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Report of The WDC-Oceanography, Tianjin

Mr. XU Sheng

Director of the WDC-Oceanography, Tianjin

Summary of the document

The document gives a summary working report of the WDC-Oceanography, Tianjin in 2007 and 2008. It makes a brief report on the center strengthened its marine data collection, management and services during the intersessional activities, specially take part in the major international activities of the WDC-Oceanography, Tianjin, including their progress and results in 2007 and 2008. The plan of the WDC-Oceanography, Tianjin in the transition of the WDCs to the WDS is stated in the document.

Appendix:

- A. 2007-2008 Working Report of The WDC-Oceanography, Tianjin

DRAFT TEXT FOR INCLUSION IN THE SUMMARY REPORT

Mr. XU Sheng reported the intersessional activities of the WDC-Oceanography, Tianjin and the plan in the transition of WDC.

The WDC-Oceanography, Tianjin strengthened its marine data collection, processing and management, and improved its services during the intersessional period.

Participation of the WDC-Oceanography, Tianjin in National Marine Scientific Data Sharing Project in China.

The WDC-Oceanography, Tianjin took active part in the collection, processing, management and service of marine data for scientific programs and researches.

Participation of the WDC-Oceanography in International Cooperative Programs/Projects

The WDC-Oceanography, Tianjin will report his major international activities which participated in during the meeting.

1. Participation in the Data Management and Service of Argo Project.

The global Argo data were downloaded from the GDAC website and then quality controlled and published on the website. Argo data management and service provided online access to the quality controlled global Argo profiles data, metadata, trajectory data and deployment information through its website (<http://www.argo.gov.cn>). By November 2008, 500601 profiles data had been made quality controlling and then published on the website, totally 6.30GB. 204712 profiles data were updated, totally 2.77GB in 2007 and 2008. The users were able to download the data via FTP.

2. Participation in Data Management and Service of GTSP Project.

The WDC-Oceanography, Tianjin took active part in the GTSP data collection, processing, management and service. The GTSP data were downloaded from the MEDS and then quality controlled for publication on the GTSP website (<http://221.239.0.160/gtsppweb/index.htm/>). By the November, 2008, 3.23GB realtime GTSP data from November, 2004 had been published on its website, and 14.3GB delayed-mode GTSP data had been quality controlled and then published on the website. 1.98GB realtime GTSP data and 3.08GB delayed GTSP data were updated in 2007 and 2008. In November, 2007 the sixth GTSP Data Center was set up in China.

3. Participation in ODAS/JCOMM Metadata Service and META-T Pilot Project

The WDC-Oceanography, Tianjin took charge of the JCOMM ODAS metadata management and service. The JCOMM ODAS Metadata Management Center was established in 2003. It conducts collection, processing and management of the metadata on the ODASs operated by the JCOMM Member States, international organizations and cooperative projects. It undertakes the operational running, maintenance and service of

ODAS metadata. A website, JCOMM ODAS Metadata Service (ODASMS) (<http://www.ogas.org.cn/>), was set up in 2004 for publication of metadata. The ODASMS held 9018 platform records, including the records of 4581 profile floats, 3452 drifting buoys, 621 fixed platforms, and 264 moored buoys by the end of 2008. These metadata were derived from the DBCP, China Argo Data Center and the GLOSS project.

Expert of the WDC-Oceanography, Tianjin attended the workshop of META-T Pilot Project in 2008 and participated in the discussions and idea exchanges with META-T colleagues.

4. Participation in the GLOSS Project

Monthly mean sea level data of 6 Chinese coastal stations have been provided to the two GLOSS data centers every month in 2007 and 2008. Delayed-mode hourly sea level data of 9 Chinese coastal stations will be continued to provide to the two GLOSS data centers in the UH Sea Level Center and the U.K. Proudman Oceanographic Laboratory. A GLOSS data collection and processing system was developed to download the world sea level data from the UH Sea Level Center and then processed them. The processed GLOSS data were integrated into the marine database hosted by the WDC-Oceanography, Tianjin for data service.

Participation of the WDC-Oceanography, Tianjin in Regional Projects

1. Participation in the NEAR-GOOS Delayed-mode Data Management and Service

China NEAR-GOOS Delayed-mode Database (DMDB) (<http://www.near-goos.coi.gov.cn/>) has been operationally working for ten years since its establishment in 1996. The WDC-Oceanography, Tianjin undertook the collection of related marine data and the cooperative work with the members of NEAR-GOOS. In 2007 and 2008, 2.0GB data were downloaded from other NEAR-GOOS members. 40MB quality-controlled data were uploaded into the China DMDB. 500 copies of the document of A Strategic Plan for NEAR-GOOS in its Second Phase were published after edition.

