

Report of the Study Group on GOOS

MONITOR Committee
North Pacific Marine Science Organization
PICES XVI
Victoria, Canada
October 31, 2007

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Terms of Reference

- Identify and describe the major observing systems (present and proposed) in the PICES region. Descriptions should include general data types, contact information, and data transmission (real-time vs. delayed);
- Provide a recommendation and justification to MONITOR on whether or not PICES should propose a North Pacific GOOS pilot project to IGOOS.

Synopsis of Study Group & Activities

SG-GOOS (MONITOR) Members: Phil Mundy (Chair), Vyacheslav Lobanov (RU), Seichi Saitoh (JP), William Crawford (CA), Dong-Young Lee (ROK). Approved at PICES XIV (Oct. 2005) Term: 2006-2008

Activities

Reports for 2006 activities are posted on the SG GOOS PICES web page. In January 2007 Lobanov represented PICES at the meeting of the IOC/WESTPAC coordinating committee for NEAR-GOOS coordination in Bangkok (report attached). In March 2007 Mundy presented a report (attached) on MONITOR PICES activities to the Scientific Steering Committee of GOOS on behalf of PICES at the annual meeting in Seoul. Lee also attended the GOOS SSC meeting, as he is the group's co-chair.

Acknowledgements

The Study Group wishes to thank Prof. John Field, Chair of the GOOS Scientific Steering Committee, and the members of the committee for their consideration of the issues and for their invitation to participate in GOOS SSC meetings. Special thanks to study group member, Dr. Dong-Young Lee, for his support and hospitality during the SSC meeting.

Recommendations

- It is recommended that MONITOR focus its activities on providing a forum for representatives of the existing North Pacific observing systems in which would be developed cross-GRA (inter-regional and international) observing projects, observing technologies, and data and information sharing protocols in cooperation with TCODE starting in 2007.
- It is recommended that the terms of reference of the MONITOR Committee be modified to expressly include facilitation of cooperation, communications and coordination among North Pacific ocean observing systems.

Currently applicable MONITOR terms of reference

1. Identify principal monitoring needs of the PICES region;
2. Develop approaches to meet these needs, including training and capacity building;
3. Serve as a forum for coordination and development of the PICES components of the Global Ocean Observing System, GOOS, including possible method development and inter-comparison workshops to facilitate calibration, standardisation and harmonisation of data sets;
7. Provide Annual Reports to Science Board and the PICES Secretariat on monitoring activities in relation to PICES;

Proposed terms of reference replacing 1, 2, 3, and 7

1. Identify principal monitoring needs of the PICES region and approaches to meet these needs by serving as a forum for coordination and development inter-regional and international components of the North Pacific ocean observing systems, including the Global Ocean Observing System, GOOS, and including facilitation of method development and inter-comparison workshops to facilitate calibration, standardisation and harmonisation of data sets;
2. Provide Annual Reports to Science Board and the PICES Secretariat on monitoring activities in the PICES areas

Next Steps

- Replace MONITOR Terms of Reference 1 – 3 and 7 to clarify role of PICES in facilitation of cooperation, communications and coordination among North Pacific ocean observing systems.
- Annually send a MONITOR representative to the meeting of GOOS Scientific Steering Committee to exchange reports on North Pacific monitoring activities emphasizing projects that span observing regions and international boundaries as the Continuous Plankton Recorder, progress in establishing sensor technologies for scientifically sound observing systems, and progress in the use of common information exchange methods such as the Global Telecommunications System (GTS).

Justifications

- Meets PICES mission of promoting cooperation and collaboration in marine sciences among member nations; a forum for international collaboration within each region is much needed
- Clarifies MONITOR terms of reference to promote international cooperation in development of observing projects, observing systems and means of data gathering and information exchange.
- Provides a forum to assist in the production of the North Pacific Ecosystem Status Report, which is among the responsibilities of PICES.

Identification of North Pacific Observing Systems

Please note that the identification of specific data types by observing systems has been deferred pending the results of the Intergovernmental Oceanographic Commission (IOC) Circular Letter No. 2199, requesting that member states provide, “National Contributions to the Global Ocean Observing System” which will be available at PICES XVII, and subsequent reports of MONITOR. Two summary information tables were provided in last year’s report of the working group.

