

## REPORT OF 2005 INTER-SESSIONAL SCIENCE BOARD MEETING



The third inter-sessional Science Board meeting, with the participation of Governing Council, was held at the NOAA/Alaska Fisheries Science Center in Seattle, U.S.A., from April 6-7, 2005. Science Board Chairman, Dr. Kuh Kim, welcomed participants and thanked them for attending the meeting. Dr. Gary Stauffer, Divisional Director of NOAA/RACE, gave a welcoming address to the guests at the Facilities. Before turning the meeting back to Dr. Kim, Dr. Stauffer stated briefly that having good science was necessary for managing fisheries resources. Meeting participants are identified in, and the agenda is provided in *SB-IM Endnote 2*.

### Mid-term updates on activities of Committees and Programs (Agenda Item 2)

#### BIO Committee

BIO Chairman, Dr. Michael Dagg, presented his Committee's inter-sessional report. Highlights of his report included changes in membership in the Advisory Panel on *Micronekton sampling inter-calibration experiment* (MIE-AP), and updates on the status of the MIE-1 and MIE-2 cruises, terms of references for the Advisory Panel on *Marine bird and mammals* (MBM-AP), and publications and symposia.

Dr. Michael Seki (U.S.A.) of MIE-AP has stepped down as Co-Chairman, but will remain a member. Dr. Orio Yamamura (Japan) was recommended as Co-Chairman to the MIE-AP, pending a Science Board decision. Other new members to the MIE-AP include Drs. Alexei Baitalyuk and Oleg Ivanov (Russia), but additional members from China and Korea are still needed.

The first cruise, MIE-1, aboard the NOAA ship *Oscar Elton Sette* was completed off Hawaii prior to PICES XIII. Data analysis is now taking place and some preliminary results were reported in PICES Press Vol. 13(1). Plans to conduct a second cruise, MIE-2, in the Bering Sea (possibly in conjunction with a BASIS

cruise) will be discussed when BASIS meets in Nanaimo, Canada, at the end of April. An attempt to obtain funding from the North Pacific Research Board through the 2004-05 request for proposals to support MIE-2 was not successful. Dr. Yamamura has proposed two cruises (July 5-11 and September 27-October 3) aboard the Japan Fisheries Agency research vessel *Hokko Maru* to conduct MIE-2 in the western Pacific off Kushiro, Japan. However, no firm decision has been made by MIE-AP on how to proceed with MIE-2.

No progress has been made regarding the special publication from the 2003 and 2004 MBM-AP workshops on "*Combining data sets on diet of marine birds and mammals*" at PICES XIII. Selected papers from the PICES XIII Topic Session on *Hot spots and their use by migratory species and top predators in the North Pacific* will be published in *Deep Sea Research II* in 2006. A poster on bird and mammal observations along the E-W CPR survey track will be presented at the GLOBEC/PICES Symposium on *Ecosystem Studies of Sub-Arctic Seas (ESSAS)* May 16-20, 2005. No specific plans for publications have been made for the Topic Sessions in PICES XIV.

There was discussion at PICES XIII that the terms of reference of the Advisory Panel on *Marine bird and mammals* (MBM-AP) might want to be revised, in regard to the extension beyond its 5-year term, and changes in PICES activities. However, it has been decided to keep the terms of reference as they stand. Executive Secretary, Dr. Alexander Bychkov, pointed out that the biggest problem regarding this AP is that it is essentially a Japan/U.S.A. bi-lateral group; changes in membership were recommended at PICES XIII. Since then, membership has been partly resolved, with Canada and Russia each appointing one bird and one mammal expert to the AP. As yet, no one from China or Korea has been appointed.

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A symposium, celebrating the 50-year anniversary of the sampling along Line P, is planned for July 5-7, 2006 in Victoria, Canada. Requests have been made to PICES for logistical support and travel.

Drs. Charles Miller (U.S.A.) and Tsutomu Ikeda (Japan) have been planning a workshop to compare the eastern and western gyres of the subarctic Pacific under the OECOS (Oceanic Ecodynamics Comparison in the Subarctic Pacific) project. The workshop is scheduled for May 23-24, 2005 in Corvallis, U.S.A.

The 4<sup>th</sup> International Zooplankton Production Symposium, scheduled for 2007 in Hiroshima, Japan, is being organized by Dr. Shin-ichi Uye. Two BIO members are among the organizers, as well as members from ICES and GLOBEC.

