

## **2024 Reports of the Advisory Panel for a Circulation Research in East Asian Marginal Seas (AP-CREAMS)**

**1. Intersessional business meeting on July 26, 2024, 09:30-11:50 (UTC+9), SNU Hoam Faculty House, Seoul, Republic of Korea (in-person and online)**

### **1.1. Opening remarks, introduction of the participants, adoption of the agenda, rapporteur**

The hybrid meeting was opened by SungHyun Nam, Co-Chair of AP-CREAMS, on July 26 at 9:30 AM in Seoul, South Korea (and ZOOM online link). There were 11 participants in the meeting (*Endnote 1*).

### **1.2. Presentations on AP-CREAMS ToR and activities, for new members (V Lobanov)**

Slava provided previous AP-CREAMS activities and history. 2024 is the last year of AP-CREAMS activity under POC and MONITOR. A new application for continuous activities and its processes (acceptance of science board etc.) are explained. Slava also explained AP-CREAMS research area, activities, and previous observational activities for new AP-CREAMS participants.

Future plans for AP-CREAMS were suggested: coordinated cruises and surveys; broadening the scope of AP (in accordance with SEES); closer collaboration with other PICES EGs and regional marine science international organisations; UNDOS (importance of education and ECOP activities); establishing CREAMS webpage; establishing CREAMS database; publications (e.g., PICES report, NPESR-3 chapter); training courses.

### **1.3. Completion of previous business**

#### **1.3.1. Development of AP-CREAMS Website and database (SH Nam)**

SungHyun updated the current status of CREAMS webpage development. It was intended to, among other things, deliver multidisciplinary data (including metadata) and information on previous/on-going programs, basic statistics of data, all tools for data processing. This covers broader Asian Marginal Seas (AMS) science (considering broader demand by the IOC/WESTPAC AMS program as well as PICES AP-CREAMS) and both national and international programs as well as general background and tools. It was recently stopped, due to funding issues, but SungHyun introduced a test page. Once

the funding is secured, the webpage development will be re-initiated considering previous feedback from the AP-CREAMS members.

-Comment from Yoshida: NOWPAP wants to build a collaboration/develop a partnership with CREAMS to support databases. NOWPAP can provide funding information.

-Question and comments from Slava: Are all of the links available? Compared to AMS information, there is some lack of information about the AP-CREAMS. This needs to be highlighted.

### 1.3.2. Preparation of the AP-CREAMS session for PICES 2024 (SH Nam)

We have S6 (Session 6), Half-day session with nine oral presentations including one invited talk (Seongbong Seo), and one poster presentation.

-Comment from Slava: 30th CREAMS anniversary was in 2023, and we had a plan to organize the anniversary session that year. However, because PICES-2023 was in Seattle (USA), the number of participants interested in CREAMS may have been limited compared to when the annual meeting is in an Asian country. We, therefore, moved our session to 2024, expecting PICES-2024 to be held in an Asian country which was not the case. In 2025, it will be held in Japan (Yokohama) so we can also propose a CREAMS related session, expecting more Asian participants.

### **1.4. Update on international and national CREAMS related activity**

- (China) Yu Fei briefly introduced the situation in China: cruises for East China Sea (ECS) and Yellow Sea are relatively few compared to the ones in South China Sea. The Chinese government accepted three cruises in the ECS/Yellow Sea, but there are EEZ problems covering the whole area. Several new projects have been proposed, but nothing has been decided.

-Question from Slava: What are those new projects? A) There were some coastal ocean projects finished in 2010 and some scientists proposed the research again.

-Question from S. Nam: If we would like to coordinate joint cruises, how early should we suggest collaboration? A) Large cruises are decided at least three years before the cruise. It is difficult to know the schedule because it is decided by the government but agree that communication and collaboration are important.

-Comment from Slava: Under PICES umbrella, we can try to solve the EEZ problem.

Su Mei introduced a progress of Chinese marginal seas program as a part of IMBER activity. She introduced two examples: a study of nutrient characteristics from Bohai Sea (Liang et al., 2023) and another of two-decade variations of nutrients in precipitation in Yellow Sea (Zhang et al., 2024). She also mentioned a plan to study the Kuroshio Extension Region in August and October 2024. Ocean University of China along with other universities and

institutions will join the cruise.