Report of SG-GOOS Victoria Meeting

October 28, PICES XVI, Victoria, Canada. Due to scheduling conflicts, a pre-meeting was held to brief MONITOR co-chair Dr. Jeff Napp on the report of the study group. Dr. Vyacheslav Lobanov and Dr. Dong-Young Lee were unable to attend the PICES meeting but participated in the report by e-mail. Report was discussed and recommended for submittal to MONITOR.

List of Participants at SG-GOOS Victoria Meeting

Sei-ichi Saitoh	Japan	ssaitoh@salmon.fish.hokudai.ac.jp
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PICES Report to the Tenth Session of the Global Ocean Observing System Scientific Steering Committee (GSSC-X)

Seoul, Korea, 13 – 16 March 2007

The North Pacific Marine Science Organization (PICES) is an international intergovernmental scientific organization established by convention in 1992 to promote and coordinate marine scientific research in the northern North Pacific and adjacent seas. Its current members are Canada, Japan, People's Republic of China, Republic of Korea, the Russian Federation, and the United States of America.

This report initiates an exchange of information between the Global Ocean Observing System Scientific Steering Committee (GSSC) and PICES, as many of its activities are related to ocean observing activities. The expectation is that the exchange of information will be mutually beneficial by furthering the shared goal of developing ocean observing capabilities in the North Pacific region. The report is also intended to serve GSSC as a reference to ocean observing activities of PICES. Following are descriptions of the PICES standing committee that is assigned to work with GOOS-related issues, the MONITOR projects relevant to GOOS, and contact information for associated personnel.

PICES MONITOR

MONITOR – Technical Committee on Monitoring

Following the first PICES-GOOS workshop on October 8, 1999, in Vladivostok, Russia, it was proposed that the terms of reference for the PICES MONITOR Task Team be modified to include the requirement for the Task Team to develop an action plan for how PICES should take an active and leading role in further development and implementation of GOOS at a North Pacific level. The action plan would:

- 1) identify existing ocean observations in the coastal and open North Pacific that are relevant to GOOS;
- 2) develop a PICES-GOOS implementation plan based on existing routine observations and augmented by new observations as appropriate; and
- 3) provide a structured plan on how to transfer relevant CCCC Program activities to a PICES-GOOS program.

The Technical Committee on Monitoring (MONITOR) was established by PICES at the recommendation of its Science Board in October 2004 to replace the MONITOR Task Team with a standing committee. MONITOR (<http://www.pices.int/members/committees/MONITOR.aspx>) is charged with identifying principal monitoring needs of the PICES region and developing approaches to meet these needs, including training and capacity building. The terms of reference call for MONITOR to serve as a forum for coordination and development of the PICES components of the Global Ocean Observing System (GOOS), including possible method development and inter-comparison workshops. In cooperation with the Technical Committee on Data Exchange (TCODE), MONITOR is to facilitate calibration, standardization and harmonization of data sets. Its members serve as the senior editorial board of the North Pacific Ecosystem Status Report (NPESR). MONITOR also recommends meetings to address

monitoring needs, PICES-GOOS activities, and development of the NPESR. MONITOR is also responsible for overseeing the ocean observing activities of PICES on vessels of opportunity.

SG-GOOS, MONITOR Study Group to develop a strategy for GOOS

The Study Group was approved in October 2005 for a term of two years. The terms of reference (http://www.pices.int/members/study_groups/SG-GOOS.aspx) call for SG-GOOS to identify and describe the major observing systems (present and proposed) in the PICES region, including description of general data types, contact information, and data transmission (real-time vs. delayed), and to provide a recommendation and justification to MONITOR on whether or not PICES should propose a North Pacific GOOS pilot project to I-GOOS. In its October 2006 report to MONITOR, SG-GOOS recommended against the pilot project, but presented a number of recommendations for closer relations between PICES and I-GOOS. Those recommendations identified a need to contact the Chairman of GSSC (Dr. John Field) to make him aware of PICES' wish for a closer working relationship. A recommendation was also made to continue to improve working relationships with existing observing systems in the North Pacific (*i.e.*, NEAR-GOOS and IOOS). Dr. Vyacheslav Lobanov of SG-GOOS attended the most recent Eleventh Session of IOC/WESTPAC Coordinating Committee for NEAR-GOOS (NEAR-GOOS-CC-XI) held January 18-19, 2007, in Bangkok, Thailand as a PICES representative. A further recommendation was for PICES to be represented at Tenth Session of GSSC to be held March 13-16, 2007, in Seoul, Korea., which is the impetus for this report. The Co-Chairman of GSSC (Dr. Dong-Young Lee) is aware of these recommendations, as he is also a member of SG-GOOS.