### **ACTION:**

#### **Dr. Dagg:**

- 2.BIO.1 Decide how to proceed with MIE-2;**
- 2.BIO.2 Resolve mesh size to be used in the MIE-2 cruise;**
- 2.BIO.3 Look into reason for lack of progress on the special publication for the 2003 and 2004 workshops held at PICES XIII;**
- 2.BIO.4 Look into appointing MIE-AP and MBM-AP experts from China and Korea;**
- 2.BIO.5 BIO Committee support for the Line P Symposium;**
- 2.BIO.6 Table a proposal to house IFEP-AP at the BIO Committee meeting at PICES XIV.**

#### FIS Committee

FIS Chairman, Dr. Yukimasa Ishida, made a brief presentation stating that there were no changes in FIS activities discussed at PICES XIII. He reported that Drs. Richard Beamish (Canada) and Akihiko Yatsu (Japan) have prepared a draft WG 16 report on *Climate change, shifts in fish production, and fisheries management*. FIS has requested financial support from PICES for the authors to complete the report. The U.S.A. contribution will be prepared by Dr. Loh-Lee Low, of the Alaska

Fisheries Science Center, but the target date of late summer 2005 for completion of the report will be delayed. Dr. Ishida did not have any information on when the report would be completed. Dr. Bychkov requested that the FIS Chairman use his influence to have the report prepared by the end of summer 2005.

### **ACTION:**

#### **Dr. Ishida:**

- 2.FIS.1 Complete the WG 16 report on *Climate change, shifts in fish production, and fisheries management* by the end of summer 2005.**

#### MEQ Committee

MEQ Chairman, Dr. John E. Stein, reported that the report of the Study Group on *Ecosystem-Based Management Science and its Application to the North Pacific* was published as PICES Scientific Report No. 29 in January 2005. The main task of the SG was to establish the Working Group on *Ecosystem-based management and its application to the North Pacific* under the direction of the FIS and MEQ Committees, with a 3-year duration and the terms of reference as listed in Annual Report 2004 *SGEEM Endnote 4*.

In 2003, the *Harmful Algal Bloom* Section (HAB-S) was established in order to develop and implement annual bloom reporting procedures that would be consistent with ICES reporting procedures, and therefore, could be linked to the ICES Harmful Algae Event Data Base (HAE-DAT) in order to assess the impacts of HAB events, and to be used as a research tool to understand the patterns that will lead to increased prediction capability. Work is progressing on the development of procedures. It is hoped that a joint ICES/PICES website can be developed, which will strengthen ICES-PICES collaboration and exchange of science. Assistance is being requested from the NOAA Coastal Data Development Center. HAB-S will select two alga species as a focus of their study, and will also investigate topics of importance to PICES member nations. HAB-S plans to develop terms of reference for a working group on invasive species. A 1-day workshop on

“Review of selected harmful algae in the PICES Region: *I. Pseudo-nitzschia* & *Alexandrium*”, will be preceded by a ½-day laboratory demonstration on algal toxins detection techniques at PICES XIV.

The HAB Section requires more specific expertise to fill in the gaps in knowledge. Only one Russian member has been nominated; other countries have not reacted to the request.

Dr. Wells attended the ICES/PICES topic session on “*Natural and anthropogenic introductions of marine species*” at PICES XIII, and has been active in representing PICES at meetings of the ICES/IOC/IMO Working Group on *Ballast waters and other ship vectors* and the ICES Working Group on *Introductions and transfers of marine organisms*, held consecutively in March 2005 in Norway.

WG 18 on *Mariculture in the 21st century – The intersection between ecology, socio-economics and production* has received national reports on the status and projected trends in marine aquaculture from all member countries except Russia.

The term of the MEQ Chairman is expiring and nominees are being sought to replace him. Dr. Stein reported that there is currently no Chinese representation on the MEQ committee. Science Board indicated they would also try to contact Chinese delegates. The Executive Secretary stated that there has been a serious problem with membership in MEQ. Although activities were occurring under its auspices, membership is down. Canada has only one member who was acting in dual roles of MEQ member and EBM Co-Chairman. The U.S. had 3 members in MEQ, but Dr. Stein is currently doing the work for all three. Japan has introduced a new member, Dr. Yuji Adachi, and Korea has two new members. Weak participation might be attributed to the nature of the lead agencies for PICES in each member country; MEQ issues tend to be national, so agencies in member countries do not see the need to work internationally. Therefore, perhaps MEQ should just step back and see if their goals were being met even though their membership is small.

