

## REPORT OF ADVISORY PANEL ON CREAMS/PICES PROGRAM IN EAST ASIAN MARGINAL SEAS



The Advisory Panel for a *CREAMS/PICES Program in East Asian Marginal Seas* (hereafter CREAMS-AP) was established in 2005, and met twice during 2006. The first meeting was convened on April 11–12, 2006, in Seoul, Korea, hosted by the Seoul National University, and the second meeting was held on October 15, 2006, at PICES XV in Yokohama, Japan. Recommendations from the 2006 meetings (*CREAMS-AP Endnote 1*) formed the basis for activities in 2007.

In 2007, the Panel had again two meetings: on May 18, in Qingdao, China, hosted by the First Institute of Oceanography of the State Oceanic Administration (*CREAMS-AP Endnote 2*), and on October 27, 2007, at PICES XVI in Victoria, Canada (*CREAMS-AP Endnote 4*).

Both meetings discussed recent results and plans on activities related to the CREAMS/PICES program in China, Japan, Korea and Russia, needs and possibilities for cooperative research and the role of PICES in their coordination, collaboration with existing monitoring efforts and other related organizations/programs in the area, capacity building issues, presentation and publication of the results (*CREAMS-AP Endnotes 3 and 5*). The following is a summary of the outcomes from these meetings (and their relation to the appropriate recommendations (R) from 2006).

### Research activities:

- The Panel agreed on the need to carry out the cooperative physical–biological coupled study related to the recruitment process of pelagic fish and squid in the East China Sea, Yellow Sea, Bohai Sea and Japan/East Sea under the CREAMS/PICES Program. [R1]
- Joint Russian–Korean observations along 132°E will continue. The next survey, organized by the Pacific Oceanological Institute and Seoul National University, is

expected to take place in May 2007, aboard the R/V *Professor Gagarinsky*. [R2]

- Three joint Japanese–Korean cruises with sampling for trace elements (as a part of the Asian GEOTRACERS program), aboard the R/Vs *Hakuho Maru*, *Tansei Maru* and *Nagasaki Maru*, will cover the major part of the Japan/East Sea and the East China Sea in 2008/2009. [R1-R3]
- A joint Chinese–Korean study of the water circulation dynamics and its effects on the marine environment of the Yellow Sea will be proposed to advance our knowledge on this Large Marine Ecosystem and to further cooperative research between the two countries. [R1]

### Capacity building activities:

- The first CREAMS/PICES Summer School on “*Ocean circulation and ecosystem modeling*” (co-sponsored by the Seoul National University, the Korean Ocean and Research Development Institute, the Korean Ministry of Maritime Affairs and Fisheries, the National Fisheries Research and Development Institute, and the Brain Korea 21 (BK 21) Program of the Korean Ministry of Education and Human Resources) was held in August 2006, in Busan, Korea, in conjunction with the CREAMS/PICES workshop on “*Model-data inter-comparison for the Japan/East Sea*”. More than 30 students from 9 countries (including all PICES member countries) attended lectures, seminars and practical exercises. [R4]
- After this successful effort, there is a plan to organize the second CREAMS/PICES Summer School on “*Biomass-based management and ecosystem approach*” to be held from August 23-26, 2008 (tentative dates), at Hokkaido University, in Hakodate, Japan. Potential co-sponsors include: the Japanese Society for Promotion of Science (JSPS), the Hokkaido University Sustainable

Government Project and the Asia Pacific Network. There is an intention to invite to this school young scientists not only from PICES member countries, but also from South East Asian countries. [R4]

- Planning is also in progress for the first CREAMS/PICES Winter School on “*Field survey of sea ice area*”. Originally, the school was proposed to be organized in late February or early March 2008, in Vladivostok, Russia, but it will be postponed for 1 year to resolve funding and logistical problems. [R4]
- The third CREAMS/PICES Summer School on “*Recent methods of investigating red-tide organisms and controlling red tides*” was planned for August 2009, in Busan, Korea. It is now possible that the theme will change to “*Satellite oceanography*”. In 2009, a Korean satellite will be launched so timing for this event is good. [R4]

New funding:

- In order to get financial support for the CREAMS/ PICES international research and capacity building activities, a joint Japanese–Korean–Chinese project entitled “*Marine ecosystem response related to climate change in East Asian marginal seas*” was proposed under the A3 Foresight Program (August 2007–July 2010) to JSPS, KOSEF (Korean Science and Engineering Foundation) and NSF (National Science Foundation) of China. Unfortunately, the proposal was rejected by JSPS, but will be re-submitted next year. [R1-R4]

**CREAMS-AP Endnote 1**

**Recommendations from 2006 CREAMS-AP meetings**

- R1 To support continuation and development of existing national observational programs and, when possible, their coordination, including exchange information on cruise schedules, and data, samples, personnel and equipment sharing;
- R2 To continue Russian–Korean observations along the repeated north–south sections in the Japan/East Sea (JES), and to start

Publications:

- A book on “*Fisheries Oceanography in the Japan Sea*” will be published by the end of 2007 in Russian, with figure captions and tables in both Russian and English. It could be useful to translate this book into English sometime later.
- Manuscripts submitted for a special issue of *Journal of Marine Systems* (Guest Editors: K.-I. Chang, S.-I. Ito, C. Mooers and J.-H. Yoon) resulting from the CREAMS/PICES workshop on “*Model/data inter-comparison for the Japan/East Sea*” are under review. It is expected that the volume will be published in 2008.