2. Participation in the Development of ODINWESTPAC Project

The WDC-Oceanography, Tianjin took active part in the development of the ODINWESTPAC project. Infrastructure was built up for the project. Integration of marine data and data products was in progress. Marine information was being collected. Workshop or training course will be in the works for the capacity building of the WESTPAC countries.

3. Participation in the Chinese NMDIS Node of The PICES Marine Metadata Federation

The PICES Marine Metadata Federation was a new project that the WDC-Oceanography started to participate in its work in 2007. After technical training and software and hardware installation, Chinese node was registered in the FGDC Clearinghouse in 2008. 40 records of metadata of tidal prediction products for Chinese and Southeast Asian

harbors were processed according to the requirements of the project and uploaded into the clearinghouse.

Plan of the WDC-Oceanography, Tianjin in the transition of WDC

The WDC-Oceanography, Tianjin paid much attention to the restructure of WDC and FAGS. During the transition term from the end of WDC system (October, 2008) to the time when the new World Data System (WDS) is fully functional, the WDC-Oceanography, Tianjin will go on its current activities as before, offer suggestions to the WDS Transition Team and respond to the ICSU calls for nominations to staff the World Data System Scientific Committee (WDSSC). It will reapply formally to become a part of the WDS and will strengthen its work in the light of the principles, goals and missions of the WDS that will be clear in next months.

Appendix A

2007-2008 Working Report of The WDC-Oceanography, Tianjin

The WDC-Oceanography, Tianjin strengthened its data collection, processing and management, and improved its services. It maintained marine databases on different disciplines and constructed the marine information systems. It made researches on and developed data products, and provided users with data products. It promoted its international exchange and cooperation. The international cooperative projects/programs it undertook made much progress.

I. Participation of the WDC-Oceanography, Tianjin in National Marine Scientific Data Sharing Project in China.

A national program on scientific data sharing was launched by the Ministry of Science and Technology of China in November, 2004. The marine scientific data sharing project was a major part of it. The WDC-Oceanography, Tianjin participated in the project since its commencement. It took active part in the collection, processing, management and service of marine data for scientific programs and researches.

The project was developed on the basis of the existing infrastructure of the WDC-Oceanography, Tianjin. After four years' efforts, a primary operational system was set up for marine scientific data collection, processing, management, product research and development, and services. Marine databases were established for data sharing. Up to now, some marine databases have existed for data sharing.

II. Participation of the WDC-Oceanography, Tianjin in International Cooperative Programs/Projects

1. Participation in the Argo Data Management and Service

The WDC-Oceanography, Tianjin participated in the Argo data management and service. A website (<http://www.argo.gov.cn>) was established for retrieval and publication of Argo data in China. The global Argo data were quality controlled and then published on the website. The website provided access to the global Argo profiles data, metadata, trajectory data and deployment information from the Argo Continuously Managed Database. By November 2008, 500601 profiles data had been quality controlled and then published on the website, totally 6.30GB. 204712 profiles data were updated, totally 2.77GB in 2007 and 2008. The users were able to access to the data conveniently on the website and download the data via FTP.

In order to expand the application of Argo data, some products of Argo data were provided, such as waterfall maps, Argo trajectory maps, global surface current and mid depth current maps which were derived from Argo trajectory data. These data products were published on the website.

Concerning delayed mode QC, both WJO and OW methods were applied to Chinese float data. It was found out that the accuracy of calibration was reduced in the OW method when the CTD data were limited in some areas. More CTD data were being prepared for calibration now. The thermal lag was not obvious in Chinese Argo data because most of floats were not deployed in high latitude. Until now, obvious sensor drift or offset which need to be adjusted has been found in 4 Argo floats. 1862 Dfiles, which represents more than 90% of all Chinese profiles, have been updated into GDACs.

Argo data has been used in ocean data assimilation and reanalysis, regional oceanographic research and the ocean responses to the tropical cyclones. Two versions of Argo data CD were produced respectively in 2007 and 2008. The CDs were distributed to the users in China.