**ACTION:**

Dr. Stein:

- 2.MEQ.1 Determine the status of the Russian national report for WG 18;**
- 2.MEQ.2 Contact Chinese delegates to identify potential candidates for Co-chairmanship in MEQ;**
- 2.MEQ.3 Fill in the gaps in expertise for the HAB Section.**

POC Committee

POC Chairman, Dr. Michael Foreman, reported that Dr. Andrew G. Dickson is continuing preparation on the “Guide to best practices for oceanic CO<sub>2</sub> measurements and data reporting” which should be complete by summer 2005. NPDB-AP Technical Coordinator, Mr. Ron McLaren (Canada), has retired and will be replaced by Mr. Al Wallace (Canada). Mr. Craig Engler (U.S.A.) has been appointed as Coordinator. Dr. James E. Overland, POC Committee member, was named a member of the CFAME Task Team. Dr. Foreman stated that this was an important placement as there is an important role for POC to play in the climate forcing aspect of CFAME’s work. Dr. Foreman also said the next series of climate models, with biological feedback, will be soon available from Lawrence Livermore Laboratories, U.S.A., and it would be appropriate for PICES/POC to begin looking at these models to make predictions.

No action has been taken yet to identify a POC Vice-Chairman. Dr. Foreman stated that the positions of Chairman and Vice-Chairman should be from opposite sides of the Pacific.

Dr. Foreman relayed an update from Dr. Vyachelav Lobanov on the activities of NEAR-GOOS. At the annual meeting of the IOC/WESTPAC Coordinating Committee (CC) for NEAR-GOOS (9<sup>th</sup> Session), 3 Technical Subcommittees were established:

- (1) Drifter and Buoy Monitoring, headed by Dr. D.-K. Lee (Korea),
- (2) New Generation SST Project, headed by Professor H. Kawamura (Japan),
- (3) Data Management, headed by Mr. T. Yoshida (Japan).

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Mr. Takashi Yoshida (Japan) was elected as the new Chairman of the NEAR-GOOS CC.

A new POC Working Group to work with CFAME will be proposed at PICES XIV. Its members will examine climate forcing in the North Pacific and work with CFAME to apply these models to biological components. Several new IPCC climate models are available and it is important to examine the variability among them, and their implications for the North Pacific.

### **ACTION:**

#### **Dr. Foreman:**

- 2.POC.1 Identify candidates for POC Vice-Chairman;**
- 2.POC.2 Invite a climate modeller to the POC Paper Session at PICES XIV;**
- 2.POC.3 Develop draft terms of reference for a new POC Working Group.**

### **TCODE**

Dr. Igor I. Shevchenko, Chairman of the TCODE Committee, stated that a “federated search” test program involving the Korean Ocean Data Center (KODC) and the North Pacific Ecosystem Metadatabase (NPEM), will be carried out to establish a federated sharing capability between KODC and NPEM. The NPEM team (Drs. S. Allen Macklin and Bernard A. Megrey) has completed some of the program and will visit KODC either prior to, or following, PICES XIV. The KODC Team (Drs. Hee-Dong Jeong and Hae-Seok Kang) has obtained visas to visit NPEM soon, and will proceed similarly with the test plan. The Executive Secretary pointed out that communications related to this project were largely between Korean and U.S. members, and that broader communication within TCODE was necessary. Dr. Shevchenko reported that the website will inform the members when a meeting will be planned.

Dr. Shevchenko requested PICES funding to support the travel of a TCODE representative to the 3<sup>rd</sup> International Symposium on GIS/Spatial Analysis in Fishery and Aquatic Sciences August 22-26, 2005 in Shanghai. The

Secretariat will find money in the existing budget.

Dr. Shevchenko discussed the need for Chinese participation in TCODE. TCODE needs an updated national report from China, but that there was no representation from China at their recent meeting. Science Board Chairman suggested sending a letter to the Chinese.

TCODE is due to replace its chairman at PICES XIV.

### **ACTION:**

#### **Dr. Shevchenko:**

- 2.TCODE.1 Update TCODE website concerning NPEM meetings.**

### **MONITOR**

Dr. Jeffrey M. Napp, acting on behalf of the MONITOR Technical Committee, reported that a workshop on “*Filling the gaps in the PICES North Pacific ecosystem status report*” will be convened by MONITOR at PICES XIV. The Continuous Plankton Recorder (CPR) Advisory Panel has been placed under the MONITOR Technical Committee. Dr. Napp reported that two Korean members, Professor Young Jae Ro and Dr. Young Sang Suh, have been added to the Committee. Terms of reference for the GOOS Advisory Panel will be formulated by PICES XIV.

