingrid Burgetz (Canada). We also received a progress report and an updated work plan from the Study Group on *Human Dimensions* (SG-HD). Science Board is particularly interested in the work of this Study

Group as it is one of our steps in addressing the human dimension issues related to FUTURE, and it is an important stage in further engaging economic and social scientists in FUTURE, which is important to the program's success. We are confident that under the leadership of Dr. Mitsutaku Makino (Japan), SG-HD will meet its objectives.

I also note here an action related to a joint activity with ICES (see PICES Press Vol. 18, No. 1 for details) in that Science Board nominated Drs. Therriault (AICE-AP) and Saito (COVE-AP) as members of PICES/ICES Study Group on *Developing a Framework for Scientific Cooperation in Northern Hemisphere Marine Science*, along with our Science Board Chairman-elect, Dr. Sinjae Yoo, and the Deputy Executive Secretary, Dr. Skip McKinnell. I see this as an important activity to further our growing and productive collaboration with ICES.

While we look at the activities for this year and next, we also are also busy planning further ahead, especially when it comes to organizing international symposia. One such event is the 2nd PICES/ICES/IOC Symposium on "*Effects of climate change on the world's oceans*" to be convened in May 2012, in Yeosu, Korea, in conjunction with Ocean Expo-2012. At PICES-2009, Dr. Hiroaki Saito was appointed as the PICES convenor. At ISB-2010, we selected Drs. James Christian (Canada) and Keith Criddle (U.S.A.) to serve as the PICES members on the Scientific Steering Committee.

It is a pleasure to report that we are on schedule to publish the second version of the North Pacific Ecosystem Status



Participants of the inter-sessional Science Board meeting on the grounds of the Sendai International Center: (left to right) – Skip McKinnell (Secretariat), Gongke Tan (China), Robin Brown (Canada), Mikhail Stepanenko (Russia), Steven Rumrill (U.S.A.), John Stein (Science Board Chairman), Alexander Bychkov (Secretariat), Michael Foreman (Canada), Tokio Wada (PICES Chairman), Thomas Therriault (Canada), Michael Dagg (U.S.A.), Hiroya Sugisaki (Japan), Taro Ichii (Japan), Hiroaki Saito (Japan), Bernard Megrey (U.S.A.), Yukimasa Ishida (Japan, front), Sinjae Yoo (Science Board Chairman-elect), Fangli Qiao (China), Igor Shevchenko (Russia). Missing: Samuel Pooley (U.S.A.)

Report this summer. It is a nearly 400-page hard cover book and it will have a true Synthesis Chapter. As an indication of the progress being made, chapters are now in the galley proof stage. I have seen the Synthesis Chapter and from the quality of the science and the layout of the material, it is certainly clear that Co-Editors, Drs. Skip McKinnell and Michael Dagg, and all of the lead authors and co-authors have done an excellent job, having put in a great deal of time and high quality effort to produce this important report.

Another high priority activity of PICES is capacity building. This year, at the invitation of IMBER, PICES is co-sponsoring a summer school on “*Oceans, marine ecosystems, and society facing climate change: A multidisciplinary approach*” (ClimECO2) to be held August 23–27, 2010 in Brest, France. By having PICES involved, the goal is to provide early career scientists from the Pacific with excellent training and networking with European scientists. After a review of candidates, nine scientists from all PICES member countries were selected for travel support.

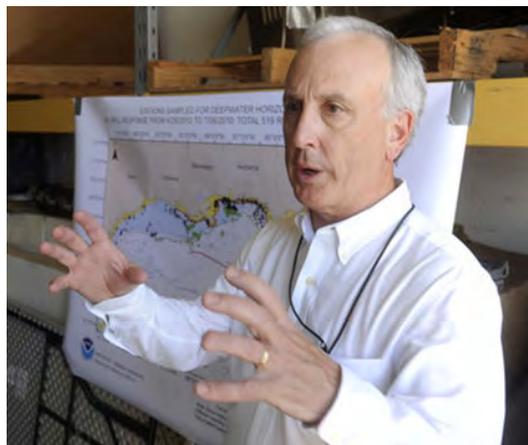
Now let me turn to our meeting as the FUTURE Scientific Steering Committee (SSC). The main objectives of the meeting were to review the work plans for each of the APs, the process for approving new expert groups, and importantly, the need for a joint meeting of the APs this summer. As we move to using the Science Board as the SSC, it will be essential that our Working Groups and Sections produce their reports and new work plans at least one month prior to our Annual Meetings. This is important to ensure that their parent Committee(s) and the relevant FUTURE AP have time to review the reports. It will be also critical for a Co-Chairman or a representative of an expert group to attend the meeting of the relevant AP in order to insure good communication and effective integration of the expert group activities into meeting the goals and objectives of FUTURE. Going back to the symposium we had in Sendai, it is again clear that what we have developed as a science plan for FUTURE is very much at the cutting edge of marine ecosystem science.

We also needed to revisit the process for nominating new expert groups so that the FUTURE Advisory Panels can provide their input. The following process was adopted. New expert groups can be suggested to the Science Board by the Committees and by the FUTURE Advisory Panels. The Committees assess proposed groups in relation to both FUTURE and the Committee’s Strategic Plan and then, as in the past, make recommendations to Science Board, which then reviews the proposal and makes recommendations to the Governing Council.

Finally, to further insure that we get FUTURE off to a solid start, we concluded that it was necessary for the three Advisory Panels to meet before PICES-2010 to discuss their work plans and coordinate their activities. The workshop

will be co-sponsored by the Korean government and held in August, in Seoul. I have a family commitment at the time and, unfortunately, will not be able to attend but I am confident that our Chairman-elect, Dr. Sinjae Yoo, will do an excellent job as both host and convenor of the workshop.

I close now from Pascagoula, Mississippi, U.S.A. – and you all thought I was based in Seattle. I am on detail to the Gulf of Mexico to lead NOAA’s Seafood Safety Program that was put in place to respond to the Deepwater Horizon oil spill. As you are aware, the U.S. is experiencing the largest oil spill in its history. We have had to close 34% of the Gulf of Mexico to fishing – an unprecedented closure. I brought this up because it illustrates that in FUTURE we have the right pieces – we are addressing anthropogenic forcing on coastal marine ecosystems and interactions with climate, and then will need to communicate the science. In the Gulf of Mexico the amount of carbon that is being added to the ecosystem is a major concern. This year is projected to be a more active hurricane season and, along with carbon, are the associated toxic polycyclic aromatic hydrocarbons and the use of large amounts of dispersants, which means that the oil is present as a subsurface ‘cloud’. What will be the interactions? How will a hurricane affect the fate and effects of the oil? What will be the overall ecological impacts and when will it be safe to re-open areas to fishing? All these are questions that need ecosystem-based science and good communication of that science. This is what we are taking on in FUTURE, and this significant incident in the Gulf of Mexico brings home the message that while climate change is the major global issue we must address, there can be human-caused events that can have critical consequences on regional scales, and our science must improve both at the global and regional scales to better address major events and to help society deal in the future with events that can change a region for years if not fundamentally while under the backdrop of global climate change.



PICES Science Board Chairman, Dr. John Stein, wearing his major “hat” as NOAA expert, briefs reporters on NOAA’s Seafood Safety Program implemented to respond to the Gulf of Mexico oil spill disaster in Pascagoula, Mississippi.