R N O D C
ACTIVITY
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CONTENTS

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1. Prep-ODINWESTPAC

The Preparatory meeting for establishment of ODINWESTPAC (Prep-ODINWESTPAC) was held in conjunction with the 3rd International workshop on GODAR-WESTPAC, 4-6 December 2006, Japan.

The objectives of the preparatory meeting are to provide information on ODIN projects and how they assist IOC regions; to inform the participants on the history of the ODINWESTPAC proposal; re-assess need for ODINWESTPAC; to assess the available resources and needs for data and information management capacity building in the region and how these needs can be met; to identify ODIN services and products that need to be developed; to start the preparation of an ODINWESTPAC work plan for 2007-2009; to set up an ODINWESTPAC management structure to start the activities.

The meeting was hosted by the Japan Oceanographic Data Center, attended by Representatives from IODE, IOC/WESTPAC, NEAR-GOOS, NOWPAP, SEAFDEC, and data managers from Australia, China, Japan, Korea, Malaysia, Philippines, Russia and Vietnam. The meeting was opened by Mr. Kunikazu Nishizawa, Director of JODC. Dr. Hyun-Tack Huh and Mr. Peter Pissierssens addressed the meeting on behalf of the IOC/WESTPAC and IODE, respectively. Mr. Peter Pissierssens from IODE was invited to give a presentation on the ODINs and the background information on the ODINWESTPAC proposal. Representatives from NEAR-GOOS, NOWPAP and member states were also invited to brief the meeting on the activities on data and information management.

In view of the requirements for an enhanced data and information capability in the WESTPAC region, including development and establishment of NODCs, training in applying standard formats and methodologies for marine data and information management, development and maintenance of national, regional metadata bases, and development and dissemination of marine data and information products and services, the meeting recognized the importance of the establishment of ODINWESTPAC in the WESTPAC region and strongly recommended that the ODINWESTPAC project should be approved by the 7th Session of IOC/WESTPAC which would take place in 2008.

To facilitate the approval of ODINWESTPAC project and to draw some useful experience for the future ODINWESTPAC, the meeting agreed on a proposal to initiate a pilot project of ODINWESTPAC. This pilot project proposal will be submitted to the 19th Session of the IODE Committee (12-16 March 2007) for adoption. If adopted, it is expected that the pilot project will start after adoption by IODE-XIX and end at WESTPAC-VII (provisionally planned for September 2008). During the pilot project, survey of needs for capacity building in the WESTPAC region, development of capacity building tools and services and development of proposal of ODINWESTPAC for WESTPAC-VII have been planed.

The list of participants on Prep-ODINWESTPAC is shown in ANNEX I.

The proposal of pilot project for ODINWESTPAC to IODE-XIX is shown in ANNEX II.

2. RNODC's Activities under the Charge of the JODC

The Eighteenth Session of IOC Committee on International Oceanographic Data and Information Exchange (IODE-XVIII) was held at the Kursaal, Ostend, Belgium between 26 and 30 April 2005.

The IODE Committee, during its 5 day Session, reviewed the work of the past inter-sessional period. Considerable attention was given to the IODE Review that had taken place during the inter-sessional period. The Committee reviewed all recommendations by the Review Team and made several fundamental and structural change decisions in response to the Review. These included the re-composition of the IODE Officers, the abolishment of the system of RNODCs and IODE Regional Co-ordinator systems.

The Committee decided to abolish the system of RNODCs. However, to ensure that the resources and expertise acquired in the regional RNODCs will not be lost, the Committee instructed the ODIN projects to incorporate the resources of existing regional RNODCs. Similarly, the Committee instructed the Chair to discuss with host centres of other RNODCs how their operations, if considered essential for the international (science) community, could be maintained and properly acknowledged.

IODE officers, at their February 2006 meeting, requested the former RNODCs to incorporate these, as relevant, in the terms of reference of the relevant ODINs. The officers also requested the centres that hosted the former RNODCs for drifting buoys (Canada), IGOSS (Japan, USA and Russia), MARPOLMON (Japan, USA and Russia) and ADCP (Japan) to continue their work until the next Session of IODE.

2.1. RNODC for WESTPAC

2.1.1. Status of CSR and Data Management

The major activities of JODC are the collection and archiving of CSR (Cruise Summary Report of IODE, ROSCOP's third edition), and data from the beginning of the WESTPAC program in 1979.

The geographic scope of the WESTPAC region is shown in Fig. 1.

The CSRs received by JODC in 2006 are shown in Table 1.

Number of Archived Data in the WEATPAC region is shown in Table 2.

The WESTPAC region was referred as from 100 to 180 degree of longitude for the North Hemisphere and the area enclosed by from 110 to 230 degree of longitude and from 0 to 30 degree of latitude in the South Hemisphere, here.