### **ACTION:**

#### **Dr. Napp:**

- 2.MONITOR.1 Provide terms of reference for the GOOS Advisory Panel.**

### **CCCC Program**

The CCCC Co-Chairmen reported that Dr. Batchelder is due to rotate off as Co-Chairman at PICES XIV and that Dr. Suam Kim’s Co-Chairmanship term will expire at PICES XV.

The CCCC Program now consists of two Task Teams: MODEL and CFAME. MODEL has been very proactive in obtaining funding for its workshops (see below). The newly formed CFAME Task Team will examine the large-scale aspects of climate forcing in ecosystems.

Co-Chairmen are Drs. Akihiko Yatsu (Japan) and Kerim Aydin (U.S.A.), who have a 2-year and 3-year term respectively.

A CFAME workshop on “*The development of a CFAME work plan and hypothesis for CCCC synthesis*” will be held in Victoria, Canada on May 14-15, 2005. Drs. Kazuaki Tadokoro (Japan) and Jurgen Alheit (Germany) were invited to help to finalize the Task Team’s terms of reference and to develop a plan to define goals.

CCCC/MODEL is planning a workshop in Tokyo, Japan, on November 14-17, 2005 to extend the NEMURO.FISH model from herring and saury to multispecies of fish. Co-sponsors for this workshop are APN, FRA, and IAI. Funding is in place to run the workshop. The Task Team requested funds to have a users’ manual translated from English to other languages as a capacity building contribution, but it was not approved by SB, given that an English version was not available for review. Dr. Francisco E. Werner (U.S.A.) agreed to continue as MODEL Co-Chairman for one more year. Dr. Thomas C. Wainwright (U.S.A.) will begin serving as Co-Chairman at PICES XIV.

The MODEL Task Team held an Asia Pacific Network–Fisheries Research Agency of Japan (APN–FRA) meeting at Louisiana State University, U.S.A., on March 5-10, 2005, where the present APN project on Pacific herring was reviewed. Papers on NEMURO models and activities were also assessed and 12-20 manuscripts were submitted to *Ecological Modelling* for publication near the end of 2005.

A proposal was made to FRA to support an international workshop on “*Global comparison of sardine, anchovy and other small pelagics – Building towards a multi-species model*”. Another proposal was submitted to APN’s CAPaBLE program to continue to advance capacity building in the study of the global fluctuations of sardines and anchovies. If the proposal is accepted, MODEL will request travel support from PICES for two scientists. At PICES XIII, the MODEL Task Team adopted the objectives of (1) geographic variation in fish

growth, (2) the understanding of fish regime shifts, and (3) global climate change effects on energy pathways and fish production as the targets suitable for CCCC. The Task Team’s plan was to continue to develop these activities, and it was hoped that these objectives would be considered for the next major integrating program for PICES.

The Advisory Panel on the *Iron fertilization experiment in the subarctic Pacific Ocean* was a subsidiary of the BASS Task Team, which has disbanded. It was temporarily placed under the auspices of the CCCC Program, but will be once again looking for a more permanent home at PICES XIV. BIO Committee has agreed to table a proposal to house IFEP-AP at their meeting at PICES XIV.

The APN grant for 2004 called for the creation of an internet site for all NEMURO model source code on an AFSC website. A restricted access portal was established, but Dr. Werner reported that access will be provided and that the site will act more as a repository for code and documentation than a place to upload data. A User’s Manual for NEMURO will be published on the PICES website. The plan is to publish it in four other languages if this is approved by PICES Science Board.

The CCCC Program would like to see a new program in place by 2009-10 so the CCCC Program can start to ramp down. The GLOBEC Scientific Steering Committee will be meeting in Rome on June 1-3, 2005, and Dr. Suam Kim will attend on behalf of PICES/CCCC.

**ACTION:**

**Dr. Batchelder/Dr. S.Kim:**

- 2.CCCC.1 Seek approval from SB to publish the NEMURO manual in four languages;**
- 2.CCCC.2 Dr. Kim to report on GLOBEC SSC meeting.**

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### Draft Action Plans for each Committee and the PICES Action Plan (Agenda Item 3)

The BIO Strategic Plan was revised to be consistent with the PICES Strategic Plan. SB adopted the basic format of BIO's Strategic Plan for all Committees. A draft Action Plan covering from 2-5 years will be reviewed by SB and sent to GC for approval by October. It was agreed that the Action Plan product/outcome will be posted on the web when finalized.

In the future, the Organization should maintain an archive of versions of Committee Action Plans. Science Board will be asked to identify commonalities among committees in these plans.

