

Intergovernmental Oceanographic Commission
Reports of Meetings of Experts and Equivalent Bodies

IOC/WESTPAC Coordinating Committee for the North-East Asian Regional- Global Ocean Observing System (NEAR-GOOS)

Fourteenth Session

Tianjin, China

8-9 September 2011

**IOC/WESTPAC Coordinating Committee
for the North-East Asian Regional-
Global Ocean Observing System
(NEAR-GOOS)**

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**UNESCO/IOC SUB-COMMISSION FOR THE WESTERN PACIFIC
(WESTPAC)**

**Fourteenth Session of IOC/WESTPAC Coordinating Committee for the North-East
Asian Regional-Global Ocean Observing System
(NEAR-GOOS-CC-XIV)**

Tianjin, China, 8-9 September 2011

Summary Report

1. OPENING

1. Mr Wenxi ZHU, Head of the IOC Regional Office for WESTPAC, opened the Fourteenth Session of the IOC/WESTPAC Coordinating Committee for the North-East Asian Regional - Global Ocean Observing System (NEAR-GOOS) at 09:00 hours on Thursday 8 September 2011, at the Tianjin Zhenxie Club Hotel in Tianjian, China. He welcomed all the participants, including the observers and invited resource persons from various organizations, and invited all participants to introduce themselves to the meeting. The list of participants is given as Annex II.
2. Following the self introduction of participants, Ms Yue Chen, Deputy Director General of the International Cooperation Department, State Oceanic Administration (SOA) of China was invited to give a congratulatory remark on behalf of the host government. She highlighted the achievement of NEAR-GOOS in its first phase and the high spirit of cooperation reflected among four participating countries, and underscored the importance of the development of NEAR-GOOS in its second phase to achieve social and economic benefits through its various applications. She informed the meeting of the recent increasing investment of her government on ocean observation and marine scientific research, and further assured the Committee of the continuous support of the Government of China for the development of NEAR-GOOS.
3. Mr Suixiang Shi, Vice Director of the National Marine Data and Information Service (NMDIS), China followed with a short review of the history and success of the NEAR-GOOS. He briefed the participants of his institute's efforts at national level on the marine data and information exchange and management, and expected the cooperation with other neighbouring countries and international programs could be further enhanced through the promotion of NEAR-GOOS.
4. On behalf of Ms Wendy Watson-Wright, Executive Secretary of IOC, Mr Wenxi Zhu concluded the opening by thanking the Government of China for the financial support provided in the organization of this session, the NMDIS for hosting and excellent arrangement made for all participants. While expressing his concern over the lack of substantive progress of NEAR-GOOS in its second phase and stressing the need for the Committee to review the present deficiencies of NEAR-GOOS, come up with practical ideas and take concrete actions, he expected that more ownership need to be instilled from participating countries on the NEAR-GOOS and more efforts should be made to enhance the efficiency and visibility of NEAR-GOOS with a view to meeting the ever-growing demand for a coordinated ocean observing and forecasting system.

2. DESIGNATION OF ACTING CHAIRPERSON

5. Mr Zhu informed the meeting with regret that Mr Hee-Dong Jeong, Chair of the Coordinating Committee, was unable to attend this session due to his failure of visa application. As customary, Mr Zhu invited the Committee to select one acting Chairperson for this session.
6. Mr Vyacheslav Lobanov, Russian member of the Coordinating Committee, nominated Ms Shaohua Lin to be the acting Chair of this session in consideration of her capacity as the former Chair of the Coordinating Committee and the Committee Member from the host country. This proposal was unanimously adopted by acclamation.

3. ADMINISTRATIVE ARRANGEMENTS

3.1. ADOPTION OF AGENDA

7. Ms Lin, Acting Chairperson introduced the Provisional Agenda that was subsequently adopted by the Committee with minor modifications. The Agenda is attached as Annex I.

3.2. DESIGNATION OF RAPPORTEUR

8. The Committee Member from China nominated Mr Lobanov from Russia as the Rapporteur and the meeting accepted this proposal. Mr Lobanov was designated as the Rapporteur accordingly.

3.3. WORKING ARRANGEMENTS

9. Mr Zhu, also in his capacity as the Technical Secretary to NEAR-GOOS, informed the meeting about the working arrangements and it was agreed that the Committee would, as far as possible, work in plenary, with drafting groups for special issues to be formed as required.
10. He drew attention of the Committee to the documentation for this session, expressing concerns over lack of sufficient time for his office in making all necessary working documents available prior to the meeting due to the late submission of several working documents from the Committee, which may result in difficulties, to some extent, for participants in the preparations for this meeting.
11. *Action Point 1: All members of the Coordinating Committee are required to submit their national reports and/or proposals in a timely manner, preferable at least one month prior to each session, in order to facilitate the deliberations of the Coordinating Committee in advance of the session.*

4. STATUS OF NEAR-GOOS: REPORT ON THE OPERATION

4.1 STATEMENT OF CHAIRPERSON

12. The acting Chairperson presented the statement received prior to the meeting from Mr Hee-Dong Jeong, Chairperson of the Coordinating Committee. She briefed the meeting of three major activities which Chairperson participated in and organized over the last intersessional period, including the representation of NEAR-GOOS at the nineteenth Annual Meeting of PICES in Portland, USA, October 2010, organization of one workshop on NEAR-GOOS products during the eighth IOC/WESTPAC International Scientific Symposium in Busan, Korea, 28-31 March 2011 with presentations received covering data management, observation

and products. The workshop identified the need for NEAR-GOOS to develop and provide timelier, user-oriented products and services to meet various social-economic needs. He acknowledged the efforts of Mr. Zhu, Head of WESTPAC Office in mobilizing resources for the joint NOWPAP/PICES/WESTPAC training course on Remote Sensing Data Analysis which will take place in Vladivostok, Russia, October 2011.

13. The statement received extensive discussions in terms of the activities organized and outcomes generated. While appreciation was expressed for the efforts of Mr Jeong in the promotion of the NEAR-GOOS, concern was voiced on the efficient communications among the Committee in the organization of the NEAR-GOOS activities, and lack of perspective in the statement for the future development of NEAR-GOOS. Suggestion was also made on the incorporation of half day or one day topic- specific session into each session to allow more time for the Committee to deliberate on some specific topics related to NEAR-GOOS.

14. *Action Point 2: Chairperson of the Coordinating Committee, acting as the Coordinator for NEAR-GOOS, is requested to identify the deficiencies, and provide his/her vision on the development of NEAR-GOOS in the statement.*

15. *Action Point 3: All members of the Coordinating Committee are encouraged to improve the communication and coordination in the development and organization of NEAR-GOOS activities in order to maximize the cost effectiveness of the already limited resources.*

4.2 REVIEW OF THE IMPLEMENTATION OF ACTION POINTS AGREED UPON AT THE NEAR-GOOS CC-XI, XII, XIII

16. Mr. Zhu briefed the meeting on the implementation status of action points agreed upon at the previous three sessions, namely the 13th Session in Russia 2010, 12th Session in Malaysia 2008, and 11th Session in Bangkok 2007. While reporting that most of action points, particularly those adopted in 12th and 11th Session, have not been implemented or well implemented, he expected that concrete solution could be sought from the meeting.