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

In the late 1990s, funding for a pilot project to operate a continuous plankton recorder (CPR) survey in the North Pacific was obtained from the *Exxon Valdez* Oil Spill Trustee Council. PICES formed the CPR Advisory Panel in October 1998 (http://www.pices.int/members/advisory_panels/CPR.aspx) to review and advise PICES on the most appropriate locations, timing and frequency of CPR routes for "A Continuous Plankton Recorder Monitoring Program for the eastern North Pacific and Southern Bering Sea". The terms of reference call for CPR-AP to provide technical advice on parameters to be measured for additional monitoring initiatives and to advise on linkages to other potential initiatives in the North Pacific and elsewhere. The experts on CPR-AP have been influential in securing funding for the project, an element which has been crucial to its success, as the sources of funding have changed several times since the survey was initiated 1997 by the Sir Alister Hardy Foundation for Ocean Science, SAHFOS. In addition the panel has been consulted by program scientists on developing routes and the types of observations collected.

MONITOR Facilitated Projects

Continuous Plankton Recorder Survey of the North Pacific

PICES has facilitated the funding and operation of the North Pacific CPR, which is operated by the Sir Alister Hardy Foundation for Ocean Science, SAHFOS (Sonia Batten) and funded from a number of sources, including the *Exxon Valdez* Oil Spill Trustee Council and the North Pacific Research Board. Established in 1997, the NPCPR currently occupies two routes, the AT and the VJ. The AT route lies between Tacoma (Washington) and Anchorage (Alaska). In 2005, the *Horizon Kodiak* made six sets of three tows each on this route, with a total of 7946 nm being logged. The VJ route from Vancouver (Canada) to Japan, as towed by the *Skaubryn* in 2005,

executed seven 500 nm tows. At 3500 nm VJ is the longest CPR route in the world. In 2005, total length of VJ tows was 10,500 nm. Information on NPCPR project can be found on the SAHFOS website at http://192.171.163.165/pacific_project.htm, and on the PICES website at http://www.pices.int/projects/tcprstnp/CPR_Description.pdf.

North Pacific Ecosystem Status Report

PICES will be reporting on North Pacific marine ecosystems periodically to review and summarize their status and trends, and to consider the factors that are causing or are expected to cause change in the near future. The first report, "Marine Ecosystems of the North Pacific" was published in late 2004 (http://www.pices.int/publications/special_publications/NPESR/2005/npesr_2005.aspx). It is based largely on geographic locations and subjects for which time series data or information was readily available. In addition, the report identifies locations and subjects where data were collected but are not yet available.

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Report on representation of PICES at GSSC-X, Tenth Session of the Global Ocean Observing System, Scientific Steering Committee

Seoul, Korea, 13 – 16 March 2007

Submitted by Phil Mundy, Member of MONITOR and Chair of SG-GOOS

Background

PICES was represented by Phil Mundy at the GSSC-X meeting in March 2007. Following the recommendations of MONITOR, as adopted by the PICES Science Board, October 2006, the Chair of GSSC (Dr. John Field) was contacted by the Chair of SG-GOOS to inform him of the activities of PICES relevant to international GOOS (I-GOOS), and the GSSC. Dr. Field subsequently issued an invitation for PICES to send a representative to GSSC-X to brief its members on PICES and its activities. In consultation with the Chair of MONITOR (Dr. Jeff Napp), the Secretariat arranged for Chair of SG-GOOS to represent PICES at GSSC-X. The representation was based on the contents of a report that is available on the SG-GOOS page of the PICES web site, and on the web site of the GSSC-X meeting, <http://www.ioc-goos.org/gssc10> along with all of the documents and presentations made at the meeting.