#### **ACTION:**

##### **SB:**

**3.1 Review draft Action Plans for submission to GC for approval by PICES XIV.**

##### **Dr. Stein:**

**3.2 Develop one Strategic Plan template to be used for all Committees.**

##### **PICES Secretariat:**

**3.3 Post approved Action Plans on the PICES website.**

### Biogeochemical issues within PICES (WG 17 and IFEP-AP) (Agenda Item 4)

Invited speaker, Dr. Richard A. Feely, member of WG 17, made a presentation on the future of carbon cycle studies in PICES. He stated that PICES has done an outstanding job in facilitating the international activities of Working Groups 13 and 17, and leads the way in providing a prototype for a regional coordination group focused on the scientific problem of Carbon and Climate. To meet the needs related to this issue, Dr. Feely proposed that a new Section on Carbon and Climate be formed as a regionally (rather than globally) focused group that would play a pivotal role in ensuring that basin-scale scientific problems were addressed appropriately.

Discussion revolved around what the goals of the IOCCP were, what were the Pacific components, and what could PICES bring to the table. Dr. Sabine stated that the scientific objectives could be found in the SOLAS/IMBER documents. What was needed was a group to coordinate a program and bring people together through a PICES venue. PICES had the structure, expertise and leadership to offer, which would be used in a bottom-up approach on a regional scale, which could then be put into a global context. It was suggested during discussion that a PICES Carbon and Climate Activity might be a joint section of both the POC and BIO Committees. No consensus on this was reached.

The Executive Secretary provided SB/GC with a brief background and update of the Advisory Panel on the *Iron fertilization experiment in the subarctic Pacific Ocean* (AP-IFEP). Based upon unexpected outcomes of the 2001 joint Japan/Canada Subarctic Pacific Iron Experiment for Ecosystem Dynamic Study (SEEDS-I), the 2002 Canada/Japan Subarctic Ecosystem Response to Iron Enrichment Study (SERIES), and the 2004 Japan/U.S. SEEDS-II, the Advisory Panel felt it important to add an additional term of reference. SB agreed to the addition of a fourth term of reference, "To synthesize, compare and contrast the results of conducted experiments (SEEDS-I & II and SERIES), and to develop new experimental strategies and hypotheses to explain the different biogeochemical responses to iron enrichment".

Concerning a new parent group for IFEP, suggestions were offered to place IFEP under either MEQ or BIO. BIO Chairman, Dr. Dagg, agreed to propose to BIO Committee that IFEP be included as an advisory panel of BIO at the PICES XIV.

### Integration and conclusion of the CCCC Program (Agenda Item 5)

As the Climate Change and Carrying Capacity Program nears its end, a 3-day Symposium on "*Climate viability and ecosystem impacts on the North Pacific: A basin-scale synthesis*", co-

sponsored by GLOBEC, will be held in Honolulu, U.S.A. on 19-21 April 2006. Each day is devoted to a different theme. Closing presentations will be given by Dr. Makoto Kashiwai (Japan) and Dr. John Davis (Canada) who were asked to provide their impressions of the success and failures of the PICES CCCC Program, and if we had failures, what we might have done differently to achieve success. Their talks will be followed by a panel discussion. The Executive Secretary suggested that the summaries prepared by the closing speakers might be published in a PICES Scientific Report. He felt that it was important to record the strengths and weaknesses of the Program in a PICES report.

The CCCC Program will remain part of PICES activities for as long as GLOBEC activities continue, until 2009/2010. The CCCC Program may require a 2- to 3-year follow-up, after this date, to answer carrying capacity issues.

**Committee Chairman and Vice-chairman positions (Agenda Items 6 and 21)**

The issue of establishing a Vice-Chairman position for each Committee was discussed at PICES XIII, and to date there still was no consensus. Science Board recommended that a Vice Chairman position should be from the opposite side of the Pacific as the Chairman. Council agreed to amend the Rules of Procedure to include Vice-Chairman or Co-Chairman positions, at the discretion of the Committee, and that a term for Vice-Chairman cannot be longer than 3 years.

Science Board and Council agreed that there needs to be flexibility for the extension of terms for Chairmen.

**ACTION:**  
**Governing Council:**

- 6.1 Amend Rules of Procedure to provide flexibility in choosing either Vice-Chairman or Co-Chairman positions for Committees;**

- 6.2 Prepare a draft on rules for selecting a Chairman and circulate to Committees before PICES XIV;**
- 6.3 Standardize Rules of Procedure and Current Practices.**

**MONITOR Technical Committee (Agenda Item 7)**

New Chairman, Dr. Jeffrey Napp, will be developing the Action Plan in the coming months.