17. The Committee noted with concern the lack of efficient implementation of action points due to the busy schedule and/or alteration of several Committee Members. It was suggested that further consideration be given in the respective agenda items of this meeting.

4.3 REPORT ON NATIONAL AND REGIONAL RTDB and DMDB

4.3.1 China

18. Ms Yu Ting, China National Delayed Mode Data Base for NEAR-GOOS, NMDIS reported the progress made since the last session of NEAR-GOOS. The official website for China DMDB has been dramatically upgraded and updated (<http://near-goos.coi.gov.cn>) with a great amount of data uploaded, and data products and/or graphic products provided. Meanwhile, effort has been made in the development of data processing techniques, quality control techniques, and standard operating procedures for data collection, processing and management. She also briefed the meeting of various international programs her institute has been involved in. The current status of China National Real Time Data Base for NEAR-GOOS was also briefly presented.

19. The Committee congratulated the China DMDB on the great improvement recently made to its website as a positive response to the results generated from a preliminary review

conducted early August 2011 on the operation of all RTDB and DMDBs' websites. A inquiry was made on whether the monthly mean sea level data of six Chinese oceanographic stations were well received by the University of Hawaii Sea Level Center (UHSLC) since these data has not been uploaded to its website (<http://ilikai.soest.hawaii.edu/uhscl/datai.html>). Ms. Yu clarified the monthly mean sea level data (from January 2000 to July 2011) of six Chinese stations (Dalian, Zhapo, Xisha, Nansha, Lvsu, and Kanmen) could be found at UHSLC's "SLP-Pac map database" under slpp. anomalies or slpp. deviations. (<http://ilikai.soest.hawaii.edu/uhscl/islp.html>).

20. *Action Point 4: Chinese members of the Coordinating Committee are requested to improve their national DMDB in a more user-friendly manner, and put into operation their national RTDB as soon as possible.*

4.3.2 Japan, including RRTDB, RDMDDB

21. Mr Satoshi Ogawa, Japan Meteorological Agency (JMA), presented the report on the operation and activities related to the NEAR-GOOS Regional Real Time Data Base (RRTDB) over the last intersessional period. The RRTDB website (<http://goos.kishou.go.jp/>) was redesigned to improve the accessibility to the data and products, and released in July 2011. The total number of registered users was increased from 114 in April 2011 to 154 in April 2010. In the period from February to July 2011, there were 263 thousands accesses to the RRTDB. JMA's R/Vs cruise plan and a link to JMA R/V & buoy observations were newly provided to the RRTDB. He explained that the current data and products in the RRTDB remains almost the same as those reported to the previous session, while JMA reanalysis products for MGD SST and MOVE were introduced since March 2011 to the RRTDB and RDMDDB for the period between 1985 and 2009. Additionally, updated JMA climate normals have been provided in the RRTDB and RDMDDB since May 2011. The unedited national report of RRTDB, with detailed list of data and products in RRTDB is annexed as III.
22. Mr Tomonori Hattori from the Japan Oceanographic Data Center (JODC) reported on the operation of the NEAR-GOOS Regional Delayed Mode Data Base (RDMDDB). Total 43 types of data files have been provided as of the end of July 2011 with total volume of oceanographic and meteorological data available amounting to 125 GB, an increase of 60 GB increase over the volume reported at last session. He highlighted the annual number of hits on RDMDDB website (<http://near-goos1.jodc.go.jp/>) are counted at the constant level of 8,000 to 10,000 with 4,900 files and 74 GB data downloaded from RDMDDB in 2010. The list of data in RDMDDB is contained in the Annex III.
23. The Committee appreciated the continuous contribution of the Japan Meteorological Agency and Japan Oceanographic Data Center to the smooth operation of the two regional data bases. Salient suggestions were also made on the uploading of WESTPAC logo to all websites of NEAR-GOOS Data Bases, including RRTDB and RDMDDB, and the conduct of user analysis to better orient NEAR-GOOS products. An inquiry was made on whether the RRTDB and RDMDDB retrieved data from other national RTDBs and DMDBs.
24. *Action point 5: The RRTDB and RDMDDB are requested to strengthen their regional function, and enhance the interaction with other National RTDBs and DMDBs with suggestions to be proposed to the next session.*

4.3.3 Republic of Korea

25. Mr Ok-Soo KIM, Korea Hydrographic and Oceanographic Administration (KHOA), reported to the meeting the Korea National Real Time Data Base for NEAR-GOOS has been transferred from KORDI to KHOA due to the reshuffle of Korean Government in 2008. KHOA has been constructing and will put in operation the Korea National RTDB for NEAR-GOOS. Prior to its operation, the current Korea national RTDB for NEAR-GOOS has been maintained by KORDI at website: <http://near-goos.kordi.re.kr/>. Mr. Kim informed that 145 real-time offshore/coastal observing stations has been operating by KORDI, KHOA, KMA and NFRDI with oceanographic and marine meteorological data observed and transmitted by satellite or CDMA (Code Division Multiple Access) in real-time mode. With the improving observing capability, KHOA has been establishing an integrated Korea National Real- Time Data Base. He expected more data will become available to the public through the Korea national RTDB for NEAR-GOOS when the new website becomes operational. He highlighted the recent progress made on the development of Korea Operational Oceanographic System (KOOS), which will greatly enhance the NEAR-GOOS related activities in Korea.
26. In relation to the operation of Korea National Delayed Mode Data Base for NEAR-GOOS, Mr Kwang-Soon Park presented, on behalf of Mr Hee-Dong Jeong, the national report. The Korea National DMDB for NEAR-GOOS has been maintained and updated by the Korean Oceanographic Data Center (KODC) with data and information available on the Serial monthly oceanographic data from 1961 to 2010 (water temperature, salinity, dissolved oxygen, meteorological factors, nutrients, zooplankton biomass) and daily coastal oceanographic data from 1923 to 2010 (water temperature, air temperature, meteorological factors).
27. The Committee noted the change in the host of the Korea National RTDB for NEAR-GOOS, and the out-of-operation of Korea National DMDB for NEAR-GOOS. Inquires were made about the models used for the Korea Operational Oceanographic System (KOOS) and the national coordination mechanism for its observing systems.
28. *Action point 6: Korean Members of the Coordinating Committee are requested to put into operation their new National RTDB and National DMDB as early as possible.*

