



## Major Outcomes from the 2009 PICES Annual Meeting: A Note from the Chairman

The PICES Eighteenth Annual Meeting took place from October 23 to November 1, 2009, at the International Convention Center in Jeju, a scenic volcanic island of the Republic of Korea. The Ministry of Land, Transport and Maritime Affairs was our host organization, with local arrangements made by the Jeju Special Self-Governing Province, the Korea Ocean Research and Development Institute (KORDI), and the National Fisheries Research and Development Institute (NFRDI). About 500 scientists and administrators from 18 countries and several organizations attended the meeting held under the theme “*Understanding ecosystem dynamics and pursuing ecosystem approaches to management*”. A highlight of this Annual Meeting was the start of the new integrative scientific program of PICES called FUTURE, an acronym for “*Forecasting and Understanding Trends, Uncertainty and Responses of North Pacific Marine Ecosystems*”.

### Start of FUTURE

During the previous decade, much progress was achieved on the understanding of linkages between periodic climate changes on various scales and ecosystem responses in the North Pacific. The PICES-GLOBEC Climate Change and Carrying Capacity (CCCC) Program, the first integrative scientific program of the Organization, greatly contributed to deepen our knowledge in this regard. Ecological consequences of the recent global warming and our

socioeconomic activities are also essential for making ocean management policies in PICES’ Contracting Parties. However, there are many unknowns here as global warming and the rapid increase of anthropogenic impacts are phenomena not experienced in the history of humankind. The aim of FUTURE is to understand and forecast how marine ecosystems in the North Pacific respond to climate change and human activities, and to communicate new insights to policy makers, stakeholders and the public of the Contracting Parties. The FUTURE Science Plan was approved in February 2008, and the Implementation Plan was adopted in June 2009.



Venue for PICES-2009: Jeju International Convention Center.

### In This Issue

#### Major Outcomes from the 2009 PICES Annual Meeting:

A Note from the Chairman .....	1
PICES Science – 2009 .....	4
2009 PICES Awards .....	9
New Chairmen in PICES .....	11
PICES Interns .....	15
The State of the Western North Pacific in the First Half of 2009..	16
The State of the Northeast Pacific in 2009.....	18
The Bering Sea: Current Status and Recent Events .....	20
2009 PICES Summer School on “ <i>Satellite Oceanography for the Earth Environment</i> ” .....	22

2009 International Conference on “ <i>Marine Bioinvasions</i> ”..	26
A New PICES Working Group Holds Workshop and Meeting in Jeju Island.....	28
The Second Marine Ecosystem Model Inter-comparison Workshop .....	30
ICES/PICES/UNCOVER Symposium on “ <i>Rebuilding Depleted Fish Stocks – Biology, Ecology, Social Science and Management Strategies</i> ” .....	33
2009 North Pacific Synthesis Workshop .....	36
2009 PICES Rapid Assessment Survey .....	38

The CCCC Program was a regional program of the International GLOBEC (Global Ocean Ecosystem Dynamics) Project, and its implementation was separated from the standing scientific structure of PICES. FUTURE is the scientific program of the Organization, both in name and in reality, as the PICES Science Board serves as the Scientific Steering Committee (SSC), and is responsible for initiating activities of the program by working through the Scientific and Technical Committees and their expert groups, and for evaluating progress toward the FUTURE goal, which is expected to be accomplished in the next decade.

Following the adoption of the Implementation Plan, three Advisory Panels named AICE (*Anthropogenic Influences on Coastal Ecosystems*), COVE (*Climate, Oceanographic Variability and Ecosystems*) and SOFE (*Status, Outlooks, Forecasts, and Engagement*), were established to provide continuing direction, leadership, coordination, and synthesis within PICES, and to assist SSC toward attaining the FUTURE goal. During PICES-2009, the Advisory Panels met both separately and jointly to discuss the immediate course of actions. Based on this discussion, Council formally decided to form a Study Group on *Human Dimensions* under the direction of Science Board. The Study Group will review the roles of social science tools and examine practical ways to involve socioeconomic studies into activities of FUTURE. Council also recognized that new developments within the Organization, and especially the launching of FUTURE, call for revisions in the PICES Strategic Plan approved in May 2004, and not reviewed since its adoption. Therefore, a Study Group on *Updating the PICES Strategic Plan* was also established, under the direction of Council, to develop recommendations on required amendments for consideration at the 2010 PICES Annual Meeting.

