

Report of the Technical Committee on Monitoring

The Technical Committee on Monitoring (hereafter MONITOR) met from 18:00–19:30 h on October 16, and from 14:00–18:30 hours on October 19, 2011, under the chairmanship of Dr. Hiroya Sugisaki. 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 ITEMS 2 AND 10

Information and discussion for PICES-2011

MONITOR was assigned to judge the MONITOR/POC/FUTURE-sponsored topic session on “*How well do our models really work and what data do we need to check and improve them?*” (S9) by the Science Board Chairman. Dr. Sugisaki thanked the volunteer judges in advance for their service.

Dr. Naoki Yoshie (Ehime University, Japan) was awarded the MONITOR Best Presentation for his talk (co-authored by Xinyu Guo, Naoki Fujii and Tomohiro Komorita) on “*Phytoplankton and nutrient dynamics in the western Seto Island Sea based on observation and a modified NEMURO*”, and Dr. Vladimir Kulik was given the MONITOR Best Poster award for his presentation (co-authored by Igor Volvenko) on “*North Pacific database of pelagic and bottom trawl surveys from Russian EEZ applicable to Ecosystem based management*”.

AGENDA ITEM 3

Advisory Panel reports

Dr. Phillip Mundy, Chairman of the Advisory Panel on *Continuous Plankton Recorder Survey* (AP-CPR), reported on the Panel meeting held on October 15. Dr. Sonia D. Batten presented a report of the scientific accomplishments and present status of the North Pacific Continuous Plankton Recorder project. She reported on the inaugural meeting of the Global Alliance of CPR Surveys (GACS) and the Plankton 2011 Symposium that followed (September 22–23, 2011) in Plymouth, UK. MONITOR members agreed to keep a good relationship with GACS.

Dr. Vyacheslav Lobanov, Co-Chairman of the Advisory Panel for a CREAMS/PICES Program in East Asian Marginal Seas (AP-CREAMS), presented a report on AP-CREAMS-AP activities which the EAST-II project, a NOWPAP/PICES/IOC-WESTPAC joint training course on *Remote Sensing Data Analysis* held from October 8–12, 2011 in Vladivostok, Russia, and the completion of the supplemental chapter for the second North Pacific Ecosystem Status Report.

AGENDA ITEM 4

MONITOR Action Plan

The Committee Chair reported on the process of updating the MONITOR’s Action Plan, and presented its first draft. Committee members agreed to discuss it by e-mail, and to complete it by the end of March 2012.

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AGENDA ITEM 5

Status reports relevant to MONITOR

Framework on Ocean Observing

Comments from MONITOR were requested by Science Board on a presentation entitled “A framework for ocean observing” (FOO) by Dr. David Checkley in the Science Board Symposium (S1). MONITOR’s comments emphasize the importance of developing biological and chemical ocean observations (EOVs) in benthic to surface locations that are relevant to understanding productivity of higher trophic level organisms (*MONITOR Endnote 3*). Dr. Checkley discussed with MONITOR opportunities for collaboration between PICES and FOO. MONITOR agreed that this framework is important for ocean monitoring activities and recommended that PICES consider supporting and participating in the Framework and its process.

SCOR WG 137

Science Board Chairman, Dr. Sinjae Yoo, attended the Committee meeting and introduced the activities of SCOR Working Group 137 on *Patterns of Phytoplankton Dynamics in Coastal Ecosystems: Comparative Analysis of Time-Series Observations* activities. The purpose of the presentation was to invite possible collaboration between PICES and SCOR through the Working Group and to seek MONITOR’s cooperation. MONITOR agreed to offer its support.

AGENDA ITEM 6

Relations with international/national organizations and programs

The representatives of the following organizations attended the committee meeting and reported their activities.

- Argo: Dr. Howard Freeland
- NEAR-GOOS: Dr. Dmitry Kaplunenko
- AOOS: Dr. Phillip Mundy
- NaNOOS: Dr. Jack Barth
- PaCOOS: Dr. Rosa Runcie
- SCOOS: Dr. Tony Koslow

AGENDA ITEM 7

PICES Ocean Monitoring Service Award (POMA)

The Chairman reviewed the role of the Committee in nominating and recommending candidates for POMA to the Science Board.

AGENDA ITEM 8

Country reports

The following Committee (and *ex-officio*) members from four PICES member countries made short presentations on national monitoring activities relevant to PICES. The report of Korea was sent to the Committee Chairman later:

- Canada: Dr. Jennifer Boldt
- Japan: Drs. Sei-Ichi Saitoh, Sanae Chiba
- Russia: Dr. Vladimir Kulik
- United States: Drs. Phillip Mundy and John Barth
- SAON (Sustaining Arctic Observing Networks): Dr. John Calder (Dr. Sugisaki reported on his behalf)

AGENDA ITEM 10

Planning for PICES-2011

MONITOR strongly supported a proposal for a 1-day Topic Session, jointly co-sponsored by POC, entitled “*Effects of natural and artificial calamities on marine ecosystems and the scheme for their mitigation*” (MONITOR Endnote 3).

AGENDA ITEM 11

Other business

Dr. Jack Barth informed MONITOR about an Ocean Observation meeting planned for 2013 in Oregon, USA.