4.3.4 Russian Federation

29. Mr Vyacheslav Lobanov presented the national report on Russia National Real Time Data Base and Delayed Mode Data Base for NEAR-GOOS, respectively. The Far Eastern Regional Hydrometeorological Research Institute (FERHRI) continued to maintain the national Real Time Data Base (RTDB) for NEAR-GOOS in Russian (<http://rus.ferhri.ru/esimo/Projects/Neargoos/>) with provision of operational and archived oceanographic and marine meteorological data from 3 coastal stations and ship reports. He informed the meeting that website of the RTDB is out of service due to constructions it is undergoing to provide data observed from new autonomous mooring systems installed in the NEAR-GOOS region from 2010 to 2011, although these information is currently available at <http://public.feerc.obninsk.org/remac/kav/index.html>.
30. With respect to the operation of Russia National Delayed Mode Data Base (DMDB) for NEAR-GOOS, he introduced that the V.I.II'ichev Pacific Oceanological Institute (POI) has been maintaining national DMDB (<http://pacificinfo.ru/near-goos/>) with renewal and provision of historical oceanographic data observed by national and foreign organizations in the Northwest Pacific including NEAR-GOOS seas, and the data set of POI, FERHRI and TINRO marine expeditions (hydrology, chemistry and biology). The information on recent POI

oceanographic cruise in the NEAR-GOOS area is located at <http://pacificinfo.ru/near-goos/?show=catalogue&org=POI&orgs=Select>. Information on current cruises could be found at <http://pacificinfo.ru/rv/>. New information on coastal observations is added at http://pacificinfo.ru/data/cdrom/11/html/r_4_1.html. Several links has been recently established with the newly completed Russian Atlas Climate of the Seas (<http://data.oceaninfo.info/atlas/Jap/index.html>) and joint publication with NODC (USA) on Climatic Atlas of the North Pacific Marginal Seas (<http://www.nodc.noaa.gov/OC5/PACIFIC2009/>) to which the Russian National DMDB has made major contribution.

31. *Action Point 7: Russian Member of the Coordinating Committee is requested to make available their National RTDB as scheduled in the first half of 2012.*

32. *Action Point 8: Russian Member of the Coordinating Committee is encouraged to improve, in close consultation with his competent agencies, the attendance of Russian Members to the sessions of the Coordinating Committee.*

4.4 REPORT ON THE WORKING GROUP ON NEW GENERATION SEA SURFACE TEMPERATURE

33. Mr Ogawa was invited to present the progress made on behalf of Mr. Hiroshi Kawamura, Chair of NEAR-GOOS Working Group on NGSST. He reviewed the Working Group was established with objectives to, among others, develop new generation space-based SST products in the NEAR-GOOS region using remote sensing and in situ observations, and demonstrate the utilities of the NGSST products. The WG conducted their work in the form of two workshops held respectively in 2006 and 2008 with remarkable improvements made on the research and development of regional SST in participating countries. Notably, some regional high-resolution SST digital data has been continuously provided on research or operational basis, e.g. the NGSST-O developed by the Tohoku University, available at <http://www.ocean.caos.tohoku.ac.jp/%7Emerge/sstbinary/actvalbm.cgi?eng=1>, and the MGDSST developed by Japan Meteorological Agency, available at <http://goos.kishou.go.jp/rtrdb/mgdsst.html>

34. Mr Ogawa further introduced the recommendations of Mr Kawamura on the termination of the Working Group, in view of the fact that the major objectives of this Working Group has been accomplished, and on the establishment of NEAR-GOOS Working Group on Products in order to conduct a comprehensive review of all NEAR-GOOS products and suggest necessary improvements with the aim of further enhancing the efficiency and visibility of NEAR-GOOS.

35. Extensive discussions were provoked on the proposed Working Group and its Terms of Reference. The Committee appreciated Mr Hiroshi Kawamura for his leadership and the Working Group on NGSST for their achievement made in the development of NGSST products, and decided to abolish the NEAR-GOOS WG on NGSST as suggested. Meanwhile, recognizing the need to improve the NEAR-GOOS products in a comprehensive manner, the Committee decided to establish the NEAR-GOOS Working Group on Products with adopted Terms of Reference reflected as annex IV to this report.

36. *Action point 9: The Coordinating Committee nominated Mr Ogawa take a lead in the organization of the working group on NEAR-GOOS products with expectation on the Working Group to conduct, as early as possible, their work in accordance with its Terms of Reference.*

37. Action point 10: all Members of the Coordinating Committee are encouraged to send their nominees to Mr Ogawa for the Working Group on Products immediately after the closure of the session.

4.5 REPORT ON THE WORKING GROUP ON DATA MANAGEMENT

38. Mr Kwang-Soon Park presented the message received from Mr Hee-Dong Jeong, also Chair of NEAR-GOOS Working Group on Data Management. It was regretful that, due to no any activity conducted since 2008 by this Working Group, Mr Jeong would resign from the Chairman ship of the Working Group.
39. Despite the resignation of Mr Jeong, the Committee emphasized the great importance of Data Management in the development of NEAR-GOOS, and decided to retain the Working Group on Data Management with its Terms of Reference, which was adopted at the seven session of the Coordinaitng Committee in 2002, as annex v to this report.
40. Action point 11: The Coordinating Committee noted with regret the resignation of Mr Hee-Dong Jeong as the Chairperson of Working Group on Data Management. However, in view of the importance of Data Management for the efficient and effective operation of the NEARGOOS databases system, and the difficulties at this session in the identification of new chairperson capable to lead the work of the Working Group, the Coordinating Committee requested Mr. Kim, Korean Member, to communicate with Mr Jeong for his replacement as the chairperson of the Working Group on Data Management. Thus the Chair of the WG will be decided through correspondence among the Members of the Coordinating Committee.
41. Action point 12: All Member of the Coordinating Committee are encouraged to send their nominees to the WESTPAC office for the chair and/or members of this Working Group immediately after the closure of the session.

5. REPORT ON RELATED PROGRAMMES IN THE NEAR-GOOS REGION, IF ANY

42. Two presentations were made, respectively on the Global Temperature and Salinity Profile Program (GTSP) Data Product Center for the North Pacific Ocean and Korea Operational Oceanographic System (KOOS).
43. Mr Ogawa informed the meeting that JMA has launched the Global Temperature and Salinity Profile Program (GTSP) Data Product Center for the North Pacific Ocean in March 2011. As a joint program of IODE and JCOMM, the GTSP is to develop and maintain global ocean Temperature-Salinity profile data and to improve and implement quality control in an agreed and uniform manner. While receiving through GTS the real-time data, GTSP acquires delayed mode data either through national oceanographic data centers (NODCs) or through cooperation with projects such as Climate Variability and Predictability (CLIVAR) & World Ocean Database (WOD). To ensure the data quality, the GTSP Data Product Centers are established to provide information on observed data quality to the GTSP Steering Group. In doing so, the GTSP DPC for the North Pacific was launched by JMA to provide information on data quality, with a specific target on the data from vessels (SOOP fleet). Mr Ogawa concluded his presentation by introducing some services provided by the center, including access to observation data, GTS data search and products of MOVI/MRI.COM, JMA data assimilation system.