Report

The GSSC-X meeting was preceded by a workshop to review global and regional issues in developing networks for collecting and distributing observations on the open ocean and coastal regions. The presentations from the workshop provided an overview of 1) coastal observations 2) regional marine environment and ecosystem modeling 3) data management and assimilation. In keeping with the location of the meeting, there was a focus on the Asia/Pacific region. The presentations confirmed the pattern of relatively advanced observing capabilities in the open ocean and relatively uncoordinated coastal observing systems. Nonetheless significant advances in coastal observing were apparent in the workshop for the coasts of China, Korea and Japan, and the west coast of Africa. To cite one example, Dr. Changsheng Chen presented a small scale model of circulation appropriate to complex coastal environments. Dr. Chen's presentation, *Ecosystem Environment in the East China Sea: Dense Algal Bloom and Its Impacts on Local and Remote Ocean Systems*, was one example from among several applications of the model, which also include an application in the Gulf of Alaska. To cite another example, rapid advances in coastal Africa have been made possible by the World Bank's support of the Benguela Current Large Marine Ecosystem programme (BCLME) off the coast of South Africa. Some of the work in BCLME is part of an international initiative Chlorophyll Ocean Globally Integrated Network, or ChloroGIN. ChloroGIN aims to improve quality and availability of surface measures of chlorophyll and temperature to support identification of harmful algal blooms and enhanced fisheries management off the coasts of South America, Africa and India. Further details on advances in developing observing systems are available in the documents on the GSSC-X web site.

The GSSC-X meeting following the workshop developed two formal recommendations of particular relevance to PICES, an endorsement of the Continuous Plankton Recorder, CPR, as an ocean observing tool for measuring long term change, and a standing invitation for a representative of PICES to participate as an observer in future GSSC meetings. The endorsement of the CPR was not specifically requested by the PICES representative, but came as an outgrowth of the PICES presentation. GSSC members were impressed with the CPR project and enthusiastic about its continuation, and disappointed to learn of the uncertain nature of the funding. The GSSC had previously endorsed the CPR as an ocean observing method, so the extension of the endorsement to the PICES CPR was readily acceptable to all members.

The GSSC extended its invitation to PICES for a representative of PICES to participate as an observer in future GSSC meetings in recognition of PICES' role in establishing and coordinating the operation of observing projects such as the CPR that cross the boundaries of existing GOOS Regional Alliances in Northeast Asia and North America. Participation by PICES in international GOOS (I-GOOS) at the level of scientific discourse was acceptable to all committee members and the I-GOOS representative, Keith Alverson. ICES was also invited to provide a permanent observer to the GSSC in the same action of the GSSC.

Details on all the actions of the GSSC at its meeting, as well all the information presented at the workshop are available on the web site cited above.

11th Session of IOC/WESTPAC Coordinating Committee for the NEAR-GOOS,

Bangkok, Thailand, 18-19 January 2007

Observers report

Vyacheslav Lobanov
PICES Monitor, PICES POC

Introduction

In accordance with the recommendation of PICES Monitor Committee that PICES should play a strong role in coordination and facilitation of North Pacific regional GOOS projects and develop contacts with the relevant GOOS regional alliances to explore ways in which PICES can enable their development, PICES was presented at the 11th Session of IOC/WESTPAC Coordinating Committee for the North-East Asian Regional Global Ocean Observing System (NEAR-GOOS-CC-XI). The meeting was held in Bangkok, Thailand on 18-19 January 2007 organized by IOC/UNESCO Regional Secretariat for the Western Pacific (IOC/WESTPAC) with a support of the Department of Marine and Coastal Resources (DMCR) of the Ministry of Natural Resources and Environment (MNRE), Thailand. The meeting was attended by the CC members from participating countries, NEAR-GOOS working group leaders, observers from related regional programs/organizations, representatives of related Thailand agencies.

