

REPORT OF THE TECHNICAL COMMITTEE ON MONITORING

The Technical Committee on Monitoring (hereafter MONITOR) met from 14:00–18:00 h on October 27, 2010, under the chairmanship of Dr. Hiroya Sugisaki. Twelve committee members were present, and a total of 15 scientists from 5 PICES member countries were in attendance (*MONITOR Endnote 1*). The meeting agenda (*MONITOR Endnote 2*) was very full and business was conducted at a brisk pace.

AGENDA ITEM 2

Status of FUTURE

Three FUTURE Advisory Panel members from MONITOR, Drs. Vyacheslav Lobanov (COVE-AP), Young-Jae Ro (AICE-AP) and Phillip Mundy (SOFE-AP) and Hiroya Sugisaki (Science Board member) attended the joint Advisory Panel meeting held on October 22, 2010. The workshop on multiple stressors for the next Annual Meeting and new expert groups connected to the FUTURE program were proposed by the FUTURE Advisory Panels. MONITOR agreed with their proposals.

AGENDA ITEM 3

North Pacific Ecosystem Status Report

The Chairman was grateful to all Committee members for their cooperation and participation in the completion the second version of the North Pacific Ecosystem Status Report (PICES Special Publication 4, 2010). Dr. Lobanov, lead author of a chapter that was not included in the Report, explained that the collected manuscripts of 12 co-authors will be published elsewhere in the future.

AGENDA ITEM 4

Progress reports

Integrated Framework for Sustained Ocean Observation Task Team (IFSOO-TT)

On behalf of the representative Task Team member from PICES, Dr. David Checkley, Dr. Sugisaki, reported on the activities of IFSOO-TT, established as a post-OceanObs09 expert group to study the outcomes of the conference. MONITOR is cooperating with the Task Team by documenting the ocean monitoring activities of PICES member countries.

Sustaining Arctic Observing Network (SAON)

On behalf of *ex-officio* MONITOR member and Chairman of SAON, Dr. John Calder, Dr. Sugisaki reported on the activities of SAON. SAON activities were also introduced at the MONITOR-sponsored Topic Session on “*Development and use of ocean observing and forecasting systems in coastal and marine management*” (S15) at PICES-2010.

ICES-GOOS

Dr. Mundy attended an ICES-GOOS Steering Group meeting on April 20–21, 2010 at Woods Hole, U.S.A. to discuss the Topic Session on “*Development and use of ocean observing and forecasting systems in coastal and marine management*” co-sponsored by ICES to be held at the PICES 2010 Annual Meeting and to explore ways to build on the continuing relationship between ICES and PICES in ocean observing activities. Dr. Jonathan Hare attended on behalf ICES and recommended that MONITOR establish working relations with ICES observational committees, such as the Working Group on *Ocean Hydrography* (WGOH) and the

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Working Group on *Operational Oceanographic Products for Fisheries and Environment* (WGOOFE) (see *MONITOR Endnote 3*).

Advisory Panel on Continuous Plankton Recorder Survey in the North Pacific (CPR-AP)

Dr. Sonia D. Batten presented a report of the scientific accomplishments and present status of the North Pacific Continuous Plankton Recorder (CPR) project on behalf of CPR-AP Chairman, Dr. Mundy. In spite of the difficult funding situation, the importance of CPR is becoming larger as the body of published work increases. Although not optimum, the funding situation is stable for the next two years. Efforts to procure more funding will benefit from the continued endorsement of PICES. Dr. Sanae Chiba reported on the joint research project between the Sir Alister Hardy Foundation for Ocean Sciences (SAHFOS) and Japan, analyzing the cross-Pacific CPR samples. This project has started last year, and it is progressing as planned.

Advisory Panel for a CREAMS/PICES Program in East Asian Marginal Seas

A summary of the CREAMS-AP business meetings, held May 11, 2010 and October 23, 2010 was presented by Dr. Lobanov.

North East Asian Regional Global Ocean Observing System (NEAR-GOOS)

Dr. Lobanov reported that NEAR-GOOS is operational.

AGENDA ITEM 5

PICES Ocean Monitoring Service Award (POMA)

The Committee Chairman reviewed the role of MONITOR to nominate and recommend candidates for POMA to the Science Board.

