

PICES science in 2007

Sixteenth Annual Meeting

PICES XVI was held from October 26–November 5, 2007, at the Victoria Conference Centre in Victoria, Canada. It was hosted by Fisheries and Oceans Canada, and coordinated by the PICES Secretariat. A total of 484 participants from 18 countries attended the 15 sessions, 6 workshops, and 23 business meetings. The Science Board Symposium on “*The changing North Pacific: Previous patterns, future projections, and ecosystem impacts*” opened with a keynote lecture on “*The North Pacific, human activity, and climate change*” by Dr. Kenneth Denman (Fisheries and Oceans Canada and Canadian Centre for Climate Modelling and Analysis). Dr. Denman reviewed some of the human effects on the oceans that change the climate through the burning of fossil fuels, by overfishing, and by physical and chemical alteration of the coastal zone. He urged the development of “end-to-end” foodweb and biogeochemical models and embedding them in comprehensive climate models, and the need for sustained sampling and focused scientific studies in both the coastal and open oceans. The keynote lecture was followed by six invited papers presented by Richard Feely (U.S.A.), Gregory Flato (Canada), Yasunori Sakurai (Japan), Steven Murawski (U.S.A.), Chang-Ik Zhang (Korea) and Gregory Ruiz (U.S.A.), and 7 contributed papers and 9 posters.

PICES XVI will be remembered for a long time for several reasons. Dr. Denman was the first person in PICES history to receive the Wooster Award (see pp. 4–5 in this issue) and to give the keynote lecture. On top of these honours, Ken was also awarded a share of the 2007 Nobel Peace Prize in October 2007, for playing a significant role in the Intergovernmental Panel on Climate Change. It was also the first time at an Annual Meeting that 4 parallel sessions were held in 1 day due to an overwhelming number of contributed papers. PICES XVI lasted longer than usual to allow time for a workshop on the next PICES science program, FUTURE (see pp. 6–7).

Congratulations are in order to winners of the Best Presentation Awards at PICES XVI. These awards are given by the Science Board, Committees or the CCCC Program to scientists who gave the best presentation at a Topic or Paper Session. Recipients for best oral presentations are: Muyin Wang (Science Board), Takumi Nonomura (BIO), Naoki Tojo (FIS), Xuelei Zhang (MEQ), Hiroaki Tatebe (MONITOR), Hitoshi Kaneko (POC), Hanna Na (TCODE), and Tadanori Fujino and Motoko R. Kimura (CCCC). Recipients for best posters are: Goh Onitsuka (BIO), Dongwha Sohn (FIS), Chunjiang Guan (MEQ), Gitai Yahel (MONITOR), Chun-Ok Jo (POC) and Shusaku Kobayashi (CCCC) (see details at www.pices.int/meetings/annual/PICES16/Best_2007/Best_2007.aspx).

Three conferences in 2007

Since the last Annual Meeting in Yokohama, PICES has had a very busy year. A total of 14 meetings were co-sponsored by PICES and convened at various locations around the North Pacific and the world at large. Not only was it a busy year, but it was also an unusual one because PICES was involved in co-sponsoring three major inter-sessional symposia during the spring and summer of 2007.

In May, PICES and ICES worked with the U.S. National Sea Grant College Program and MIT Sea Grant College Program to organize the 5th International Conference on “*Marine Bioinvasions*” in Cambridge, U.S.A. Immediately following this conference, the first ever meeting of the PICES WG on *Non-indigenous aquatic species*, the ICES Working Group on *Introductions and transfers of marine organisms* and the ICES/IOC/IMO WG on *Ballast waters and other ship vectors* was held.

Later that month, the 4th International Zooplankton Production Symposium on “*Human and climate forcing of zooplankton populations*”, co-sponsored by PICES, ICES and GLOBEC, was convened in Hiroshima, Japan, after a period of long and meticulous planning. This was the first time this symposium had been held outside of Europe, and its location allowed for greater participation by Pacific Rim countries. Three hundred and thirty-four participants from 46 countries attended this symposium, and presented 141 papers and 250 posters. The symposium was as big as our Annual Meetings and was a great success. Two special publications in the *ICES Journal of Marine Science* and *Deep-Sea Research II* are expected from this symposium.

In June 2007, ICES and PICES joined forces to sponsor a conference for early career scientists on the topic of “*New Frontiers in Marine Science*” in Baltimore, U.S.A. It was conceived at PICES XII (2003, Seoul, Korea) when representatives of the ICES Secretariat proposed the idea for a joint activity to PICES. The conference differed from any that have occurred in PICES’ history as it was designed to encourage scientists to meet, share knowledge, and build

networks across disciplines and international borders at the early stages in their careers, in the hope that they will last for decades. It was unique in that many of the costs were paid, either in part or in full, by ICES and PICES, and as a result, an “invitation only” model was adopted with the selection of each participant made according to the relevance of their abstracts to the conference theme. Nearly 100 early career scientists from 20 nations attended this conference which featured six theme sessions, each with a keynote speaker, for a total of 65 oral and 33 poster presentations. The conference was a resounding success, accomplishing its goals and more (see PICES Press Vol. 15(2), pp. 11–13). Let us applaud the success of this conference and express our thanks to the Scientific Steering Committee (also early career scientists): Franz Mueter, Sukkyung Kang and Julie Keister (PICES), Elizabeth North, Angel Lopez-Urrutia and Jens Floeter (ICES), and to the coordinators of this conference, Drs. Skip McKinnell from PICES and Adi Kellermann from ICES. And finally, our thanks to NOAA/Fisheries, the North Pacific Research Board, EUR-OCEANS, and the Korean Oceanographic Research and Development Institute for their financial contributions which really helped to make the conference a success. A selection of papers presented at the conference will be published as a section of a regular issue of the *ICES Journal of Marine Science*, with Franz Mueter and Elizabeth North as the Guest Editors.