**ACTION:**  
**Dr. Napp: Develop MONITOR Action Plan.**

**Identify list of high-priority PICES activities that are candidates for external funding (Agenda Items 8 and 15)**

The Executive Secretary reported that the Finance and Administration Committee (F&A) and Governing Council had questions regarding fund raising. GC/F&A often do not know what the funding opportunities are within countries and requested Science Board to list high priority projects that warranted support (*SB-IM Endnote 3*).

Suggestions were made that PICES could match funds with the Office of International Science and Engineering at the National Science Foundation in order to send students to international labs. Science Board Chairman suggested that PICES organize a summer school for students. Interest in this was expressed from Governing Council and the Secretariat, and it was recommended that this be put on PICES XIV agenda. CCCC Co-Chairman, Dr. Kim, provided an example of Korea/GLOBEC fund matching for students, and recommended that the Secretariat use money to support Koreans to go to PICES. FIS Chairman, Dr. Yukimasa Ishida recommended that the Nippon Foundation (<http://www.nippon-foundation.or.jp/eng/index.php3>) be approached internally by Japan. Nippon will match funds at 80:20 if PICES can show a commitment. There is a

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possibility that Nippon could support PICES young scientists as well.

### **ACTION:**

#### **SB:**

- 8.1 PICES summer school to be put on PICES XIV agenda;**
- 8.2 Consider having PICES match funds with Korea/GLOBEC.**

### **Analysis of performance/input from past and existing PICES working groups (Agenda Item 9)**

At the 2004 inter-sessional Science Board/Governing Council meeting, Council instructed Science Board to review Working Groups performance using the SCOR approach of contacting ex- and active chairmen for input. A list of all PICES working groups from 1992 to the present was provided by the Executive Secretary. SB was asked to consider which working groups were successful, or not, in terms of:

- clear (and realistic) terms of reference, in particular with objectives and deliverables;
- capable and committed Chairmen;
- committed, available, and interested members;
- adequate resources (time and funding);
- active communication with (and guidance from) the parent committee;
- frequent reporting deadlines.

POC Committee Chairman, Dr. Foreman, volunteered to perform the analysis which will be used to help draft a set of guidelines for future Working Groups. Gordon Kruse (U.S.A.) was also identified as a leader in this activity. It was suggested that it would also be valuable to have a member from Japan active in this. The report is to be completed by PICES XIV.

### **ACTION:**

#### **Dr. Foreman:**

- 9.1 Prepare analysis of 15 PICES Working Groups and submit results at PICES XIV.**

### **Status of proposed publications (Agenda Item 10)**

The Executive Secretary provided a review of publications that had just recently been published and those that were expected to be. Deputy Executive Secretary, Dr. McKinnell, reviewed the status of special issues of peer-related journals and of special publications. Dr. McKinnell also stated that a new Special Publications series had been initiated and that Special Publication No. 1, "*Marine Ecosystems of the North Pacific*", had recently been published, and that Special Publication No. 2, "*Marine Life in the North Pacific Ocean: The Known, Unknown and Unknowable*" was in press.

### **Status of preparations for PICES XIV (Agenda Item 11)**

Progress in organizing sessions for PICES XIV has been slow. The Executive Secretary noted that some convenors are having difficulty finding invited speakers for their sessions because the top people are booked elsewhere. Speakers need to be identified and contacted as soon as possible to ensure the success of PICES XIV.

### **Status of proposed inter-sessional workshops/symposia (Agenda Item 12)**

The Executive Secretary reported that funding to support travel by invited speakers to the symposium on "*The status of Pacific salmon and their role in North Pacific marine ecosystems*", to be held in Jeju, Korea, October 30 to November 1, 2005, will take priority over travel support for Steering Committee members.

PICES has agreed to provide logistical support for the "Line-P" symposium to be held in Victoria, Canada on July 5-7, 2006. If funding is available from the Office of Naval Research (U.S.A.), then the CREAMS/PICES workshop on "*East Asian marginal seas circulation: what we know and how well can we forecast?*" can be held near Vladivostok, Russia in 2006. If not,



the workshop will be combined with PICES XV in Yokohama, Japan in 2006.

Though the PICES/ICES Young Scientists Conference is scheduled in early 2007, ICES has not yet identified their scientists for the Conference Steering Committee. The possibility of fund-raising from the Nippon Foundation was discussed.