AGENDA ITEM 6

National reports

The following Committee members from five member countries made short presentations on national monitoring activities relevant to PICES:

- Canada: Drs. David Mackas and Jennifer Boldt
- Japan: Drs. Sei-Ichi Saitoh, Chiba and Hiroya Sugisaki
- Korea: Drs. Young Jae Ro and Kwang Soon Park
- Russia: Drs. Vyacheslav Lobanov and Vladimir Kulik
- United States: Drs. Phillip Mundy, Jeffrey Napp and John A. Barth

AGENDA ITEM 7

Best Presentation awards

MONITOR was assigned responsibility to judge the Topic Session on “*Development and use of ocean observing and forecasting systems in coastal and marine management*” (S15). The Chairman thanked those who volunteered in advance for their service.

Dr. Hisashi Yamaguchi (Nagoya University, Japan) was awarded the MONITOR Best Poster Award for his poster (co-authored by Young Beak Son, Eko Siswanto, Joji Ishizaka, Shinjae Yoo, Yu-Hwqan Ahn, Sang Woo Kim, Junwu Tang, Hiroshi Kawamura and Yoko Kiyomoto) on “*Variation of satellite chlorophyll a in the East China Sea based on local satellite algorithm with reduced influence from suspended sediment*”.

Unfortunately, there were no presenters applicable to receive the MONITOR Best Presentation award (early career scientist) this year.

AGENDA ITEM 8

Planning for PICES-2011 and inter-sessional meeting

MONITOR strongly supported the following two proposals for PICES 2010 annual meeting:

1. Dr. Barth proposed a 1-day joint Topic Session with FUTURE-AP entitled “*How well do our models really work and what data do we need to check and improve them?*” (*MONITOR Endnote 4*).
2. Dr. Lobanov proposed a 1-day workshop on “*Recent Advances in Monitoring and Understanding of Asian Marginal Seas: 5-years of CREAMS/PICES EAST-I Program*” [The duration of this workshop was later revised to ¾-day] (*MONITOR Endnote 5*).
3. The Committee members agreed that one MONITOR representative should attend the next ICES GOOS-related meeting.

AGENDA ITEM 9

Report of MONITOR elections

Dr. Hiroya Sugisaki was re-elected as Chairman for a second term and Dr. Phillip Mundy was elected as Vice-Chairman.

MONITOR Endnote 1**Participation list**Members

John A. Barth (U.S.A)
 Jennifer Boldt (Canada)
 Sanae Chiba (Japan)
 Vladimir Kulik (Russia)
 Vyacheslav Lobanov (Russia)
 David L. Mackas (Canada)
 Phillip R. Mundy (U.S.A., Vice-Chairman)
 Jeffery Napp (U.S.A)
 Kwang Soon Park (Korea)
 Young Jae Ro (Korea)
 Sei-Ichi Saitoh (Japan)
 Hiroya Sugisaki (Japan, Chairman)

Observers

Sonia D. Batten (Canada, CPR-AP)
 Jonathan Hare (U.S.A, ICES-GOOS)
 Carrie Holt (Canada)

MONITOR Endnote 2

MONITOR meeting agenda

1. Welcome, Introductions and Sign-in (All)
2. Report on the meeting of FUTURE on 22nd, Friday (AICE: Ro, COVE: Lobanov, SOFE: Mundy)
3. North Pacific Ecosystem Status Report-II (will be distributed at the Portland meeting) (All)
 - i. report on the synthesis workshop in Honolulu
 - ii. overview of MONITOR activities for NPESR-II
4. Reports on corresponding MONITOR
 - i. Report on IFSOO-TT (Integrated Framework for Sustained Ocean Observation Task Team: post Ocean Obs. '09 activity) (Sugisaki)
 - ii. Report on SAON meeting (Calder, Sugisaki)
 - iii. Report on ICES-GOOS Steering Group meeting (Mundy)
 - iv. Status of Pacific CPR program and advisory panel (Mundy)
 - v. Status of CREAMS w. POC & report on the NPESR workshop on status and trends on the East Asian Marginal Seas (Lobanov)
 - vi. Status of NEAR-GOOS activities (Lobanov)
5. Report on POMA (Sugisaki)
6. National reports of relevant monitor/observation activities
 - Canada (Boldt, Mackas)
 - China (Zhang, Zhao)
 - Japan (Chiba, Saitoh, Sugisaki)
 - Korea (Park, Ro, Suh)
 - Russia (Kulik, Lobanov)
 - United States (Barth, Mundy, Napp)
7. Judges for PICES 2010 Best Paper awards (All)
8. Proposals for PICES 2011 MONITOR Topic Sessions, workshops, inter-sessional meetings (All)
9. Election of MONITOR Chairman and Vice-Chairman (All)
10. Other business

MONITOR Endnote 3

MONITOR participation in ICES GOOS Steering Group (IGSG) meeting

PICES was represented at an ICES GOOS Steering Group (IGSG; Dr. Jonathan Hare, Chairman) meeting in Woods Hole, Massachusetts April 20–21, 2010 by MONITOR Vice-Chairman, Phillip Mundy. Two additional observers from U.S. ocean observing activities participated. Three IGWG members participated from two countries; in addition two members participated by correspondence. Dr. Mundy also attended the second day of the IGWG meeting which was held jointly with the Working Group on the *Northwest Atlantic Regional Sea*. The purpose of this joint meeting was to increase the interaction between ocean observing activities in the western North Atlantic. During the first day of the IGSG meeting, the overall structure of GOOS and Regional Alliances was discussed and a variety of activities across the Atlantic was presented.