44. Mr Kwang-Soon Park briefed on the current development of the Korean Operational Oceanographic System (KOOS), a five-year program to provide data and information required for more rapid detection & timely prediction of the state of ocean and coastal areas for better management decisions and various marine operations. He outlined the project scope, technical requirement and forecasting system established so far, including the numerical weather forecasting system, 3D regional ocean circulation system, high-resolution coastal circulation forecasting system, wave forecasting system, and operational storm surge prediction system. While emphasizing more efforts need to be done to ensure the full operation of the system, he expected the KOOS could contribute to the NEAR-GOOS directly when it works in full operation since most of models in KOOS cover the same geographic areas of NEAR-GOOS.
45. An inquiry was made on the validation quality of models used in the system. Mr Park responded that the validation quality is generally good in term of models on wave, wind and tide, and other models still need improving. Meanwhile, there are three circulation models applied in this system, comparison among different results still remains at the testing phase.

6. RELEVANT DEVELOPMENTS IN RELATED PROGRAMMES

6.1 RECENT DEVELOPMENT IN THE GLOBAL OCEAN OBSERVING SYSTEM

46. Ms Lin, also in her capacity as the Chairperson of the Intergovernmental Committee for GOOS (I-GOOS), briefly provided the recent change made by IOC at its 26th Session in June 2011 to the governance structure for GOOS with the goal of strengthening the observing system and streamlining its organization. Within this new structure, existing GOOS intergovernmental (I-GOOS), scientific committees (GSSC) and all its subsidiary panels will be replaced by an expert GOOS Steering Committee (GSC) which will guide GOOS implementation and report directly to the IOC Assembly. This new GSC, comprised of five members appointed by IOC Member State Electoral Groups with an additional 10 scientific and technical experts, will work closely together with all relevant ocean observing communities to constructively plan and move forward a Global Ocean Observing System responding to scientifically and societally set requirements. In addition, Ms Lin introduced the fifth GOOS Regional Alliance Forum (GRF-V) will take place on 3 October 2011, alongside the EuroGOOS Conference in Sopot Poland, 4-6 October 2011, which may provide a good opportunity for GRA chairs to explore global cooperation between or among them.
47. *Action point 13: The Coordinating Committee requested Mr Kim to contact Mr Jeong for his participation into the fifth GOOS Regional Alliances Forum (GRF-V) in Poland 2011 in his capacity as the Chairperson of NEAR-GOOS. In the case that Mr Jeong will be unable to attend, Ms Lin will attend the Forum on his behalf.*

6.2 SEAGOOS Ocean Forecasting Demonstration Project

48. Mr Fangli Qiao, resources person from the First Institute of Oceanography, was invited to share his experience in the development of the Ocean Forecasting Demonstration System in the IOC/WESTPAC Program on the South East Asian Regional- Global Ocean Observing System (SEAGOOS). He detailed the progress made on the development of SEAGOOS Ocean Forecasting Demonstration System in three initial participating countries, China, Malaysia and Thailand, with the wave-tide-circulation coupled model adopted which proved to have greatly enhanced the ocean and climate prediction capability. Two joint cruises have been conducted in the demonstration areas to validate the model and the forecasting results are expected to be available via web in late 2011.

49. With the accurate prediction on the spread of the green algae bloom in the coastal areas off Qingdao during 2008 and 2010, he further suggested the Committee consider the establishment of NEAR-GOOS pilot project or working group on ocean forecasting in view of its various applications to meet ever-growing social-economic needs and to improve the existing ocean forecasting capability in all participating countries.

6.3 ODINWESTPAC AND OTHER RELEVANT WESTPAC ACTIVITIES

50. Ms Lin, in his capacity as the ODINWESTPAC coordinator, briefed the meeting on the current status of the pilot project titled Data and Information Network for the Western Pacific region (ODINWESTPAC), including the establishment of project coordinating group, website development, cooperation with other regional and international programmes. She expressed her regret over lack of substantive progress since the last session of the Committee due to low response from and communication difficulties with some focal points of participating countries. She finally reported to the meeting on the workplan for the next intersessional period.

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

7.1 REVIEW OF THE CURRENT OPERATION OF NEAR-GOOS DATA EXCHANGE NETWORK

51. Mr Zhu reported on the current operational status on all NEAR-GOOS Real Time Data Bases (RTDBs) and Delayed Mode Data Bases (DMDBs). Considering the two mode “distributed” internet-based database structure has been serving as a workable model for the coordination and exchange of data and products among all RTDBs and DMDBs, a review was conducted on 2 August 2011 with initial focus on the operation of all websites.
52. China National Real Time Database (NRTDB) has been hosted at the National Marine Environmental Forecasting Center (NMEFC) with website provided at: <http://neargoos.nmefc.gov.cn/>. However, the website didn't seem to be functioning. China National Delayed-mode Database (NDMDB) has been hosted and operation at the National Marine Data & Information Service (NMDIS) with website provided at: <http://near-goos.coi.gov.cn/>.
53. NEAR-GOOS Regional Real Time Database (RRTDB) and Regional Delayed Mode Data Base (RDMDB) have been hosted respectively at the Japan Meteorological Agency (JMA) with website provided at: <http://goos.kishou.go.jp/>, and the Japan Oceanographic Data Center (JODC) with website provided at: <http://near-goos1.jodc.go.jp/>. Both websites are operating without any problem with on-line registration.
54. Korea National Real Time Database (NRTDB) has been hosted at the Korea Ocean Research & Development Institute (KORDI) with website provided at: <http://near-goos.kordi.re.kr/>. The website has been operating. However, the National Delayed-mode Database (NDMDB), hosted at the National Fisheries Research & Development Institute (NFRDI) with website provided at: http://kodc2.nfrdi.re.kr:8001/home/eng/projects/near_links.php. The website doesn't seem to be functioning.

55. Russia National Real Time Database (NRTDB) is hosted at the Far Eastern Regional Hydrometeorological Research Institute (FERHRI) with website provided at: <http://www.ferhri.ru/project/near-goos/>, however, the website doesn't seem to be functioning. While National Delayed-mode Database (NDMDB) has been hosted at the Pacific Oceanographic Institute (POI) with website operating at: <http://pacificinfo.ru/near-goos/>.

56. While expressing his regret over the out of operation of several websites and appreciating the recent improvement made on several websites, particularly China DMDB, he further suggested a in-depth review be conducted to identify the deficiencies of current internet-based database structure, come up with some suggestion for improvements, not only on the websites, but also on the RTDB and DMDB as a whole. This could be done by the newly-established NEAR-GOOS Working Group on Products.