North-East Asian Regional Global Ocean Observing System (NEAR-GOOS) was initiated in 1996 upon the formal adoption of its Implementation Plan and Operational Manual by the 29th Executive Council of the Intergovernmental Oceanographic Commission. As a regional pilot project of GOOS, it has been undertaken in partnership between China, Japan, the Republic of Korea and the Russian Federation as a WESTPAC Activity. Through several years implementation, the most important successes of NEAR-GOOS in its first phase (1996-2003) have been the consolidation of a functional two-mode distributed Internet-based database structure in the partner countries, and the linkage of this structure with one Regional Real-Time Database (RRTDB) and one Regional Delayed-Mode Database (RDMDDB) responsible for the receipt and merging of data in this region. The data in the RRTDB include only major physical parameters, while information available through delayed mode is more diverse. At its 9th session in 2004, the Coordinating Committee approved the Strategic plan for NEAR-GOOS in its second phase (2004-2008), with the goal of 'Development of a basic integrated ocean observing and operational forecasting system in the NEAR-GOOS area adhering to the GOOS Principles and building on the data management and exchange mechanisms developed in the first phase through the inclusion of additional parameters, increased coverage in space

and time, the generation of a generic suite of data products and adequate quality control and quality assurance procedures.'

Objectives of the session

The NEAR-GOOS is governed by the Coordinating committee that consists of two representatives from each participating country and holds its meetings annually. The major tasks of the 11th Session of the NEAR-GOOS Coordinating Committee were the following:

- to review the status of NEAR-GOOS and progress made during the inter-sessional period including activity of regional and national data bases and related national activities;

- to review the activities of NEAR-GOOS working groups (on New Generation Sea Surface Temperature and on Data Management) and made recommendations for their plans as well as discuss formation of two new working groups (on Monitoring Using Drifter and Buoys, and Regional Sea projects);

- to discuss the follow up activities towards the goals of NEAR-GOOS in its second phase (2004-2008);

- identify the role of NEAR-GOOS in global GOOS development and effective ways of interactions with other GRAs (the 3rd GOOS Regional Forum, the Global Coastal Network, GSSC-X Scientific Workshop, SEA-GOOS etc.)

- exchange information on related programs in the region and identify possible areas in cooperation with other related regional programs and projects such as the ODINWESTPAC, NOWPAP, Yellow Sea LME, PICES etc.

(The meeting agenda is attached).

Status of NEAR-GOOS

NEAR-GOOS data exchange system consisting of regional and national data bases continued its operation over the reporting year quite successfully. Number of registered uses of Regional Real-Time Data Base (RRTDB) has been around 105 while number of FTP accesses varied from 3,000 to 10,000 hits/month. The total number of access to the Regional Delayed Mode Data Base (RDMDDB) top page in 2006 has been increased by almost 4,000 hits, compared with that of in 2005. 40 different types of data are being handled by RDMDDB, 37 types of data from RRTDB and 3 types of data from other sources. The amount of 35GB of oceanographic/marine and meteorological data is available as of the end of December 2006, an increase of 10GB in comparison with the amount reported to the previous session.

Further improvements and modifications in national NEAR-GOOS data bases in China, Korea and Russia were reported. An increase of amount of data, number of data providers, sources of information and its accessibility were presented for most data holdings, however with different success. Extensive development of the observing system involved in NEAR-GOOS was demonstrated in Korea where it consists of growing network of coastal stations, moorings, buoys and open sea platforms. Joint Korean-China

activity, development of Yellow Sea Operational Oceanography System (YOOS) will essentially contribute to NEAR-GOOS. In addition to regional data sets the most of the data bases are linked with other international project, such as Argo, GTSP, JCOMM. In addition to data there are large amount of metadata and other oceanographic products available at the data bases. Some problems however exist in NEAR-GOOS data exchange system. The restrictions on data exchange especially in real time mode, in particular in Russia and China, still exist which cause a limited number and sources of available data. Each of the member countries has no complete integrated system which would operationally acquire, hold and provide to users all oceanographic data on national level. However a progress toward construction of such system is going on in every country. Informational on NEAR-GOOS data bases is listed in a table below.

As a capacity building activity the Eighth Training Course on NEAR-GOOS Data Management was organized by Japan Oceanographic Data Center (JODC). This is the eighth training course that has being hosted biannually by JODC for oceanographic data managers and researchers from WESTPAC countries.