The following is a summary of PICES activities relative to GOOS was presented by Dr. Mundy:

- The North Pacific Marine Science Organization (PICES) will have its 2010 Annual Meeting from October 22–31, 2010, at the Oregon Convention Center, Portland, Oregon, U.S.A. A joint ICES-PICES Theme Session on ocean observing will be held (see Agenda Item 4, ICES-GOOS).
- FUTURE (Forecasting and Understanding Trends, Uncertainty and Responses of North Pacific Marine Ecosystems) is a program established by PICES that will address three key questions: (1) What determines an ecosystem's intrinsic resilience and vulnerability to natural and anthropogenic forcing?; (2) How do ecosystems respond to natural and anthropogenic forcing, and how might they change in the future?; (3) How do human activities affect coastal ecosystems and how are societies affected by changes in these ecosystems?

- One activity of FUTURE and MONITOR are cross-Pacific CPR transects. These activities are coordinated with SAHFOS and progress was reviewed.

In accord with its term of reference 5(c), IGWG agreed to continue its participation with PICES in the form of a jointly sponsored Topic Session entitled “*Development and use of ocean observing and forecasting systems in coastal and marine management*” to be held at PICES-2010 Portland, Oregon, as presented by MONITOR Vice-Chairman, Dr. Mundy. The ICES Keynote speaker will be Dr. Glenn Nolan from the Working Group on Oceanic Hydrography.

On the second day of the IGWG meeting, the status of the observing systems in the northwest Atlantic was reviewed in a series of presentations by the Working Group on the *Northwest Atlantic Regional Sea* (WGNARS). The WGNARS report is available at <http://www.ices.dk/reports/SSGRSP/2010/WGNARS10.pdf>.

MONITOR Endnote 4

Proposal for a 1-day Topic Session at PICES-2011 on “How well do our models really work and what data do we need to check and improve them?”

Given the importance of models to FUTURE, it is important to examine their skill and utility through comparison with data. Models are being used to study and forecast physical (atmospheric and oceanic circulation and mixing), chemical (air-sea fluxes, dissolved oxygen), biological (primary production, trophic dynamics) and fisheries (individual based modeling, migration pathways) processes. Climate forcing and coupling between processes is of prime importance. We invite presentations over the range of modeling scales, from local to global, and from hours to decades. Contributions are also welcome identifying data sets that we currently have that are helpful for assessing model skill and what new data sets are needed and might be obtained through ocean observing efforts. Discussions of uncertainty in model predictions and ways to reduce that uncertainty are also invited.

Co-sponsors: MONITOR, POC, FUTURE and IMBER

Recommended Convenors: John (Jack) Barth (U.S.A), Young-Jae Ro (Korea), Phillip Mundy (U.S.A), Sei-Ichi Saitoh (Japan), Michael Foreman (Canada), and Dake Chen (China)

MONITOR Endnote 5

Proposal for a 1-day Workshop at PICES-2011 on “Recent Advances in Monitoring and Understanding of Asian Marginal Seas: 5-years of CREAMS/PICES EAST-I Program” [later revised to ¾-day]

Under the auspices of the EAST-I program initiated and supervised by the CREAMS/PICES Advisory Panel, scientists from Japan, Korea, and Russia have carried out many successful cruises in the east Asian marginal seas over the last 5 years. With the active discussion and promotion by CREAMS/PICES of a new EAST-II program focusing on the Yellow and East China Seas, it is timely to have a forum summarizing some important results obtained by the international cooperative efforts of EAST-I. This session welcomes studies on hydrography, circulation, and ecology and their variability in East Asian Marginal Seas in the PICES area and on effect of climate and long-term changes in the abiotic and biotic environments of this region.

Co-sponsors: POC, MONITOR and TCODE

Recommended Convenors: Kyung-Il Chang (Korea), Toshitaki Gamo (Japan), Young-Shil Kang (Korea) Kyung-Ryul Kim (Korea), and Vyacheslav Lobanov (Russia)