

REPORT OF ADVISORY PANEL FOR A CREAMS/PICES PROGRAM IN EAST ASIAN MARGINAL SEAS



The Advisory Panel for a CREAMS/PICES Program in East Asian marginal seas (hereafter CREAMS-AP) met twice during 2006. The first meeting was convened on April 11–12, in Seoul, Korea, hosted by the Research Institute of Oceanography of Seoul National University (CREAMS-AP Endnotes 1–3). The second brief meeting was held on October 15 at PICES XV (CREAMS-AP Endnotes 4 and 5). This report summarizes discussions and recommendations from both meetings.

Symposia and capacity building in 2006

A very successful CREAMS/PICES workshop and summer school were held consecutively from August 21–25, 2006, in Busan, Korea. The workshop on “*Model/data inter-comparison for the Japan/East Sea*” included 24 presentations in separate sessions on *Observations, Model/data comparisons, Nowcast/Forecast systems, and Ecosystem modeling*, followed by extensive discussion. The workshop was co-sponsored by Seoul National University (SNU), Pukyong National University (PNU), the Korean Ocean and Research Development Institute (KORDI), the Brain Korea 21 (BK 21) Program of the Korean Ministry of Education and Human Resources, and PICES. The workshop proceedings are available on a CD-ROM, and negotiations are underway to publish papers arising from the workshop in a special issue of *Journal of Marine Systems*. A positive response has been received from the Chief Editor, and a proposal is being prepared. This publication is planned for the summer of 2007, and will include approximately 17 papers.

The first CREAMS/PICES summer school was co-sponsored by SNU, KORDI, BK 21, the Korean Ministry of Maritime Affairs and Fisheries (MOMAF), the National Fisheries Research and Development Institute (NFRDI), and PICES. The theme of the summer school

was “*Ocean circulation and ecosystem modeling*”, and there were 7 lecturers from Japan and the United States. Forty-seven applications were received, but space restrictions allowed the selection of only 37 participants. They were from 8 countries (all PICES member countries plus Chile and Indonesia) and included 14 Ph.D. and 11 M.Sc. students, 7 early-career scientists, 4 undergraduate students, and 1 from a private company. Tutorials were also given along with the lectures. Lecture notes and educational materials presented during this summer school can be downloaded from http://www.pices.int/2006_CREAMS_PICES_school.aspx. Future summers schools are planned, but to avoid conflict with the ICES/PICES Early Career Scientists Conference in 2007, the next school will not be until 2008.

A more comprehensive summary of the workshop and summer school was published in *PICES Press*, Vol. 15(1).

Further plans and recommendations

To build an international collaborative observing program for studying hydrography, circulation, and biology of the East Asian marginal seas, their variability, and effect of climate and long-term changes on their abiotic and biotic environments, CREAMS-AP recommends:

1. 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.
2. To continue Russian–Korean observations along the repeated north–south sections in the Japan/East Sea (JES), and to start (beginning 2007) Korean–Japanese observations along the repeated west–east sections in the southern part of JES; more

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- ecological parameters should be added to the observational programs.
3. 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.
 4. 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. Schools would include (tentatively):
 - a. A winter school on “*Field survey of sea ice area*” (February or March 2008, Vladivostok, Russia);
 - b. A summer school on “*Ecosystem-based management and ecosystem approach*”, (August 2008, Hakodate, Japan). At the April CREAMS-AP meeting, this school was proposed for 2007, but it was postponed until 2008 to avoid conflict with the ICES/PICES Early Career Scientists Conference in 2007;
 - c. A summer school on “*Recent methods of investigating red-tide organisms and controlling red tides*” (planned for 2009 in Busan, Korea).
 5. 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.
 6. To strongly support PICES activities related to the development of the GOOS component for the North Pacific.
 7. 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).
- An Action Plan for implementing these recommendations can be found in *CREAMS-AP Endnote 3*.

Next CREAMS-AP meeting

It was proposed to hold the next CREAMS-AP meeting in March or April 2007, in Qingdao, China.

CREAMS-AP Endnote 1

Participation list (April 11-12, 2006, Seoul, Korea)

Members

Toshitaka Gamo (Japan)
Kyung-Ryul Kim (Korea, Co-Chairman)
Jae-Hak Lee (Korea)
Sumei Liu (China)
Vyacheslav B. Lobanov (Russia)
Yasunori Sakurai (Japan, Co-Chairman)

Pavel Ya. Tishchenko (Russia)
Yury I. Zuenko (Russia)

Observers

Kyung-Il Chang (Korea)
Dong-Jin Kang (Korea)
Kyung-Ae Park (Korea)

CREAMS-AP Endnote 2**CREAMS-AP meeting agenda (April 11–12, 2006, Seoul, Korea)**