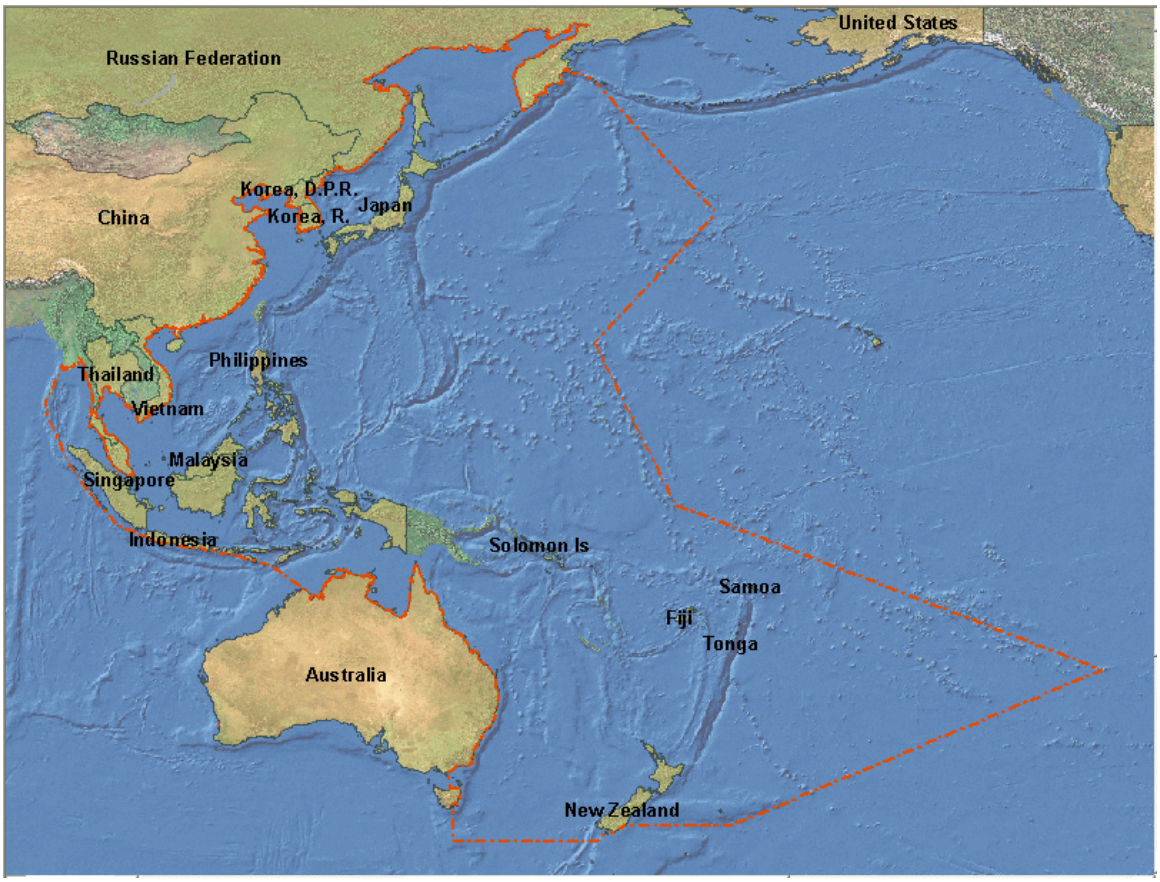

Fig. 1 the Geographic Scope of the WESTPAC Region

Table 1 Inventory of CSR Received by JODC in 2006

AGENCY	SHIP	AREA	PERIOD	DATA
ORI, UT	HAKUHO MARU	North Pacific Ocean	2005/11/17 - 2005/12/28	G
CMES, EU	TANSEI MARU	Philippine Sea, Inland Sea	2005/11/6 - 2005/11/11	G
ORI, UT	TANSEI MARU	Philippine Sea, East China Sea	2005/10/29 - 2005/11/3	B
HOD, JCG	KAIYO	Philippine Sea, North Pacific Ocean	2005/4/19 - 2005/5/11	
HOD, JCG	KAIYO	North Pacific Ocean	2005/6/1 - 2005/6/17	
HOD, JCG	KAIYO	North Pacific Ocean	2005/6/28 - 2005/7/15	
HOD, JCG	KAIYO	North Pacific Ocean	2005/7/29 - 2005/8/16	
HOD, JCG	KAIYO	North Pacific Ocean	2005/8/27 - 2005/9/20	
HOD, JCG	KAIYO	North Pacific Ocean	2005/10/8 - 2005/11/1	
HOD, JCG	KAIYO	North Pacific Ocean	2005/12/15 - 2005/12/27	
HOD, JCG	KAIYO	Philippine Sea, North Pacific Ocean	2006/1/9 - 2006/1/17	
HOD, JCG	TAKUYO	North Pacific Ocean	2006/1/9 - 2006/1/26	
ORI, UT	TANSEI MARU	Philippine Sea	2005/9/18 - 2005/9/24	G, H
ORI, UT	TANSEI MARU	East China Sea	2005/10/9 - 2005/10/14	G, H
OPMSHS	SHIN OITA MARU	North Pacific Ocean	2005/4/19 - 2005/11/21	B
ORI, UT	TANSEI MARU	Philippine Sea	2005/8/8 - 2005/8/14	D, G, H
YNCMT	YUGE MARU	Seto Inland Sea	2005/7/26 - 2005/7/28	G, H
YNCMT	YUGE MARU	Seto Inland Sea	2005/8/7 - 2005/8/10	B, H
YNCMT	YUGE MARU	Seto Inland Sea	2005/12/5 - 2005/12/8	G, H
MMO, JMA	SEIFU MARU	North Pacific Ocean, Japan sea, Sea of Okhotsk	2005/10/4 - 2005/11/20	B, D, G, H, M, P
KMO, JMA	KEIFU MARU	North Pacific Ocean, Philippine Sea	2005/11/2 - 2005/12/5	B, D, G, H, M, P
HOD, JCG	SHOYO	North Pacific Ocean	2006/2/15 - 2006/3/8	
HOD, JCG	TAKUYO	North Pacific Ocean	2006/2/18 - 2006/3/13	
HOD, JCG	KAIYO	North Pacific Ocean	2006/2/24 - 2006/3/13	
MFHS	AICHI MARU	East Pacific Ocean	2005/4/27 - 2005/6/17	
MFHS	AICHI MARU	East Pacific Ocean	2006/1/27 - 2006/3/20	
ADE	Shiranami	Philippine Sea	2005/5/24 - 2005/5/25	H, P
ADE	Shiranami	Philippine Sea	2005/7/12 - 2005/7/13	