2. Participation in GTSP Data Management and Service

The WDC-Oceanography, Tianjin took active part in the GTSP data management and service. Early in 2004, the WDC-Oceanography, Tianjin set up cooperative relationship with the Marine Environmental Data Service (MEDS) of Canada. GTSP near-realtime data were received from the MEDS three times every week. GTSP near-realtime data processing system and Chinese GTSP website (<http://221.239.0.160/gtsppweb/index.htm/>) were established for publication of processed data. On this basis the operational global GTSP data processing flow was developed. Quality control software, duplication check software, database management system and online publication system were developed to realize the processing, quality control, manual check, database management and online publication. By the November of 2008, 3.23GB realtime GTSP data from November, 2004 and 14.3GB delayed-mode GTSP data had been published on the website.

In November, 2007, two representatives from the WDC-Oceanography, Tianjin, Mr. Xiang Wenxi and Dr. Ji Fengying, attended the GTSP Data Management Group meeting in Australia. They made a report on the GTSP data processing and service in China. By the nomination of the meeting Chairman and the vote of the representatives participating the meeting, the sixth GTSP Data Center in the world was set up in China.

In 2008, near-realtime and delayed-mode GTSP data processing system and data uploading system were developed. Near-realtime data were downloaded from the MEDS three times every week and delayed-mode data were downloaded every month. All the data were uploaded into the near-realtime and delayed-mode GTSP databases and published on the website after pre-processing, quality control and standardization processing.

1.98GB realtime GTSP data and 3.08GB delayed GTSP data were published on the website in 2007 and 2008.

3. Participation in the ODAS/JCOMM Metadata Service and META-T Pilot Project

The ODAS metadata management and service is in the framework of JCOMM. The WDC-Oceanography, Tianjin participated in its work. The ODAS Metadata Management

Center was established in 2003. It conducts collection, processing and management of the metadata on the ODASs operated by the JCOMM Member States, international organizations and cooperative projects. It undertakes the operational running, maintenance and service of ODAS metadata. In recent years, the ODAS Metadata Management Center was engaged in the development of ODAS metadata and the website ODAS Metadata Service (ODASMS) (<http://www.ogas.org.cn/>). By the end of 2008 the ODASMS has held 9018 platform records, including the records of 4581 profile floats, 3452 drifting buoys, 621 fixed platforms, and 264 moored buoys. These records were derived from the DBCP, China Argo Data Center and the GLOSS project. They were processed by profound analysis, standardization processing and complicated format transformation. All the above ODAS metadata and related graphic products are offered on the website.

In the first meeting of the Water Temperature Instrumental Metadata Pilot Project (META-T) in Reading, UK in May 2006, the NMDIS volunteered to host a server for the project. The WDC-Oceanography, Tianjin also undertook the work for it. Progress of the Pilot Project was paid much attention on it since then. An expert on marine metadata management attended the workshop of META-T Pilot Project in 2008. Discussions and idea exchanges were conducted on META-T metadata formats by email with META-T colleagues. A server has been prepared for the META-T, which was funding by SOA. A working team has also formed to prepare to host META-T metadata.

4. Participation in the GLOSS Project

Monthly mean sea level data of 6 Chinese coastal stations have been provided to the UH Sea Level Center every month since 2003. The same monthly sea level data were also provided to the U.K. Proudman Oceanographic Laboratory every month from September, 2006. Delayed-mode hourly sea level data of 9 Chinese coastal stations will continue to provide to the two GLOSS data centers in the UH Sea Level Center and the U.K. Proudman Oceanographic Laboratory. Monthly mean sea level data of the six stations were submitted to the two GLOSS data centers in 2007 and 2008.

A GLOSS data collection and processing system was developed to download the world sea level data from the UH Sea Level Center and then processed them. The processed GLOSS data were integrated into the marine database hosted by the WDC-Oceanography, Tianjin for data service.

III. Participation of the WDC-Oceanography, Tianjin in Regional Projects

1. Participation in the Maintenance of NEAR-GOOS Delayed-mode Database

China NEAR-GOOS Delayed-mode Database (DMDB) (<http://www.near-goos.coi.gov.cn/>) has been operationally running for ten years since its establishment in 1996. It made contributions to the data exchange and cooperation in the region of Northeast Asia. The WDC-Oceanography, Tianjin undertook the collection of related marine data and the cooperative work with the members of NEAR-GOOS. The following tasks were completed in

2007 and 2008:

- ◇ Conducted operationally data exchange and website maintenance and data update to guarantee the routine running of China DMDB;
- ◇ Downloaded data from other NEAR-GOOS member states, 2.0GB totally;
- ◇ Uploaded 40MB quality-controlled data into the China DMDB;
- ◇ Provided technical instruction or products and advisory to Chinese users;
- ◇ Developed and made relevant data products and graphic products, published the South China Sea Atlas;
- ◇ Asked for comments on the document of A Strategic Plan for NEAR-GOOS in its Second Phase from the NEAR-GOOS Member States and revised it according to the comments from Japan and Russia, and then edited it and published 500 copies of it, finally distributed to each area and provided service.
- ◇ Attended the 11th and 12th Meetings of IOC/WESTPAC Co-ordinating Committee for NEAR-GOOS and made reports at the meetings.