57. *Action Point 14: All Members of the Coordinating Committee are requested to review the operation of their RTDBs and DMDBs, and take immediate action to improve or make them become operational as early as possible.*

7.2 DEVELOPMENT OF OCEAN OBSERVING AND FORECASTING SYSTEM IN THE NEAR-GOOS REGION

7.2.1 Development of Yellow Sea/East China Sea Operational Oceanographic System

58. Mr Kwang-Song Park, resource person from KORDI, outlined the development status of the Yellow Sea/ East China Sea Operational Oceanographic System (YOOS), a joint cooperative program between China and Korea to provide nowcast and forecast for ocean/coastal environment in the Yellow Sea and East China Sea for the governmental agencies, industries and the public in support of marine operations, sustainable management and development of coasts, oceans and its ecosystems. The technical requirement, including core variables to be predicted, numerical model to be applied, and the future application of the System were detailed, together with current progress made by two sides.

59. Mr Park emphasized the importance of cooperation among countries that share the same water body in the establishment of a regional operational ocean observing and forecasting system in the NEAR-GOOS region, and further proposed the NEAR-GOOS encourage its participating countries to establish their own ocean forecasting capability, exchange their in situ data with others of common interests, and jointly develop a synchronized ocean forecasting system in the region. The presentation, together with the one made by Mr Qiao under agenda item 5.2 prompted strong interest in the possibility of the establishment of a ocean forecasting system in the NEAR-GOOS region.

60. *Action point 15: the Coordinating Committee noted the growing need for the development of a ocean forecasting system in the NEAR-GOOS region, and decided to organize a regional workshop on the development of regional ocean forecasting system with objectives to share experience on, review the current status of, and promote the cooperation on the research & development of ocean forecasting systems. The Committee also noted with appreciation the National Marine Environmental Forecasting Center (NMFEC), China expressed its interest to host the regional workshop in 2012, subject to the final decision of its competent authority, and decided to form one proposal-drafting group with composition of Mr Ye Yuan, Mr Park, Mr Qiao and Mr Zhu.*

7.2.2 NEAR-GOOS Cross-Basin Hydrographic Section

61. A proposal to establish a NEAR-GOOS pilot project was made by Mr Ogawa from JMA and Mr Lobanov from POI on NEAR-GOOS Cross-Basin Hydrographic Section. Mr Ogawa explained the global warming may slow down deep water formation and circulation process. In view of the fact that the deep water formation in a regional sea of NEAR-GOOS region has been declining for many decades with a remarkable decrease in dissolved oxygen from the 1930s to 2000s, he further suggested the long term cross- basin investigation be conducted to reveal the variation of deep-sea water formation and circulation. With full consideration of the respective limits of their Exclusive Economic Zone in the shared water, cooperation will be initiated between JMA and POI on long-term synchronized observations along a section connecting Japan and Russia with data and result to be provided through the NEAR-GOOS RRTDB and RDMDDB.
62. The Committee considered, despite the fact that the proposed project will start from bilateral cooperation, its objective is aligned with NEAR-GOOS goals to establish a comprehensive and sustained monitoring network in the region, and it provides a basis of a multilateral framework for all participating countries interested to cooperate in the similar approach to the conduct of cross-basin investigations in the NEAR-GOOS region with a view to improving the understanding of the impact of climate change on the water and its ecosystems they are sharing.
63. Action point 16: The Coordinating Committee decided, in view of the impact of global climate change on world ocean and its ecosystems, to initiate its pilot project titled “NEAR-GOOS Cross-basin Climate Monitoring Section” with objectives to improve the understanding of the response of regional seas in the NEAR-GOOS region to climate change. The CC also appreciated the contribution of JMA and POI to the pilot project through the provision of R/V and ship time, and expected the relevant data and information to be available as soon as possible, preferably in one year, subject to the internal procedure of participating countries. Meanwhile, the Committee encouraged other participating countries to consider the possibility of conducting joint cruises in the regional seas of NEAR-GOOS region.

8. REVIEW OF THE TERMS OF REFERENCE OF THE IOC/WESTPAC COORDINATING COMMITTEE FOR THE NEAR-GOOS

64. Mr Zhu suggested, in the light of personnel alterations, the Committee review the Terms of Reference of the IOC/WESTPAC Coordinating Committee for the NEAR-GOOS which was adopted by the IOC/WESTPAC at its six session in 2002.
65. He stressed the role of the Chairperson as NEAR-GOOS Coordinator with a leadership provided with other members of CC to fulfil the responsibilities provided in the Annex VI, and expected more ownership from the Committee could be instilled in the development of NEAR-GOOS at its second phase, and implementation of these action points agreed upon.
66. Action point 17: WESTPAC Office is requested to send an official letter to all IOC National Focal Points of NEAR-GOOS Participating Countries, requesting the confirmation/identification of their members of the Coordinating Committee.

9. OTHER BUSINESS

67. No other issues were raised under this agenda item.

10. DATE AND PLACE OF NEXT SESSION

68. Mr Kim, Korea member, expressed the intention to host the next session of the committee. The Committee noted and accepted with appreciation the kind offer of Korea to host the next session of the Coordinating Committee, tentatively in the third quarter of 2012, subject to the final approval of his relevant authority. The exact date and venue will be decided through correspondence at a later stage.

11. ADOPTION OF ACTION POINTS

69. A list of action points accruing from the meeting was prepared by Mr. Zhu, and adopted afterwards by the Committee with minor amendments as contained in this report.

12. CLOSURE

70. Mr Zhu, Head of WESTPAC Office thanked Ms Shaohua Lin for her acceptance as acting Chairperson of this session. He also thanked all Committee Members, resource persons for their active participation in, the local staff for the excellent logistic arrangement for this session.
71. Ms Lin, acting Chair, concluded the session by expecting more substantial progress to be made in the next intersessional period. The session was closed at 17:00 on 9 September 2011.

ANNEX I

AGENDA

- 1. OPENING**
- 2. DESIGNATION OF ACTING CHAIRPERSON**
- 3. ADMINISTRATIVE ARRANGEMENTS**
 - 3.1 ADOPTION OF AGENDA
 - 3.2 DESIGNATION OF RAPPORTEUR
 - 3.3 WORKING ARRANGEMENTS
- 4. STATUS OF NEAR-GOOS: REPORT ON THE OPERATION**
 - 4.1 STATEMENT OF CHAIRPERSON
 - 4.2 REVIEW OF THE IMPLEMENTATION OF ACTION POINTS AGREED UPON AT THE NEARGOOS CC-XI, XII, XIII
 - 4.3 REPORT ON NATIONAL AND REGIONAL RTDB and DMDB
 - 4.3.1 China
 - 4.3.2 Japan, including RRTDB, RDMDB
 - 4.3.3 Republic of Korea
 - 4.3.4 Russian Federation
 - 4.4 REPORT ON THE WORKING GROUP ON NEW GENERATION SST
 - 4.5 REPORT ON THE WORKING GROUP ON DATA MANAGEMENT
- 5. REPORT ON RELATED PROGRAMMES IN THE NEAR-GOOS REGION, IF ANY**
- 6. RELEVANT DEVELOPMENTS IN RELATED PROGRAMMES**
 - 6.1 RECENT DEVELOPMENT IN THE GLOBAL OCEAN OBSERVING SYSTEM
 - 6.2 SEAGOOS OCEAN FORECASTING DEMONSTRATION PROJECT
 - 6.3 ODINWESTPAC AND OTHER RELEVANT WESTPAC ACTIVITIES
- 7. DEVELOPMENT OF NEAR-GOOS AND FOLLOW-UP OF ITS STRATEGIC PLAN**
 - 7.1 REVIEW OF THE CURRENT OPERATION OF NEAR-GOOS DATA EXCHANGE NETWORK
 - 7.2 DEVELOPMENT OF OCEAN OBSERVING AND FORECASTING SYSTEM IN THE NEAR-GOOS REGION