MONITOR Endnote 1**MONITOR participation list**Members

John A. Barth (USA)
 Jennifer Boldt (Canada)
 Sanae Chiba (Japan)
 Vladimir Kulik (Russia)
 Vyacheslav Lobanov (Russia)
 Phillip R. Mundy (USA, Vice-Chairman)
 Young Jae Ro (Korea)
 Sei-Ichi Saitoh (Japan)
 Hiroya Sugisaki (Japan, Chairman)

Observers

Sonia D. Batten (Canada, CPR-AP)
 David Checkley (USA, IFSOO-TT)
 Howard J. Freeland (Argo)
 Tony Koslow (SCCOOS)
 Rosa Runcie (PaCOOS)
 Sinjae Yoo (Science Board Chairman)

MONITOR Endnote 2**MONITOR meeting agenda**

1. Welcome, Introductions and Sign-in (all)
2. Information and discussion for PICE-2011
 - Comments from MONITOR committee for the FOO talk by Dr. Checkley at SB symposium (Sugisaki)
 - Information for S9 (Barth, co-convenors)
3. Advisory Panel reports
 - Status of Pacific CPR program and advisory panel
 - Report on GACS workshop and Plankton symposium at Plymouth (Batten, Chiba and Sugisaki)
 - Report on CPR-AP meeting on 15th, Saturday (Mundy)
 - Status of CREAMS w. POC and W4 workshop report (Lobanov)
 - Report on the meeting of FUTURE on 16th, Sunday (AICE: Ro, COVE: Lobanov, SOFE: Mundy)
4. Committee’s contribution to FUTURE and Committee’s action plan (Sugisaki)
5. Status reports relevant to MONITOR
 - Report on IFSOO-TT (Integrated Framework for Sustained Ocean Observation Task Team: post Ocean Obs. ’09 activity) (Checkley)
 - Discussion on cooperation with SCOR 137 (Sugisaki)
6. Relations with international/national organizations and programs (invited)
 - Argo, NEAR-GOOS, AOOS, NaNOOS, PaCOOS, SCOOS
7. Report on POMA (Sugisaki)
8. Country reports of relevant monitor/observation activities

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Canada	(Boldt, Mackas)
China	(Zhang, Zhao)
Japan	(Chiba, Saitoh, Sugisaki)
Korea	(Park, Ro, Suh)
Russia	(Kulik, Lobanov)
United States	(Barth, Mundy, Napp)

9. Judges for PICES-2011 Best Presentation awards (All)
10. Proposals for PICES-2011 MONITOR workshops, special sessions, inter-sessional meetings (All)
11. Other business (if any)

MONITOR Endnote 3

Proposal for a 1-day MONITOR/POC Topic Session at PICES-2012 on

“Effects of natural and artificial calamities on marine ecosystems and the scheme for their mitigation”

From ancient times, we have been discussing and taking countermeasures on the revival of fisheries and social infrastructures of waterside from natural disasters such as tsunamis and floods. The earthquake (Magnitude 9.0) disaster occurred in northeastern Japan on the 11th of March, 2011 was beyond our imagination. The earthquake and the gigantic tsunami destroyed the regional fisheries and surrounding society and impacted on marine ecosystems in eastern Japan. The tsunami also damaged the nuclear power plant at Fukushima, posing a serious threat of radioactive contamination to the North Pacific Ocean ecosystems.

Other recent examples are hurricane Katrina in 2005 and the oil spill accident of the Gulf of Mexico in 2010, which caused environmental pollution of the marine ecosystems and devastated parts of the economy. Recently, the magnitude of climatic disasters such as storms and floods may have been enhanced due to the global warming. Since oil and factories, power plants and other industrial infrastructures have been developed in the coastal areas of the world, coastal ecosystems are vulnerable to natural and artificial disasters. Therefore, it is urgent and most important to make wise use of ecosystem services to understand the effects of natural and artificial disasters on marine ecosystems, to document their restoration processes, and to promote effective measures for restoration and mitigation of disaster impacts.

The purpose of this session is to discuss:

1. Effects to the marine ecosystem by the disasters,
2. Effects to marine industries and societies by the disasters,
3. Schemes for the mitigations and recoveries from the disasters,
4. Field monitoring on the effect and the process of recoveries,
5. Domestic and international cooperation,
6. Policy and its effects on disaster preparations and recovery.

Co-sponsors: MONITOR, POC

Recommended Convenors: Tokio Wada (Japan), Hiroya Sugisaki (Japan)

MONITOR Endnote 3**MONITOR comments on Framework for Ocean Observing presented by David M. Checkley, Jr.**

The MONITOR Committee finds that the Framework for Ocean Observing is compatible with, and supportive of, the strategic plan of PICES and mission of MONITOR. The Framework is a process for fostering cooperation and collaboration among the community of ocean scientists for the purpose of enabling scientific discovery through improved communications and data sharing. The Framework is a logical and timely reinforcement and extension of principles embodied in the Global Ocean Observing System, as reflected in the Terms of Reference and Action Plan for MONITOR and its allied Committee, TCODE. Consistent with the missions of PICES and MONITOR, the Framework seeks to unite the presently largely independent ocean observing systems in order to provide interdisciplinary information based on observations from physics, biogeochemistry and biology, as required to solve complex management problems presented by global climate change. The Framework builds on principles of ecosystem observation that have evolved over the past three decades, emphasizing essential ocean variables (EOVs) from an observing system built around existing structures. As Dr. David Checkley presented in this talk, the requests to Ocean Observing from international societies will increase during the next decades. The Framework shows promise of implementing an organizational model that will enable faster provision of geographically coherent and temporally extensive observations and information for meeting scientific and societal needs. MONITOR recommends that PICES and scientists of PICES countries consider supporting and participating in the Framework and its process.