Excellence in publication

This year has been most remarkable and, indeed, a milestone was reached in the publication of a special issue of *Ecological Modelling* on NEMURO, which stands for “North Pacific Ecosystem Model for Understanding Regional Oceanography”, and NEMURO.FISH which is “NEMURO For Including Saury and Herring”. This was the culmination of international teamwork and energy over a period of 7 years and 10 international workshops. Drs. Michio Kishi, Bernard Megrey, Shin-ichi Ito and Francisco Werner edited this 17-paper issue. This publication might be the best example to demonstrate why PICES exists and what PICES can do. The editors and contributors dedicated



Zooplanktologists advected into the Hiroshima, Japan, convergence zone in May, 2007 for the 4th World Zooplankton Conference.

this special issue to Dr. Daniel Ware, who was their colleague, mentor, and friend. Dan was the first Chairman of the PICES Science Board who helped guide the establishment of PICES' first science program on Climate Change and Carrying Capacity and later became a key member of its MODEL Task Team within this program.

Two more major publications have just been released: selected papers from the 2006 Symposium to mark the 50th anniversary of Line-P was published in *Progress in Oceanography* (Vol. 75, No. 2) as a special issue entitled "Time Series of the Northeast Pacific Ocean" (Guest Editors: Angelica Peña, Steven Bogard and Alexander Bychkov), and a major compendium of papers presented at the 2005 GLOBEC/ESSAS Symposium on "Climate Variability on Sub-Arctic Marine Ecosystems" appeared as a special issue of *Deep-Sea Research II* (Guest Editors: George Hunt, Kenneth Drinkwater, Skip McKinnell and David Mackas).

PICES continues to release new volumes in its Scientific Report series. Number 33 is the proceedings of the 2006 PICES/NPRB workshop on "Integration of Ecological Indicators of the North Pacific with Emphasis on the Bering Sea". In 2007, PICES also introduced its new electronic Technical Report Series. Technical Report No. 1 entitled "Metadata Federation of PICES Member Countries" describes the history of the PICES Metadata Federation Project that PICES initiated with the objectives of creating standardized metadata descriptions of national, institutional and agency databases, and serving those descriptions in a World-Wide-Web-based, one-stop environment with search and delivery capabilities. This is a living document and the goal is to keep it current.

The much anticipated "Guide to Best Practices for Ocean CO₂ Measurements" is being published as *PICES Special Publication No. 3*, and is edited by Andrew Dickson, Christopher Sabine and James Christian. This Guide will allow scientists from different countries to use the same standardized methods for their surveys and will allow a Pacific-wide ocean CO₂ synthesis based on these surveys.

Forthcoming in 2008 and beyond

Next year, in addition to the publications from the 4th International Zooplankton Production Symposium, the 5th International "Marine Bioinvasions" Conference and the ICES/PICES Early Career Scientists Conference, we expect to see several special issues of primary journals. For example, selected papers from the PICES XV Topic Session on "The human dimensions of jellyfish blooms" will be published in *Plankton and Benthos Research*; papers from the SEEDS-II experiment will appear in *Deep-Sea Research II*; a set of papers from the 2006 PICES/GLOBEC Symposium on "Climate variability and ecosystem impacts on the North Pacific: A basin-scale synthesis" will be published in *Progress in Oceanography*;

and selected papers from the CREAMS/PICES Workshop on "Model-data inter-comparison for the Japan/East Sea" in the *Journal of Marine Systems*.

Several international symposia of interest to PICES are awaiting your participation. In May 2008, an International Symposium on "Effects of climate change on the world's oceans" will be held in Spain, co-sponsored by ICES, PICES and IOC, with support from other organizations. This meeting will be followed by an International Symposium on "Coping with global change in marine social-ecological systems" to be held in Rome in July 2008. In August 2008, an International Symposium on "Herring: Linking biology, ecology and status of populations in the context of changing environments" will be held in Galway, Ireland, co-sponsored by ICES, PICES and GLOBEC.

The new Science Program, FUTURE, will be launched at PICES XVII to be held in October 2008, in Dalian, China, with a meeting theme of "Beyond observations to achieving understanding and forecasting in a changing North Pacific: Forward to the FUTURE". Science Board has approved many exciting sessions and workshops for PICES XVII, and has also begun preparing for PICES XVIII (Busan, Korea, 2009). Bring your ideas to Dalian so they can be built into the plans.



Dr. Kuh Kim receives a hand-carved maple vase from Dr. Tokio Wada, PICES Chairman, in appreciation for his service as Chairman of Science Board (November 2004–November 2007).

I would like to conclude the 2007 report with my personal note. What is PICES? When I first attended PICES Annual Meeting about 10 years ago, I did not know what PICES stood for. I thought it should be NPMSO (North Pacific Marine Science Organization). After serving three years as the Science Board Chairman, I have learned that **P** means *Partnership*, **I** is for *Interdisciplinary*, **C** means *Collaboration*, **E** is for *Exploration*, and **S** is, of course, for *Science*. At the same time **S** in PICES means, I believe, *Service*. PICES should serve the people around the North Pacific Ocean and PICES should also serve the North Pacific itself for the generations to come.

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