Two working groups established at the last NEAR-GOOS CC meeting – WG on Data Management and WG on New Generation SST – reported on their activity and plans. One of the major tasks of the WG on Data Management is to include chemical and biological parameters into NEAR-GOOS data bases. As the first step an inventory of in situ chlorophyll and total suspended materials data available in the region will be prepared along with recommendation of their incorporation into existing data exchange system.

Country	Data base	Responsible organization	Address
Japan	Regional RTDB	JMA	http://goos.kishou.go.jp
	Regional DMDB	JODC	http://near-goos1.jodc.go.jp
China	National RTDB	NMEFC	http://www.nmefc.gov.cn
	National DMDB	NMDIS	
Korea	National RTDB	KORDI	http://near-goos.kordi.re.kr
	National DMDB	NFRDI	http://kdc2.nfrdi.re.kr:8001/home/eng/near-goos
Russia	National RTDB	FERHRI	http://rus.ferhri.ru/esimo/Projects/Neargoos
	National DMDB	POI	http://www.pacificinfo.ru

Further development of NEAR-GOOS

A brief discussion was focused on establishing other working groups as it was preliminary discussed at previous CC meeting i.e. WG on Monitoring Using Drifters and Buoys, and plans to develop Regional Seas Projects in the NEAR-GOOS for the Yellow Sea. However these issues were not properly prepared for CC consideration and it was suggested to postpone the discussion to next CC meeting.

Another suggestion on further promotion of NEAR-GOOS is related to development on satellite ocean color remote sensing. Ocean Color Project is one of the major activities of the IOC/WESTPAC Ocean Remote Sensing Program. It was suggested to support

initiative of NOWPAP to organize the Remote Sensing Training Course on Data Analysis for Oceanography in 2007 and recommend co-sponsorship of the course by IOC/WESTPAC.

Collaboration with related programs in the region

Progress in other GOOS Regional Alliances (GRAs), related regional programs and projects such as SEA-GOOS, UNEP/NOWPAP, PICES, Yellow Sea (YS) LME was presented by the observers. It was general consensus on importance of closer collaboration with these organizations/programs/projects to share efforts and resources for developing a sustained oceanographic observing system in the region. In particular it was noted an importance of closer networking among GRAs and support for the recommendations of the 3rd GOOS Regional Forum. Joint activity with YSLME on data bases development and linking of data bases with NOWPAP was welcomed. It was also highlighted the newly established Partnership of IOC/WESTPAC with YSLME and PEMSEA. A Memorandum of Understanding with YSLME Project Management Office, a Letter of Cooperation with PEMSEA Regional Program office were signed at the 3rd Meeting of Project Steering Committee of YSLME in November 2006, and the Inaugural Partnership Meeting of the East Asian Seas Congress in December 2006 respectively.

Considering the expertise of NOWPAP, YSLME, IOC/WESTPAC, it was noted that regional cooperation need to be further promoted on remote sensing. It was suggested IOC/WESTPAC supporting the Remote Sensing Training Course on Data Analysis in co-sponsorship with NOWPAP that would be based on the existing training course currently hosted by JODC with its extension toward inclusion of remote sensing.

Recognizing that ocean data and information related activities and networking of the participating organizations that carry out major NEAR-GOOS activities will further the efficient development and improvement of ocean data and information capability in the region, the NEAR-GOOS CC supported a pilot project proposal of Ocean and Data Information Network for the WESTPAC region (ODIN-WESTPAC-PP) and invites all NEAR-GOOS participating organizations to take part in the pilot project when it will be approved by IODE.

A report on PICES and major activities of its MONITOR committee was presented. PICES intention to support and coordinate monitoring activity in the northern North Pacific and recommendations of PICES/MONITOR Study Group on GOOS were reported. It was also explained on the PICES vision of its possible participation in GOOS at current stage as a coordinating body and forum for development of cross-GRAs observing projects, observing technologies, and data and information sharing protocols in cooperation with PICES/TCODE. Other monitoring related activity by PICES such as Continuous Plankton Recorder Program (CPR), outcomes of recent PICES-XV scientific sessions and Ecosystem Status Report were also presented. The Committee expressed its intention to keep close contact with PICES on developing ocean monitoring in the North Pacific and its marginal seas.