- 7.2.1 Development of Yellow Sea/East China Sea Operational Oceanographic System
- 7.2.2 NEAR-GOOS Cross-Basin Hydrographic Sections

- 8. REVIEW OF THE TERMS OF REFERENCE OF THE IOC/WESTPAC COORDINATING COMMITTEE FOR THE NEAR-GOOS**
- 9. OTHER BUSINESS**
- 10. DATE AND PLACE OF NEXT SESSION**
- 11. ADOPTION OF ACTION POINTS**
- 12. CLOSURE**

ANNEX II

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ANNEX III

**UNEDITED REPORT ON REGIONAL REPORT OF
THE REGIONAL REAL TIME DATA BASE (RTDB)
AND DELAYED MODE DATA BASE (DMDB)**

Report of the Regional Real Time Data Base (RRTDB)

Submitted by the NEAR-GOOS Regional Real Time Data Base

1. General status

RRTDB has operated in good condition in this intersessional period. RRTDB web pages were re-designed and released on July 2010, in order to facilitate access to the data and products.

2. User registration

The total number of the registered RRTDB users was increased from 114 in April 2010 to 154 in August 2011. The registered users are from Canada (2), China (32), Germany (1), Greece (1), Indonesia (2), Japan (91), Republic of Korea (7), Russian Federation (7), Saudi Arabia (1), Spain (1), Thailand (1), U.K. (2), and USA (6), as of August 2011.

3. Contribution to RRTDB

In addition to the data from the Global Telecommunication System (GTS), JMA, the Japan Fisheries Information Center (JAFIC), and the Integrated Science Data Management (ISDM, Canada) have contributed to RRTDB.

4. Changes in products

JMA's sea temperature and currents products are produced in real time and made public through the Regional Data Bases. On the other hand, JMA produces reanalysis products after a few months with the best information available at that time. In March 2011, JMA and JODC replaced JMA's real-time products for the period between 1985 and 2009 with the reanalysis products in RRTDB and in RDMDB, respectively.

Climate normals such as average sea surface temperatures are updated once every decade, using the past 30 years data. JMA started using new climate normals in May 2011, and the new normals and standard deviations for 10-day mean sea surface temperatures in the western North Pacific (MGDSST) and the new monthly normals and standard deviations of global sea surface temperatures (COBE-SST) were set in the JMA Products in the Regional Data Bases. Also, images of the 10-day mean sea surface temperature anomalies in the western North Pacific and the monthly anomaly of global sea surface temperatures were replaced with those using new normals retroactively.

Table 1 List of Data/Products available at RRTDB

Description of data	Source	Type
- GTS Reports (oceanographic and marine meteorological observations) FM13 SHIP, FM18 BUOY, FM62 TRACKOB, FM63 BATHY, FM64 TESAC	GTS	in situ data
- Data provided by users (sea water temperature observations)	JAFIC	in situ data
- Decoded Data (temperatures and winds)	GTS	in situ data
- GTSP (quality controlled temperature and salinity data)	GTSP	in situ data

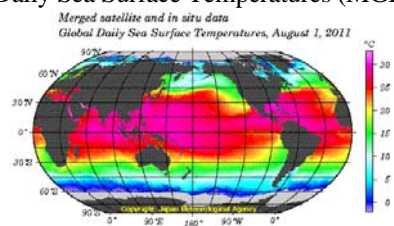
<ul style="list-style-type: none"> - JMA Products <ol style="list-style-type: none"> 1) Daily Sea Surface Temperatures (MGDSST: Global, Regional) 2) 10 day mean SST (MGDSST and others: Northwestern Pacific) 3) Monthly Mean SST (COBE-SST: Global) 4) Daily Subsurface Temperatures and Surface Currents (Assimilation model-MOVE/MRI.COM outputs: Regional) 5) Monthly Mean Pacific Subsurface Temperatures (OI) * 6) 5 day mean Sea Surface Heights (Jason, Pacific) ** 7) Sea Ice Concentrations (north-east Asian marginal seas) - JMA Research Vessels Cruise Plan 	<p>JMA</p> <p>JMA</p>	<p>Analyzed GPVs and charts</p> <p>charts</p>
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* Temporally non-active, since Oct 2010

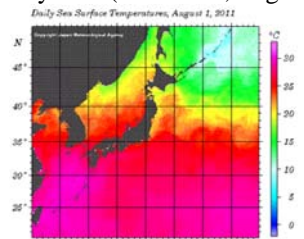
** Temporally non-active, since Feb 2009

Examples of JMA products

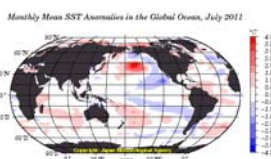
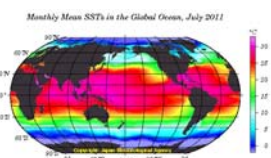
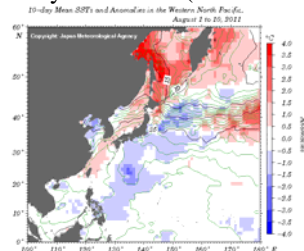
Daily Sea Surface Temperatures (MGDSST, Global)



Daily SST (MGDSST, Regional)

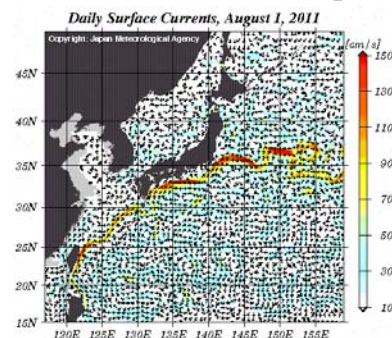
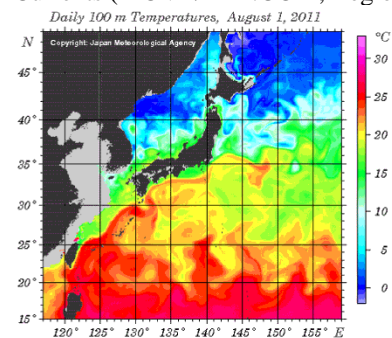