#### **Cooperation with non-member countries and organizations**

As many scientific issues in the North Pacific are common to the Northern hemisphere or the globe, cooperation with non-member countries and other international and regional organizations sharing common interests has been an

important issue for PICES. The creation of joint working groups and the holding of co-sponsored symposia and workshops with other organizations, such as ICES (International Council for the Exploration of the Sea) and FAO (Food and Agriculture Organization of the United Nations), will be a future direction of actual collaboration.

Involving external experts to PICES activities is not only beneficial for promoting cooperation, but is also essential for activating PICES science. At the 2009 inter-sessional meeting in Qingdao, People's Republic of China, Council unanimously agreed to amend the PICES Rules of Procedure to allow experts from non-member countries and other international and regional organizations to serve as *ex-officio* members on PICES Technical Committees and subsidiary bodies of PICES Scientific Committees. In Jeju, the Technical Committees and temporary expert groups discussed the potential implications of these changes in the Rules of Procedure on their membership. Taking the lead in applying these changes, the Technical Committee on Data Exchange (TCODE), the Sections on *Ecology of Harmful Algal Blooms in the North Pacific* (HAB-S) and the Section on *Carbon and Climate* (CC-S) recommended some potential *ex-officio* members. Simultaneously, two international organizations, NOWPAP (Northwest Pacific Action Plan) and IGBP (International Geosphere-Biosphere Programme) sent letters to the Executive Secretary expressing their interest in having *ex-officio* members in HAB-S and CC-S. The PICES Secretariat will take necessary steps in completing these arrangements.

Intergovernmental negotiations are in progress for establishing the new Regional Fisheries Management Organization (RFMO) for the North Pacific following the adoption of the Resolution 61/105 on *Sustainable Fisheries* by the General Assembly of the United Nations. PICES has no fisheries management function, but could provide comprehensive information on North Pacific marine ecosystems which is essential for the discussion in the new RFMO. Providing this broad scientific advice would also meet the expectations of the Contracting Parties for PICES scientific products to be useful for national policy making.



Participants of the Governing Council meeting at the entrance of the Jeju International Convention Center: (left to right) – Alexander Bychkov (Secretariat), Gongke Tan (China), Chul Park (Korea), Harumi Yamada (Japan), Yingren Li (China), Tokio Wada (Chairman), Stephen DeVincent (U.S.A.), Vera Alexander (past Chairman), Samuel Pooley (U.S.A.), Laura Richards (Canada), Jeonghwa Kim (Korea), Sylvain Paradis (Canada), Patricia Livingston (U.S.A.), Lev Bocharov (Russia), George Boehlert (U.S.A.), Yukimasa Ishida (Japan), Darlene Smith (Canada) and Igor Shevchenko (Russia).

### ***Improving participation in PICES activities***

The participation of scientists from Contracting Parties in the activities of Standing Committees and their subsidiary bodies, and in PICES Annual Meetings, is a key element for sustaining the scientific activities of the Organization. While the PICES Rules of Procedure explicitly state that each Contracting Party is responsible for covering the expenses of its own delegation to all meetings authorized by Council, the Contracting Parties often fail to support the attendance of their appointed members at these meetings. As the result, the work of Committees and expert groups is seriously impaired.

At PICES-2009, Council confirmed that Contracting Parties have to regularly review their national membership and make changes as appropriate, and to provide the updated national membership list as of the first day of each calendar year. These lists are required to maintain a historical record of PICES membership, and to assist in improving participation in the activities of the Organization.