- (Japan) Jing Zhang introduced a national report from Japan and previous/up-coming cruises. There will be the Geotracers cruise in 2025 to the Bering Sea and there are a few available seats.

Shinichiro Kida reported about the project of Yutaka Igeta with regular cruise observations in the EAST-I area and the recent cruise, completed in April 2024, studying snow-crabs and phytoplankton. He also mentioned another project studying the air-sea interaction, heatwave, and heavy rain in the Southwest Kyushu, East China Sea.

- (Russia) Slava updated that there are not many studies in marginal seas. But there is one cruise that was just completed in the Okhotsk Sea and area east of Japan focused on study of Fukushima-1 NPP impact on the ocean, measuring radioisotopes in water samples. There is another cruise Pavel designed to repeat WOCE W01 line crossing the Okhotsk Sea to Pacific to understand marine systems and physical and biogeochemical properties (including isotopes, etc.).

### **1.5. Cooperation with other activity programs/organizations in the region**

- (IMBeR) Su Hui Qian briefly introduced IMBeR task team members, key issues, and the Chinese marginal seas case study group. Some introduction on Eutrophication Study Group (IMBeR ESG), their activities (e.g., eight online meetings), and one regional program, ESSAS (ecosystem studies of subarctic and arctic seas), was added.
- (WESTPAC) Jing Zhang provided a brief introduction about the WESTPAC Asian Marginal Seas program. They are using seven tools to solve two key projects, and also working on training, meeting, and conference activities. A session on AMS was organized in April 2024 at the 11<sup>th</sup> WESTPAC Scientific conference and attracted more than 40 abstracts. They will prepare a new special issue in Progress in Oceanography based on this session (deadline 15 January 2025), which is open now.
- (NOWPAP) Takafumi Yoshida updated that all NOWPAP activities are terminated (last month) and new activities cannot be started for now. To continue activities, the regional coordinating unit requested all member states revise programs for 2024/2025. Currently they are waiting for the agreement of all countries to propose and restart NOWPAP activities if approved.

### **1.6. Future activity of the AP**

#### 1.6.1 Proposals for scientific sessions or workshops for PICES 2025-2026 Annual Meetings

SungHyun suggested organizing a science session to present research results and to include human dimensions and Slava supported this proposal. Considering the location,

there are likely to be more Asian participants. After checking the deadline, AP will organize an online meeting in late September or early October and discuss the proposal in more detail (i.e., title, topic, conveners etc.)

#### 1.6.2 Proposals for intersessional meetings/workshops

This is becoming more difficult.

#### 1.6.3 Proposals for CREAMS publications

Minkyong suggested a special issue including papers using the data provided by the CREAMS database. Slava suggested that we can make a PICES press article to inform about AP activity, the 30<sup>th</sup> Anniversary of CREAMS program, and to share our webpage and database.

#### 1.6.4 Proposals for CB

No proposals

#### 1.6.5 Others

Ryan visited KIOST in Korea recently and learned about the collaboration between NOAA-KIOST. NOAA is preparing a workshop proposal now.

### **1.7. Other matters**

None

### **1.8. Next AP-CREAMS meeting**

- On-line meeting: necessary to plan future activities of the AP and justification for continuation of the AP term, including proposals of scientific sessions and workshops for PICES 2025-2026 (TBD: but before October)
- Upcoming business meeting during the PICES 2024 is planned on morning of October 26 and will be in hybrid format.

### **1.9. Summary and closing**

The meeting was adjourned at 11:50 AM.

**Business meeting on October 27, 2024**, 09:00-12:30 (UTC-10), Hawaii Convention Center, Honolulu, Hawaii, USA (in-person and online)

## **2.1. Opening remarks, introduction of the participants, adoption of the agenda, rapporteur**

The hybrid meeting was opened by SungHyun Nam, Co-Chair of AP-CREAMS, on October 27, 2024, 09:00-10:50 (UTC-10), at the Hawaii Convention Center in Honolulu, Hawaii (in-person). There were 12 in-person participants (*Endnote 1*). There were no online participants because of the late hour in Asia. SungHyun proposed the agenda, and all participants agreed. Minkyoung served as the reporter.