10 day mean SST (Northwestern Pacific)

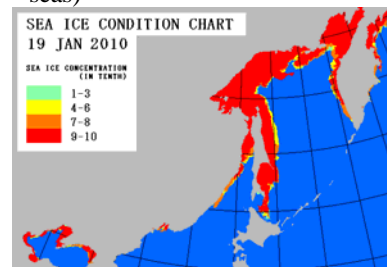


Monthly mean SST (COBE-SST, Global)

Daily Subsurface Temperatures and Surface Currents (MOVE/MRI.COM, Regional)



Sea Ice Concentration (North-east Asian marginal seas)



Report of the Regional Delayed Mode Data Base (RDMDB)

Submitted by the NEAR-GOOS Regional Delayed Mode Data Base

Japan Oceanographic Data Center (JODC) has been operating RDMDB (Regional Delayed Mode Data Base) since October 1996, based on the recommendation of the first session of the NEAR-GOOS Coordinating Committee held in Bangkok in September 1996.

RDMDB contains the 43 different types of data files as of the end of July 2011 (Table 1). Since July 2010, the SST and SSS data sets provided by VOS Nippon¹ have been available. In addition, due to the re-analysis for real-time data products of Japan Meteorological Agency (JMA), the related data for the period from 1985-2009 were replaced in RDMDB in March 2011.

The total volume of oceanographic/marine and meteorological data available on RDMDB is more than 125GB. 40 types of data have been transferred from RRTDB (Regional Real Time Data Base) operated by JMA. Others are from Japan Hydrographic and Oceanographic Department, Tohoku University and Ministry of Land, Infrastructure, Transport and Tourism.

The total volume of the data available on RDMDB has increased by about 60GB during the past 16 months, compared to that at the end of March 2009, which was reported at the last session of NEAR-GOOS Coordinating Committee.

Fig.1 shows annual variation of the number of hits on English and Japanese top pages of RDMDB website. The total numbers have been in constant level around 8,000 to 10,000 a year since 2006. The number on the English top page in 2010 was counted maximum number of 6324 in the past years.

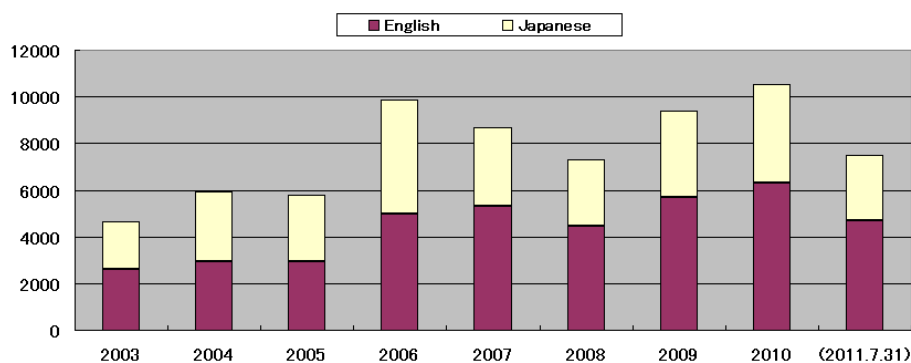


Fig.1 Annual variation of the number of hits on English and Japanese top pages of RDMDB website

Fig.2 shows Annual variation of the number and volume of downloaded data files from RDMDB. About 4,900 files and 74GB data were downloaded from RDMDB in 2010.

¹ VOS Nippon: http://www.vos-nippon.jp/index_e.html

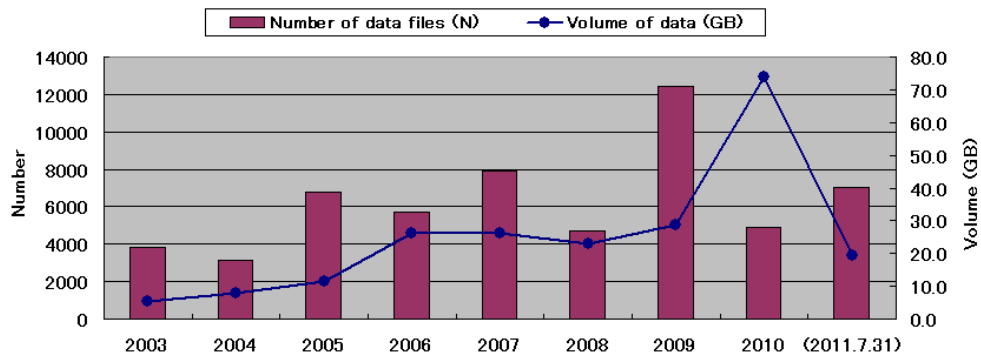


Fig.2 Annual variation of the number and volume of downloaded data files from RDMDB

Table 1 Data in NEAR-GOOS RDMDB (as of End of July 2011)

Type of Data	Description of Data	Data Volume
30secTIDE	30 sec interval tide data at the JHD tidal stations, Japan	9,773.1 MB
adjsubs	Monthly Mean Subsurface Temperature in seas around Japan (100m, 200m, 400m)	23.4 MB
asmday	Daily subsurface temperature in the seas around Japan	171.0 MB
bathy	Regional Data Sets of BATHY Report	21.1 MB
bathyG	Global Data Sets of Bathy Report	219.4 MB
buoy	Regional Data Sets of BUOY Report	835.5 MB
buoyG	Global Data Sets of BUOY Report	11,560.1 MB
cobesst	Monthly mean sea surface temperature	35.0 MB
cobesstnorm	Normals and standard deviations of COBESST	9.1 MB
dailysst	Daily sea surface temperature	315.9 MB
FERHRI	Marine Meteorological observation data on board by FERHRI, Russia	3.8 MB
FERHRI_station	Station Marine Meteorological observation data by FERHRI, Russia	0.2 MB
glbsst	Monthly Mean Sea Surface Temperature	5.3 MB
glbts	Global sea and sub surface temperature and salinity decode	30,315.0 MB
glbwind	Global wind decode	2,788.2 MB
gtsp	Quality controlled temperature and salinity data by MEDS, Canada	1,171.9 MB
JAFIC	Sea Surface/Sub surface Temperature from JAFIC, Japan	74.2 MB
mgdsst	Global daily sea surface temperature merged satellite and in-situ data	29,288.4 MB
MOVE_adjsubs	Monthly mean subsurface temperatures in seas around Japan (50m,100m,200m,400m)	532.1 MB
MOVE_asmday	Daily subsurface temperatures in seas around Japan (50m,100m,200m,400m)	16,237.7 MB
MOVE_current	Daily Surface Currents around Japan	8,119.2 MB
pacsbs	Monthly Mean Subsurface Temperature in Pacific (100m, 200m, 400m)	39.9 MB
palace	Sub surface temperature profile observed by PALACE float operated by ORI, University of Tokyo, Japan	0.1 MB
pariwave	Japanese nationwide coastal wave data of MLIT, Japan	202.3 MB
seaice	Sea ice concentration in the north-east Asian marginal seas	1,590.9 MB
ship	Regional Data Sets of SHIP Report	210.8 MB
shipG	Global Data Sets of SHIP Report	3,103.9 MB
ssdh	Sea surface dynamic heights in the Pacific	278.5 MB
ssha	Sea surface heights anomalies in the Pacific	278.5 MB
sstanl	Grid Daily Sea Surface Temperature data in the Western North Pacific	98.0 MB
subst	Sub Surface Temperature decoded at RRTDB	2,038.9 MB