CREAMS/PICES Program as a component of FUTURE:

- Plans of the CREAMS/PICES Program as an international integrated multidisciplinary research of the East Asia marginal seas are in accordance with directions for the PICES new PICES scientific program, FUTURE (Forecasting and Understanding Trends, Uncertainty and Responses of North Pacific Ecosystems). The major contribution of the CREAMS/PICES program to FUTURE is a coordination of international activities on a regional level.

Next meetings:

- Two CREAMS-AP meetings are expected to be held in 2008. A spring meeting was planned for April or May in Vladivostok, but will be likely moved to another venue due to funding constraints. A fall meeting will be held at PICES XVII (Dalian, China).

(beginning 2007) Korean–Japanese observations along the repeated west–east sections in the southern part of JES; more ecological parameters should be added to the observational programs;

- R3 To implement a comprehensive international basin-scale survey of JES and adjacent areas in summer 2009; the survey should include hydrographic, chemical and biological

observations, sampling for trace elements (as a part of the Asian GEOTRACERS program), and observations carried out under regional national programs;

- R4 To develop a CREAMS/PICES Capacity Building Program that will provide on-site training through international research at educational laboratories, training camps, inter-calibration centers, *etc.*, and to organize summer and winter schools for students and young researchers;
- R5 To collaborate with NEAR-GOOS on the development of an observing system,

expansion of observational parameters and data sources (*e.g.*, more satellite data), and improvement of international data exchange in the region;

- R6 To strongly support PICES activities related to the development of the GOOS component for the North Pacific;
- R7 To provide frequent updates on progress of the CREAMS/PICES Program via the PICES website, and to publish in 2006 brief information on the program in a special issue of *Oceanography* (by TOS).

### CREAMS-AP Endnote 2

#### Third CREAMS-AP meeting: Participation list (May 18, 2007, Qingdao, China)

##### Members

Toshitaka Gamo (Japan)  
Kyung-Ryul Kim (Korea, Co-Chairman)

Sumei Liu (China)  
Yasunori Sakurai (Japan, Co-Chairman)  
Fei Yu (China)  
Yury I. Zuenko (Russia)

### CREAMS-AP Endnote 3

#### Third CREAMS-AP meeting agenda (May 18, 2007, Qingdao, China)

1. Opening remarks
2. Approval of previous reports and agenda of the meeting
3. National reports on activities and plans related to CREAMS/PICES program
4. Progress on international cooperation on Japan/East Sea studies
  - Japan-Korea cooperation
  - Korea-Russia cooperation
5. Discussion on role of PICES in research coordination
6. Capacity building activities
  - 2008 CREAMS/PICES Summer School
7. Discussion on existing monitoring and data exchange systems in the region
  - NEAR-GOOS, GOOS, GRAND, GEOSS
  - GEOTRACES
8. CREAMS-AP role in FUTURE: EAST-II
9. Miscellaneous items
  - Special publications
  - A3 proposal
  - Next CREAMS-AP meeting and others
10. Closure

### CREAMS-AP Endnote 4

#### Fourth CREAMS-AP meeting: Participation list (October 27, 2007, Victoria, Canada)

##### Members

Yasunori Sakurai (Japan, Co-Chairman)  
Sinjae Yoo (Korea)  
Yury I. Zuenko (Russia)

##### Observers

Kyung Il Chang (Korea)  
Dong-Jing Kang (Korea)  
Kuh Kim (Korea)  
Michio Kishi (Japan)

**CREAMS-AP Endnote 5**

**Fourth CREAMS-AP meeting agenda (October 27, 2007, Victoria, Canada)**

1. Opening remarks (Y. Sakurai)
2. National reports on activities and plans related to CREAMS/PICES program:
  - Korea EAST-1 program: Workshop on the Korean EAST-I Program (June or July 2008, in Seoul)
  - Russian surveys
  - Recent activities of Japan-GLOBEC and projects related to the CREAMS/PICES program
3. Capacity building activities:
  - Korea-China-Japan GLOBEC symposium (December 2007, Hakodate, Japan)
  - CREAMS/PICES Summer School on *Biomass-based management* (August 2008, Hakodate, Japan)
  - CREAMS/PICES Winter School on *“Field survey of sea ice area”* (February or March 2009, Vladivostok, Russia)
  - Workshop on *“Flux studies in marginal seas”* (spring 2009)
    - CREAMS/PICES Summer School on *Recent methods of investigating red-tide organisms and controlling red tides* (planned for 2009 or 2010, Korea)
    - CREAMS/PICES International Research and Educational Laboratory
4. CREAMS-AP role in FUTURE
5. Miscellaneous items:
  - Book on *“Fisheries Oceanography in the Japan Sea”*
  - Special issue of *Journal of Marine Systems* on *“Model-data inter-comparison for the Japan/East Sea”* – set of selected papers from the 2006 CREAMS/PICES workshop
  - 4<sup>th</sup> PICES workshop on *“The Okhotsk Sea and adjacent areas”* (August 2008, Abashiri, Japan)
  - A3 proposal and other proposals
  - Next CREAMS-AP meeting and others
6. Closure