#### **Wooster Award (Agenda Item 13)**

Nominations for the 2005 Wooster Award were reviewed by Science Board *in camera*, and a recipient was selected.

#### **Process to develop the next major integrating program for PICES (Agenda Item 14)**

A summary of the development of the CCCC Program was provided by former PICES Chairman, Dr. Warren Wooster.

Council directed SB to prepare terms of reference for a new study group that would develop candidates for the next major integrating program. The SG would include all persons on SB on April 7, 2005, plus additional representatives appointed by member nations with less than two representatives on the study group. It was suggested that preliminary one-page theme proposals be put on each PICES Committee website to elicit comments by June 1, 2005. The one-page proposals would then be ranked by SB at PICES XIV, and given to GC for review. At the 2006 inter-sessional Governing Council/Science Board meeting, reviews and feedback would be provided by Council, and a tentative topic selected for further discussion at PICES XV in 2006.

#### **ACTION:**

##### **SB Committee Chairmen:**

- 14.1 prepare terms of reference for a new study group;**
- 14.2 solicit nominations for new members, up to a maximum of two, from each member country;**

**14.3 discuss with committee members and prepare one-page themes for the next major integrating program by June 1, 2005 and place on the PICES website for review and comments;**

**14.4 discuss and rank the themes at PICES XIV, and present to Governing Council for review.**

##### **Governing Council:**

**14.5 review and provide feedback to SB at the 4th intersessional meeting in 2006.**

#### **Status of proposed changes in membership for subsidiary bodies (Agenda Item 16)**

MONITOR Chairman, Dr. Phillip Mundy, due to other commitments, was unable to attend this year's SB/GC inter-sessional Meeting, or to continue in his capacity as Chairman. In his place, Dr. Jeffrey Napp (U.S.A.) was unanimously endorsed as MONITOR Chairman by Science Board. Dr. Mundy, who will continue as a member of the Technical Committee, was thanked, *in absentia*, for the contributions he had made. Dr. Orio Yamamura was recommended as Co-Chairman of the AP-MIE. SB unanimously endorsed his nomination.

#### **Status of planned proposals to support PICES activities (Agenda Item 17)**

The Executive Secretary provided updates on funding by the North Pacific Research Board (NPRB) to support PICES activities. In March 2005, NPRB funded the proposal on the Bering Sea Indicators Workshop in the amount of US\$99,957, and approved CDN\$90,000 for the production of the next version of the North Pacific ecosystem status report. Three funding projects (APN, FRA, NMFS) related to the activities of the MODEL Task Team (see Agenda Item 2) have been proposed. Decisions on funding for the APN and FRA proposal are expected some time in April 2005. BIO's 2004-2005 request for funding from NPRB to support MIE-2 was not successful. A proposal for the same activity has been submitted to Canada's Natural Science and Engineering Research

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Council and a decision is expected by summer 2005.

### Capacity building (Agenda Item 18)

Suggestions were made to provide funds to students awarded best presentation and to offer proposal writing courses. This item was also discussed under Agenda Items 1.1 and 7.

### Interactions with other organizations/ programs (Agenda Item 19)

Dr. McKinnell is an *ex officio* member of the PaCOOS Governing Board. PaCOOS is the Pacific Coastal Ocean Observing System of NOAA/Fisheries. It recently established three committees: data management, ocean observing, and data analysis and interpretation. The Board was asked to nominate members to each committee. Science Board suggested that Dr. William Peterson (U.S.A.) could serve as the PICES representative on the ocean observing committee. A full report of PICES interactions will be given at the Annual Meeting.

### PICES communications (Agenda Item 20)

The Executive Secretary described how the Secretariat was asked by Science Board to improve its website/database. It was now endeavouring to increase the "science content" on the site, but needed input from Committees and Working Groups. There has been little or no response from members. Dr. Batchelder, Chairman of the Web Committee, was of the view that he was there for quality control, and that Committee Chairmen were to contribute the content. Council congratulated the Secretariat on the huge improvement of the organization and functionality of its website. Committee Chairmen found it to be timely updated and were satisfied with the fast retrieval of information.

#### **ACTION:**

#### **Committee Chairmen:**

**20.1** Populate committee web pages with interesting science.

### Other items (Agenda Item 22)

PICES Chairman, Dr. Vera Alexander, proposed the development of a new fisheries management science that would take an ecosystem-based approach. PICES could play a lead role in coordinating the main components of this science, either in consort with an ecosystem-based management activity, or as a separate PICES initiative.