Type of Data	Description of Data	Data Volume
subst_error	Sub Surface Temperature decoded Error Report	10.4 MB
tesac	Regional Data Sets of TESAC Report	142.3 MB
tesacG	Global Data Sets of TESAC Report	2,135.3 MB
tohokuUv	XBT data observed by Tohoku University, Japan	0.1 MB
trackob	Regional Data Sets of TRAKOB Report	1.3 MB
trackobG	Global Data Sets of TRACKOB Report	121.4 MB
vosnippon	VOS Nippon SST & SSS data	795.9 MB
ts	Sub surface temperature and salinity decode	2546.1 MB
wind	Wind decoded Data at RRTDB	193.2 MB
wind_error	Wind decoded Error Report	1.5 MB
wind2	Format ver2.0 of WIND	179.4 MB
wnpsst	10 days Mean Sea Surface Temperature	7.8 MB
wnpsstnorm	Western North Pacific sea surface temperature	2.0 MB
Total of Data Volume		125,477.9 MB

ANNEX IV

**TERMS OF REFERENCE
ON NEAR-GOOS WORKING GROUP ON PRODUCTS**

Composition:

The membership will include one or more experts from the participating agencies or organization based on their expertise in the subject area. Membership can be extended to experts outside the participating agencies or organization by consensus, if their contributions are deemed necessary for the working group.

The working group will select a chairperson from its members by consensus, for a term mutually agreed. The chairperson will be responsible for representing the working group and reporting to the NEAR-GOOS Coordinating Committee at its regular sessions.

Operation of the working group:

The working group will conduct its business largely through correspondence. It may organize meetings and workshops where necessary and possible, in order to facilitate discussion among members.

Responsibilities:

- To review the present status of NEAR-GOOS products provided by the respective RTDBs and DMDBs, identify the deficiencies and suggest possible improvements;
- To carry out user analysis, for the knowledge on the application of the NEAR-GOOS products and better understanding of specific needs of different users;
- To advise and/or report to the Coordinating Committee on the improvement of the NEAR-GOOS products.

ANNEX V

**TERMS OF REFERENCE
ON THE NEAR-GOOS WORKING GROUP ON DATA MANAGEMENT**

(adopted at the Ninth Session of IOC/WESTPAC Coordinating Committee for the North-East Asian Regional-Global Ocean Observing System, NEAR-GOOS CC-IX, Sendai, Japan, 3-5 November 2004)

Composition:

The membership will include initially representatives of all agencies and/or institutes that operate national and regional NEAR-GOOS databases. Membership can be expanded to include participants from agencies and/or institutes who are willingly to participate in and whose contribution is necessary to the NEAR-GOOS data management.

Chairperson:

The working group shall elect a Chairperson among the working group members for a term mutually agreed. The Chairperson will be responsible for representing the working group and reporting to the NEAR-GOOS Coordinating Committee at its regular sessions.

Operation of the working group:

The working group will conduct its business largely by correspondence and will meet where possible.

Terms of reference:

- To maintain and develop the database network established in the first phase of NEAR-GOOS
- To review the present database network and develop a plan to improve it
- To prioritize the tasks on NEAR-GOOS data management identified in the past and future CC meetings and develop implementation plans
- To work together with other NEAR-GOOS groups in order to maximize the outcome of the groups' activities through appropriate links between the database network and the activities
- To keep contact with other data management initiatives with a view to introducing new data management method to NEAR-GOOS data management in order to develop and maintain the regional data management capacity to meet the national, regional and international requirements

ANNEX VI

**TERMS OF REFERENCE
ON THE IOC/WESTPAC COORDINATING COMMITTEE FOR NEAR-GOOS**

(Revised and adopted at the Seventh Session of the IOC/WESTPAC Coordinating Committee for the North-East Asian Regional-Global Ocean Observing System, NEAR-GOOS CC-VII, Vladivostok, Russian Federation, 2-4 October 2002)

REVISED TERMS OF REFERENCE

As part of the revised organizational structure for NEAR-GOOS in its second phase, the NEAR-GOOS Coordinating Committee will operate with the following general Terms of Reference:

Composition:

The Committee shall consist of representatives of all member countries. Each country shall designate two members, preferably with one person coming from the operational meteorological/oceanographic community. The Committee shall elect a Chairperson among the members. The Chairperson of the Coordinating Committee will act as NEAR-GOOS Coordinator. The Committee shall meet to the extent possible in regular annual sessions at the expense of the participating countries. Other countries and appropriately affiliated organizations can attend the sessions as observers.

In case a Member is unable to attend, his or her government will try to send a suitable replacement, so that there is continuity of representation.

Responsibilities:

- a) Coordinate the development of applications in operational oceanography that demonstrate the usefulness of regional collaboration;
- b) Encourage the increase the volume of quality-controlled data available to the NEAR-GOOS Community through the respective national and regional databases, where possible with the smallest time delay possible;
- c) Inventory and analyse existing activities relevant to NEAR-GOOS including operational systems and programmes, organizations, scientific programmes, services and products, commercial interests, and training and capacity building;
- d) Coordinate to produce integrated comprehensive data sets and data products that conform to the principle of end-to-end data management;
- e) Prepare a NEAR-GOOS Strategic Plan that highlights the direction of NEAR-GOOS over the next five years that incorporates the economic, social and environmental protection needs of the region with a clear approach to enhancing the coordinating mechanism of NEAR-GOOS;
- f) Publicise and disseminate NEAR-GOOS plans and information to regional governments and the general public;
- g) Recommend scientific and technical activities to support NEAR-GOOS

implementation by coordinating new pilot projects and providing linkages to existing projects and programmes;

- h) Produce guiding documents for the near real time data collection and exchange in the NEARGOOS region;
- i) Advise and consider sources of funding for pilot project development with various funding agencies and in consultation with pilot project leaders;
- j) Liaison with national NEAR-GOOS committees, J-COMM, GOOS Project Office and other GOOS-related bodies as appropriate;
- k) Develop linkages with existing relevant organizations, programmes and projects in the region.