## **2.2. Review on previous reports**

SungHyun provided an overview of the previous meetings (including the updated Terms of Reference) held in July and September for the members and observers.

## **2.3. Completion of previous business**

### 2.3.1. Development of AP-CREAMS Website and database

SungHyun updated the on-going development of the website and database (some challenges related to funding).

### 2.3.2. Preparation of the AP-CREMAS session for PICES 2024

We have scheduled S6 (Session 6), a half-day session with 10 oral presentations.

## **2.4. Update on international and national CREAMS related activity since the 2nd business meeting**

- (China) Yu Fei mentioned that there are currently no international activities, but national activities include cruises every year in Bohai Sea, Yellow Sea, and East China Sea.
- (Japan) Yosuke Igeta provided an update on monitoring activities and the GTSP database in Japan. Yu Fei expressed interest in the satellite detectability of warm eddies (available with SSH). SungHyun suggested linking the GTSP with the CREAMS database later. Ryan inquired about biogeochemistry data, nothing that only temperature and salinity are currently available.
- Ryan shared news about an upcoming cruise from JMA (Japan Meteorological Agency) scheduled for February to March 2025, along the meridional line from Japan to Palau, and questioned the possibility of any connection to AP-CREAMS; well within the updated CREAMS coverage.

## **2.5. Cooperation with other activity programs/organizations in the region**

No updates but IMBER, IOC WESTPAC, NOWPAP updated in the last business meeting.

## **2.6. Future activity of the AP**

### 2.6.1 Proposals for scientific sessions or workshops for PICES 2025-2026 Annual Meetings

- Minkyoungh requested clarification on the differences between a workshop and a session. SungHyun and Ryan provided insights, and it was decided to proceed with a session to bring more attendees from outside the AP-CREAMS community.
- Under SungHyun's lead, we edited the proposal for a session first suggested by Slava.
- Potential conveners include Vyacheslav Lobanov, SungHyun Nam, Minkyoungh Kim, and Takafumi Yoshida (TBD).

### 2.6.2 Proposals for intersessional meetings/workshops

No proposals at this time.

### 2.6.3 Proposals for CREAMS publications

SungHyun suggested that a new CREAMS publication (special issue) could be developed once the database is ready.

### 2.6.4 Proposals for CB

SungHyun suggested offering AI technology-related training courses, and Ryan agreed.

### 2.6.5 Others

None

## **2.7. Other matters**

None

## **2.8. Next AP-CREAMS meeting – (2025) intersessional meeting**

-Yu Fei mentioned online meeting would be easier due to travel difficulties, but also suggested to visit Qingdao, China (Yu Fei can host 😊). Details will be determined via email.

## **2.9. Summary and closing**

The meeting was adjourned at 10:30 AM.

***AP-CREAMS Endnote 1***

AP-CREAMS participation list

July 26, 2024 Meeting

Members

Fei Yu (China, Co-Chair)

SungHyun Nam (Korea, Co-Chair)

Vyacheslav Lobanov (Russia,  
Co-Chair)

Su Mei Liu (China, online)

Shinichiro Kida (Japan)

Jing Zhang (Japan, Co-Chair, online)

Minkyong Kim (Korea)

Pavel Ya. Tishchenko (Russia)

Ryan Rykaczewski (USA, online)

Observers:

Suhui Qian (IMBER, online)

Takafumi Yoshida (NOWPAP)



Participants of the AP-CREAMS annual meeting on July 26, 2024. Left to right: Fei Yu (China), SungHyun Nam (Korea), Minkyong Kim (Korea), Vyacheslav Lobanov (Russia), Pavel Ya. Tishchenko (Russia), Shinichiro Kida (Japan), Takafumi Yoshida (Japan)

October 27, 2024 Meeting

Members

Fei Yu (China, Co-Chair)