BIO Chairman, Dr. Dagg, proposed the concept of green travel, by allowing travelers to calculate air or auto travel in terms of CO<sub>2</sub> production. For awareness purposes, perhaps PICES could list an internet calculator on its website.

Dr. Dagg reported that he will be co-hosting a symposium entitled "*Coastal ecosystem responses to changing nutrient inputs from large temperate and sub-tropical rivers, with emphasis on comparison among Mississippi (U.S), Pearl (China), Yangtze (China), and Rhone (France) Rivers*" in Xiamen, China, in May/June 2005. The next symposium will be held in 2007 or 2008 to discuss impacts of North Pacific rivers on the coastal ocean, and Dr. Dagg inquired if PICES would be interested in co-hosting and sponsoring such a symposium. It was suggested that this request be put forth formally at PICES XIV.

#### **ACTION:**

#### **Dr. Dagg:**

**22.1** Make a formal request at PICES XIV to have PICES co-host/sponsor a symposium on coastal rivers and basins for 2007/08.

**SB-IM Endnote 1**

**Participation list**

Science Board members

Harold P. Batchelder (Co-Chairman, CCCC-IP)  
Michael J. Dagg (Chairman, BIO)  
Michael Foreman (Chairman, POC)  
Yukimasa Ishida (Chairman, FIS)  
Kuh Kim (Chairman, Science Board)  
Suam Kim (Co-Chairman, CCCC-IP)  
Igor I. Shevchenko (Chairman, TCODE)  
John E. Stein (Chairman, MEQ)

Governing Council members and advisors

Vera Alexander (Chairman, PICES)  
Robin Brown (Canada, alternate delegate)  
Lev N. Bocharov (Russia, national delegate)  
George Boehlert (U.S.A., national delegate)  
Dong Sil Park (Korea, alternate delegate)

Chul Park (Korea, national delegate)  
Jae-Soo Park (Korea, advisor)  
Samuel Pooley U.S.A., national delegate)  
Laura Richards (Canada, national delegate)  
Tokio Wada (Japan, national delegate)

PICES Secretariat

Alexander Bychkov (Executive Secretary)  
Stewart M. McKinnell (Deputy Executive Secretary)

Invited Guests

Norman Bartoo (SWFSC, U.S.A.)  
Richard Feely (PMEL, U.S.A.)  
Jeffrey M. Napp (AFSC, U.S.A.)  
Christopher Sabine (U.S.A.)  
Warren Wooster (UW; Past Chairman, PICES)  
Usha Varanasi (NWFSC, U.S.A.)

**SB-IM Endnote 2**

**Science Board/Governing Council inter-sessional meeting agenda**

***Wednesday, April 6, 2005***

1. Welcome, introductions, logistical details, purpose of meeting
2. Updates from Scientific Committees and Programs
  - 2.1 BIO (Dagg)
  - 2.2 FIS (Ishida)
  - 2.3 MEQ (Stein)
  - 2.4 POC (Foreman)
  - 2.5 TCODE (Shevchenko)
  - 2.6 MONITOR (Napp)
  - 2.7 CCCC (Batchelder/Kim)
3. Draft Action Plans for each Scientific Committee and Program and the complete PICES Action Plan
4. Biogeochemical issues within PICES
5. Integration and conclusion of CCCC Program
6. Committee Chairman and Vice-Chairman positions
7. MONITOR Technical Committee
8. High priority PICES activities that are strong candidates for external funding

9. Analysis of performance/input from past and existing PICES working groups

10. Status of proposed publications

***Thursday, April 7, 2005***

11. Status of preparations for PICES XIV
12. Status of proposed inter-sessional workshop/symposia
13. 2005 Wooster Award
14. Process to develop the next major integrating program for PICES
15. High priority PICES activities that are strong candidates for external funding (Agenda Item 8, continued)
16. Status of proposed changes in membership for subsidiary bodies
17. Status of planned proposals to support PICES activities
18. Capacity building actions
19. Interactions with other organizations/programs
20. PICES communications
21. Committee Chairman and Vice-Chairman positions (Agenda Item 6, continued)
22. Other items

## SB Inter-session Meeting-2005

### SB-IM Endnote 3

#### High Priority PICES activities that are strong candidates for external funding

High Priority PICES activities:

Rank	Topic	Show of hands
1	Study Group on <i>Future Integrative Scientific Program(s)</i>	5
1	North Pacific Ecosystem Status Report	5
3	Young Scientists Conference	4
4	International Exchange and Capacity Building	3
5	GOOS integration into PICES	2
6	Matching funds	1