Contracting Parties were also requested to follow up on the PICES Rules of Procedure and notify the Executive Secretary, three weeks in advance, of the names of delegates, alternate delegates, advisors and members, who will attend each meeting of the Organization. These national delegation lists are required to assist in better coordinating activities of the Standing Committees and their subsidiary bodies, and in better preparing for the Annual Meeting.

Council recognizes the importance of inter-agency coordination and communication within Contracting Parties for improving the participation of their scientists in the activities of PICES, but believes that this problem must be faced at the national level. PICES can only urge that it be recognized and solved at that level to ensure that the lead agency (an agency that has the principal responsibility for interaction with PICES) represents the interest of other agencies, or coordinate PICES interactions with them and promote activities within PICES that have high national interest and relevance.

### ***Capacity building***

PICES has been trying to encourage the involvement of early career scientists from Pacific Rim countries in marine scientific research and the activities of the Organization by holding special conferences, summer schools, training courses and methodological workshops for them, and by providing financial support for their participation in PICES Annual Meetings and other symposia organized or co-sponsored by PICES.

The Intern Program, initiated in 2000, is also an essential component of PICES' strategy for capacity building. This program aims at providing young marine researchers and administrators from Contracting Parties, for whom English

is not a native language, with an opportunity to get experience in the operations of an international scientific organization and in the coordination of multi-disciplinary international research programs. The Intern Program has proven to be successful and has performed well in supporting functions of the Secretariat. At PICES-2009, Ms. Tatiana Semenova (Pacific Research Fisheries Centre (TINRO-Centre), Russian Federation) was selected as the 2010 PICES intern. Canada, the Republic of Korea, the Russian Federation and the United States of America have kindly committed to make voluntary contributions to the Trust Fund for the program in 2010. On behalf of Council, I would like to express our deepest thanks for their generous and encouraging support of the program.



*2008 PICES Intern and PICES-2009 local organizer, Mr. Keyseok Choe (KORDI), taking a well deserved break from duties with his former professor Ik-Kyo Chung.*

### ***Financial issues and restructuring of the Annual Meeting***

With the expansion of PICES activities, the annual budget of the Organization has also increased, and now reaches nearly CDN\$1,400,000. However, the total annual contribution from Contracting Parties covers less than 50% of the budget. The remainder depends on voluntary contributions, grants and partnerships, and most of the funding offers have specific product and service requirements, which put an additional burden on the Secretariat, the permanent staff of which has been restricted to four people since 1995. This size seems not enough to provide sufficient service to all activities of PICES and, therefore, the Organization has a "carrying capacity" problem of financial and logistical capabilities, so we must strive for more efficient administration of PICES within our capacity.

The PICES Annual Meeting is a unique and irreplaceable forum where scientists from a wide spectrum of marine sciences get together for interdisciplinary discussions under an overall theme. To continue this valuable forum in the future, we should consider some changes in the structure of the Annual Meeting to harmonize scientific demands with financial and logistical limitations. As part of the restructuring, Council changed the format of the Opening Session by abolishing remarks by Contracting Parties,

*(continued on page 8)*

PICES/ICES Study Group on *Developing a Framework for Scientific Cooperation in Northern Hemisphere Marine Science*. Dr. Sinjae Yoo was approved to be an associate member of the new SCOR Working Group on *Patterns of Phytoplankton Dynamics in Coastal Ecosystems*, and Dr. Hiroaki Saito was selected as a PICES co-convenor of the 2<sup>nd</sup> PICES/ICES/IOC Symposium on “*Effects of Climate Change on the World’s Oceans*” to be held in Yeosu, Korea, in 2012. Last but not least, I must mention that PICES, jointly with ICES and the Food and Agriculture Organization (FAO), is convening a major symposium on “*Climate Change Effects on Fish and Fisheries*” from April 25–29, 2010, in Sendai, Japan. The local host is the Fisheries Research Agency of Japan, and Drs. Anne Hollowed (U.S.A.), Shin-ichi Ito (Japan), and Suam Kim (Korea) are the symposium convenors from PICES. Interest in the symposium has been high, and it will provide an international synthesis of our current understanding of the impacts of climate change on marine ecosystems and the implications of these changes for marine resources and their uses.