1. Opening remarks
2. National report on activities and plans related to the CREAMS/PICES program in Japan, Korea, Russia and China:
 - a. Overview of Japan-GLOBEC and research projects related to the CREAMS/PICES program in Japan (Y. Sakurai)
 - b. Perspectives on geochemical studies in Japan related to EAST-I (T. Gamo)
 - c. Korean East Asian Seas Time-Series-1 (EAST-I) (K.-R. Kim)
 - d. EAST-I activity in KORDI (J.-H. Lee)
 - e. Activities related to the CREAMS/PICES program at POI (V. Lobanov)
 - f. Impact of near-bottom geochemical processes on hydrochemical properties of the Japan/East Sea (P. Tishchenko)
 - g. TINRO surveys in 2005 and future perspectives (Y. Zuenko)
 - h. A brief introduction to time-series work in China's seas (S. Liu)
3. Discussion on how to coordinate these activities and the role of PICES
4. Capacity building:
 - a. CREAMS/PICES workshop on “*Model/data inter-comparison for the Japan/East Sea*” and summer school on “*Ocean circulation and ecosystem modeling*” (K.-I. Chang)
 - b. Summer school on “*Recent methods of investigating red-tide organisms and controlling red tides*” (K.-R. Kim)
 - c. CREAMS/PICES Capacity Building Program: International Research and Educational Laboratory (V. Lobanov)
5. Discussion on monitoring and data exchange systems in the region: Development of NEAR-GOOS, GOOS, GRAND and GEOSS projects (V. Lobanov)
6. Role of CREAMS-AP in FUTURE (new integrative science program of PICES)
7. Miscellaneous items:
 - a. Special issue of *Oceanography* on the CREAMS-II program results
 - b. Other issues
8. Summary and next actions

CREAMS-AP Endnote 3**List of actions proposed at the first CREAMS-AP meeting (April 11–12, 2006, Seoul, Korea)**

No.	Subject	Item	Action proposed	Responsible	Target date
1	Support for existing national observational programs and their possible international coordination	2	Request relevant agencies to continue existing national observational programs and recommend their international coordination, when possible, including exchange of information on cruise schedules, data, samples, personnel and equipment sharing	All members	When feasible
2	Repeated sections by Japan and Korea	2	Discuss feasibility and plans for joint observations along repeated west–east sections in the southern part of JES	Y. Sakurai	October 2006
3	International survey of JES and adjacent areas in 2009	2	Discuss plans for an international basin-scale survey of JES and adjacent areas in summer 2009, including Asian GEOTRACERS component	T. Gamo, all members	When feasible

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4	Summer school on “ <i>Ecosystem-based management and ecosystem approach</i> ”	4	Investigate feasibility of holding a summer school in 2007, in Japan, and, if positive, present a proposal for sponsorship to FIS and BIO Committees	Y. Sakurai	October 2006
5	Summer school on “ <i>Recent methods of investigating red-tide organisms and controlling red tides</i> ”	4	Present a proposal to sponsor a summer school in 2008 or 2009, in Korea to PICES MEQ Committee	K.-R. Kim	October 2006
6	International research and educational laboratory	4	Discuss a suggestion on establishing a CREAMS/PICES international research and educational laboratory at the next CREAMS-AP meeting	V. Lobanov, all members	October 2006
7	Collaboration with GOOS	5	Inform MONITOR Committee on CREAMS-AP interest in collaborating with GOOS and NEAR-GOOS, and support PICES activities related to the development of the GOOS component for the North Pacific	K.-R. Kim, Y. Sakurai	October 2006
8	Introduction of the CREAMS/PICES Program	7	Contact TOS or PICES Secretariat to publish a brief introduction of the program in a special issue of <i>Oceanography</i> or in <i>PICES Press</i>	K.-R. Kim	ASAP
9	Website	7	Consult with the PICES Secretariat on possibility of using the PICES website for information (frequent updates) on CREAMS/ PICES program development	K.-R. Kim, All members	ASAP, when feasible
10	Next meeting	8	Consult with the PICES Secretariat on possibility of holding a CREAMS-AP meeting at PICES XV in October 2006	K.-R. Kim	ASAP

CREAMS-AP Endnote 4

Participation list (October 15, 2006, Yokohama, Japan)

Members

Naoki Iguchi (Japan)
 Kyung-Ryul Kim (Korea, Co-Chairman)
 Vyacheslav B. Lobanov (Russia)
 Yasunori Sakurai (Japan, Co-Chairman)

Yury Zuenko (Russia)
 Sinjae Yoo (Korea)

Observer

Takuya Kawanishi (Japan)

CREAMS-AP Endnote 5**CREAMS-AP meeting agenda (October 15, 2006, Yokohama, Japan)**

1. Opening remarks
2. National report on activities and plans related to CREAMS/PICES program in Japan, Korea and Russia
3. Discussion on how to coordinate these activities and role of PICES
4. Capacity building:
 - a. Report on CREAMS/PICES workshop on “*Model/data inter-comparison for the Japan/East Sea*” and summer school on “*Ocean circulation and ecosystem modeling*” (August 2006, Busan, Korea)
 - b. Winter school on “*Field survey of sea ice area*” (February or March 2008, Vladivostok, Russia)
 - c. Summer school on “*Ecosystem-based management and ecosystem approach*”, (August, 2008, Hakodate, Japan)
 - d. Summer school on “*Recent methods of investigating red-tide organisms and controlling red tides*” (planned for 2009)
 - e. Progress report on CREAMS/PICES Capacity Building Program: International Research and Educational Laboratory (V. Lobanov)
5. Discussion on monitoring and data exchange systems in the region (V. Lobanov)
6. Role of CREAMS-AP in FUTURE (new integrative science program of PICES)
7. Next CREAMS-AP meeting