Other issues

With the completion of the two-years term of the chairpersonship of Mr. Takashi Yoshida Ms. Shaohua Lin, Director-General of National Marine Data and Information Services, State Oceanic Administration, P.R. China was elected as a new chairperson of the Co-ordinating Committee for NEAR-GOOS for next two years.

Conclusion

1. NEAR-GOOS provides various oceanographic data that are useful for PICES community. Some problems of easy and fast international data exchange still exist. However the volume of available data, number of parameters, data providers and users have been steadily increasing. Growing number of data bases accesses proves usefulness of the data.

2. Inclusion of chemical and ecological parameters into NEAR-GOOS data bases toward the requests of PICES, NOWPAP and other organizations would take some time to make necessary arrangements. However some products as graphical information, metadata, etc. useful for marine chemists and biologists in addition to physical parameters has been getting available in the web pages of NEAR-GOOS partner-organization. In some cases it is done jointly with PICES under TCODE supported projects.

3. Over its more than ten years history NEAR-GOOS developed technology of oceanographic data management, exchange and services, communication with data providers and users. This experience would be useful for new ocean observing systems developing in the eastern PICES area.

4. On other an experience of developing observing systems in the American coast of Pacific to use comprehensive modern instruments would help NEAR-GOOS in improving its observational network.

5. NEAR-GOOS is an official component of GOOS endorsed by IOC, WMO and UNEP. As one of 13 officially recognized GRAs it has quite well established political background on international level. However practical support on national level for NEAR-GOOS in some countries are seriously lacking. It may be expected that with increasing of GRAs consolidation and sharing resources with related organizations and programs in the region this would be improved.

6. Further development of NEAR-GOOS would require to increase public awareness to involve more partners/data providers as organizations and individual scientists. PICES could help in this term to promote NEAR-GOOS in the PICES community.

More details about NEAR-GOOS and the 11th CC Session could be found soon at

<http://westpac.unescobkk.org/> or <http://www.ioc-goos.org/>

Attachments:

Agenda of the session

**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of UNESCO)**

**Eleventh Session of IOC/WESTPAC Co-coordinating Committee for the North-East
Asian Regional-Global Ocean Observing System
(NEAR-GOOS-CC-XI)**

Bangkok, Thailand, 18-19 January 2007

AGENDA

- 1. OPENING**
 - 1.1 Welcome addresses
 - 1.2 Introduction of the participants

- 2. ADMINISTRATIVE ARRANGEMENTS**
 - 2.1 Adoption of the meeting agenda
 - 2.2 Designation of Rapporteur
 - 2.3 Working arrangements

- 3. STATUS OF NEAR-GOOS: REPORT ON THE OPERATION**
 - 3.1 Report by the Chairperson
 - 3.2 Report by the IOC/WESTPAC Secretariat
 - 3.3 Report on the national activities
 - 3.3.1 China**
 - 3.3.2 Japan, including RRTDB, RDMDB and the training course**
 - 3.3.3 Republic of Korea**
 - 3.3.4 Russian Federation**
 - 3.4 Report on the Working Group on New Generation SST
 - 3.5 Report on the Working Group on Data Management

- 4. RELEVANT DEVELOPMENTS IN RELATED PROGRAMMES**
 - 4.1 RECENT DEVELOPMENT IN THE GLOBAL GOOS PROGRAMMES
 - 4.1.1 The 3rd Forum on GRAs and GOOS Regional Councils**
 - 4.1.2 GSSC-X Scientific Workshop**
 - 4.2 SEAGOOS
 - 4.3 OTHER PROGRAMMES
 - 4.3.1 ODIN-WESTPAC**
 - 4.3.2 GODAR-WESTPAC**
 - 4.3.3 YSLME**
 - 4.3.4 PICES**
 - 4.3.5 NOWPAP**

- 5. DEVELOPMENT OF NEAR-GOOS AND FOLLOW-UP OF ITS STRATEGIC PLAN**

- 5.1 Promotion of NEAR-GOOS
- 6. OTHER BUSINESS**
- 7. ELECTIONS**
- 8. DATE AND PLACE OF NEXT SESSION**
- 9. ADOPTION OF THE SUMMARY REPORT**
- 10. CLOSURE**