2. Participation in the Development of ODINWESTPAC Project

ODINWESTPAC was coordinated by China since the IOC/WESTPAC 7th International Scientific Symposium held in May 2008 in Manila, WDC-Oceanography, Tianjin take part in the project .

The contact points of six WESTPAC countries, Malaysia, Philippines, Indonesia, Thailand, Vietnam and Japan, were gotten in touch with through the assistance from Mr. Peter Pissierssens, IODE Project Office Coordinator, and Mr. Zhu Wenxi, Acting Head of the IOC/WESTPAC Office. Email was written to these contact points concerning the ODINWESTPAC. Three countries, Malaysia, Thailand, and Japan, responded.

Infrastructure was built up for the project. Two HP DL580 G5 servers and a PC were purchased and WINDOWS SEVER 2003 system and MICROSOFT SQL SEVER database management system were selected for the databases and network construction.

Integration of marine data and data products was in progress. Marine information was being collected to publish the directory of marine institutions and experts in the WESTPAC region, regional e-repository of scientific publications published by WESTPAC experts and so forth on future website.

Concerning the capacity building of the WESTPAC countries, workshop or training course will be carried out from works. The training content was preliminary planed to be database management technology, network construction, data processing, quality control, marine metadata and so on.

3. Participation in Chinese NMDIS Node of The PICES Marine Metadata Federation

Establishment of Chinese NMDIS node of the PICES Marine Metadata Federation was a new project starting in 2007. The technical training and software and hardware

installation was conducted in 2007. In 2008, Chinese NMDIS node was registered in the FGDC Clearinghouse. A server for the NMDIS metadata clearing house node was rent by the PICES. 40 records of metadata of tidal predication products for Chinese and Southeast Asian harbors were processed according to the requirements of the project. And then they were uploaded into the server.

IV. Participation of the WDC-Oceanography, Tianjin in Other Related International and Regional Activities

1. Taking part in the Discussion of WDC Restructuring

The discussion of WDC restructuring was launched by the SCID (Ad-hoc Strategic Committee on Information and Data) in 2008. The WDC-Oceanography, Tianjin took active part in the discussion and presented its opinions on the WDC restructuring. The SCID summarized the discussions from WDC directors in its final report to the 29th ICSU General Assembly.

2. Attendance in the WDC Conference

In May, 2007, Mr. Xiang Wenxi, Mr. Zhang Dongsheng and Ms. Zhou Yanxia, the representatives of the WDC-Oceanography, Tianjin, attended the WDC conference in Germany. They made a presentation on the development of the WDC-Oceanography, Tianjin at the conference.

3. Exchange Visits of Experts

Exchange visits of experts were carried on with the ocean-related institutes and organizations of other countries for cooperative researches on marine data processing, management and service. A few experts attended the relevant international meetings. The exchange visits of experts and attendance in international meetings promoted the marine data processing, management and service.

V. Plan of WDC-Oceanography, Tianjin in the transition of WDC

The 29th ICSU General Assembly in Maputo, Mozambique, on October 23, 2008 adopted the final report of SCID (Ad-hoc Strategic Committee on Information and Data), including in particular the recommendations concerning the WDC, that is, the WDC and FAGS was incorporated in a new ICSU multi-disciplinary body: the World Data System (WDS). A new ICSU interdisciplinary body, the World Data System Scientific Committee (WDSSC) was set up, replacing the WDC Panel and the FAGS Council. It will be formed over next few months.

The WDC-Oceanography, Tianjin paid much attention to the reformation of WDC system. During the transition term from the end of WDC system (October, 2008) to the

time when the new WDS is fully functional, the WDC-Oceanography, Tianjin will go on its current activities as before, offer suggestions to the WDS Transition Team and respond to the ICSU calls for nominations to staff the WDSSC. It will reapply formally to become a part of the WDS and will strengthen its work in the light of the principles, goals and missions of the WDS that will be clear in next months.

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