Our next Annual Meeting, PICES-2010, will be held from October 22–31, in Portland, Oregon, U.S.A., under the theme “*North Pacific ecosystems today, and challenges in understanding and forecasting change*”. Science Board has selected and approved many sessions and workshops that should be of great interest to PICES and the broader scientific community. The U.S. delegation and the PICES Secretariat are hard at work in preparing the meeting, and we look forward to seeing you in Portland. In looking further ahead, planning was also initiated for PICES-2011 to be held in Russia, under the theme “*Mechanisms of marine ecosystem reorganization in the North Pacific*”.

(continued from page 3)

except for the host country. Instead, the opportunity will be provided to national delegates to make their statements at the first session of the Council meeting. Council also agreed to implement the following recommendations by the Study Group on *Restructuring the PICES Annual Meeting*, starting with PICES-2011: (1) shorten the main part of the meeting from 5 days to 4.5 days, with a possible simultaneous increase in the number of concurrent scientific sessions to a maximum of four; (2) expand the duration of the main Science Board meeting from 1 day to 1.5 days to provide more time for accommodating its new role as the FUTURE Scientific Steering Committee, and to allow for the completion of its report to Council; and (3) hold overture 1.5-hour meetings of Scientific and Technical Committees to examine and confirm the discussion points in preparation for their main meetings.

The 2010 PICES Annual Meeting will be held from October 22–31, at the Oregon Convention Center in Portland, U.S.A. The meeting is hosted by the Government of the United States of America, with logistical support provided by the Pacific States Marine Fisheries Commission. The overall theme for PICES-2010 is “*North Pacific Ecosystems Today, and Challenges in Understanding and Forecasting*

To close, it has been a busy and productive year for PICES science, and it was a particularly gratifying to see the culmination of the hard work we all did in developing FUTURE. As I look into 2010, it is the start of a year of transition as I complete my term as Science Board Chairman, and work with Sinjae for a smooth handoff to him as our next Chairman of Science Board. There is much to do, and I look forward to the opportunities to work with all of you. As we enter the new decade, I see a decade where PICES continues to be recognized globally as a leader in the science of climate change and effects on marine ecosystem; I see FUTURE meeting its goal of building on the success of the Climate Change and Carrying Capacity (CCCC) Program, increasing our focus on coastal ecosystems and providing outlooks and forecasts of how climate and human activities may affect marine species; I also see the next generation of PICEans taking important roles in leading our Organization and positioning it to be responsive, relevant, reliable and respected in addressing the key issues of our member countries and the global challenge to mitigate and respond to climate change. I am optimistic that PICES will continue to step up to the challenge with creativity, innovation and cutting-edge science.



John Stein  
PICES Science Board Chairman  
E-mail: John.E.Stein@noaa.gov

*Change*”. The host country has kindly agreed to hold up to four concurrent scientific sessions per day.

PICES-2009 had good weather from the first to the last day. Under warm hospitality and thoughtful arrangements made by the host organization and local organizers, the attendees partook in presentations and discussions at scientific sessions and enhanced their friendship through social events, including a soccer match. Many of the participants also enjoyed scenic and marvellous landscapes of Jeju, such as Mount Hallasan and lava tubes, which were created by volcanic activities and are considered as UNESCO’s World Natural Heritage sites. On behalf of PICES and all attendees, I would like to express our sincere thanks to the organizers for their efforts to make PICES-2009 a success.



Tokio Wada  
Chairman of PICES  
E-mail: wadat@affrc.go.jp