SungHyun Nam (Korea, Co-Chair)

Yosuke Igeta (Japan)

Shinichiro Kida (Japan)

Minkyong Kim (Korea)

Gwang Ho Seo (Korea)

Ryan Rykaczewski (USA)

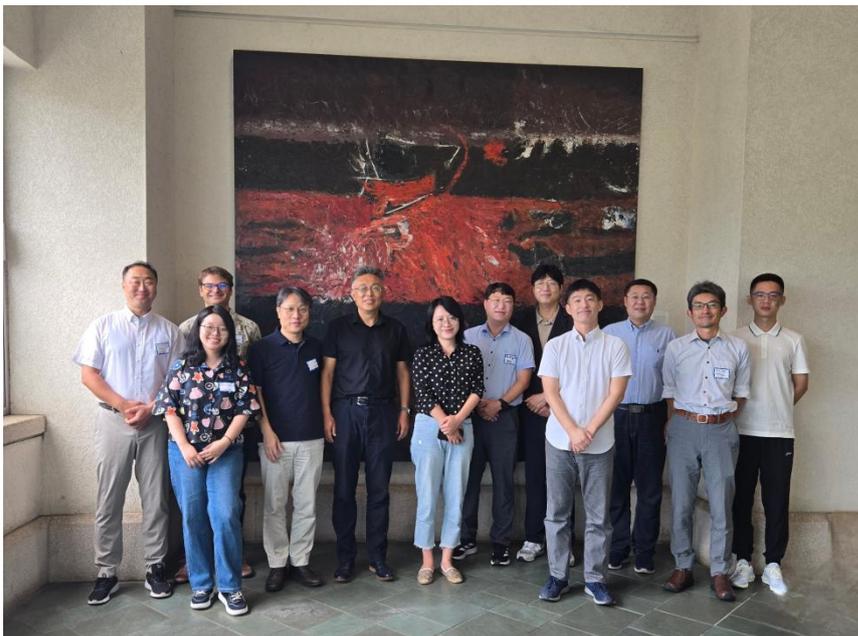
Observers:

China: Xingchuan Liu, Diao Xinyuan,

Yi Xu

Korea: Kwang-Young Jeong, Joon-Soo

Lee



Participants of the AP-CREAMS business meeting on October 27, 2024. Left to right: Kwang-Young Jeong (Korea), Ryan Rykaczewski (USA), Minkyong Kim (Korea), SungHyun Nam (Korea), Yu Fei (China), Yi Xu (China), Gwang Ho Seo (Korea), Joon-Soo Lee (Korea), Shinichiro Kida (Japan), Diao Xinyuan (China), Yosuke Igeta (Japan), Xingchuan Liu (China)

## ***AP-CREAMS Endnote 2***

### AP-CREAMS meeting agenda

Intersessional business meeting July 26, 2024, 09:30-11:50 UTC+9, SNU Hoam Faculty House, Seoul, Republic of Korea (and online)

1. Opening remarks, introduction of the participants, adoption of the agenda, rapporteur (AP co-chairs)
2. Presentation on AP-CREAMS ToR and activities, for new members (V Lobanov)
3. Completion of previous business
  - 3.1. Development of AP-CREAMS Web Site and database (SH Nam)
  - 3.2. Preparation of the AP-CREAMS session for PICES 2024 (SH Nam)
4. Update on international and national CREAMS related activity (China, Japan, Korea, Russia) – *all members provide voluntary brief information on ongoing activities in the CREAMS area*
5. Cooperation with other active programs/organizations in the region
  - 5.1 IMBER (SM Liu)
  - 5.2 WESTPAC (SH Nam)
  - 5.3 NOWPAP (T Yoshida)
  - 5.4 Others
6. Future activity of the AP:
  - 6.1 Proposals for scientific sessions or workshops for PICES 2025-2026 Annual Meeting
  - 6.2 Proposals for inter-sessional meetings/workshops
  - 6.3 Proposals for CREAMS publications
  - 6.4 Proposals for CB
  - 6.5 Other
7. Other matters
8. Next AP-CREAMS meeting
9. Summary and closing