ADE	Shiranami	Philippine Sea	2005/10/12 - 2005/10/13	
ADE	Shiranami	Philippine Sea	2006/1/17 - 2006/1/18	
ADE	Kamiko Maru	Philippine Sea	2005/5/24 - 2005/5/25	
ADE	Kamiko Maru	Philippine Sea	2005/7/12 - 2005/7/13	
ADE	Kamiko Maru	Philippine Sea	2005/10/12 - 2005/10/13	
ADE	Kamiko Maru	Philippine Sea	2006/1/17 - 2006/1/18	
ADE	Shiranami	Philippine Sea	2005/9/15 - 2005/7/15	H, P
HOD, JCG	KAIYO	North Pacific Ocean	2003/1/31 - 2003/2/5	H
HOD, JCG	TENYO	North Pacific Ocean	2003/4/15 - 2003/4/21	H
HOD, JCG	TENYO	North Pacific Ocean	2003/8/1 - 2003/8/7	H
HOD, JCG	KAIYO	North Pacific Ocean	2003/12/11 - 2003/12/24	H
HOD, JCG	TENYO	North Pacific Ocean	2004/5/29 - 2004/6/4	H
HOD, JCG	TENYO	North Pacific Ocean	2004/9/16 - 2004/9/29	H

AGENCY	SHIP	AREA	PERIOD	DATA
HOD, JCG	KAIYO	North Pacific Ocean	2004/11/9 - 2004/11/22	H
HOD, JCG	TENYO	North Pacific Ocean	2004/12/20 - 2004/12/24	H
HOD, JCG	TENYO	North Pacific Ocean	2005/2/22 - 2005/3/4	H
GSJ, AIST	HAKUREI MARU No.2	Northwestern Pacific along the Japanese islands	2005/6/13 - 2005/7/12	G
ORI, UT	TANSEI MARU	North Western Pacific	2004/9/2 - 2004/9/9	B
ORI, UT	TANSEI MARU	Tosa Bay	2006/5/9 - 2006/5/9	B, H, P
HyARC, NagoyaU	TANSEI MARU	Sagami Bay	2006/5/1 - 2006/5/10	B, H
ADE	Shiranami	Philippine Sea	2004/5/24 - 2004/5/25	H, P
ADE	Shiranami	Philippine Sea	2004/7/12 - 2004/7/13	H, P
ADE	Shiranami	Philippine Sea	2004/10/18 - 2004/10/19	H, P
ADE	Shiranami	Philippine Sea	2005/1/17 - 2005/1/18	H, P
ADE	Kaiko-maru	Philippine Sea	2004/5/24 - 2004/5/25	H, P
ADE	Kaiko-maru	Philippine Sea	2004/7/12 - 2004/7/13	H, P
ADE	Kaiko-maru	Philippine Sea	2004/10/18 - 2004/10/19	H, P
ADE	Kaiko-maru	Philippine Sea	2005/1/17 - 2005/1/18	H, P
ADE	Shiranami	Philippine Sea	2004/8/23 - 2004/8/23	H, P
KMO, JMA	KEIFU MARU	North Pacific Ocean	2006/1/18 - 2006/3/2	B, G, M, D, H, P
MMO, JMA	SEIFU MARU	Japan Sea	2006/1/25 - 2006/3/4	B, G, M, D, H, P
HOD, JCG	MEIYO	Philippine Sea	2006/5/24 - 2006/6/6	G
PL, HU	TANSEI MARU	Pacific Ocean	2006/5/22 - 2006/5/30	H, P
HOD, JCG	KAIYO	North Pacific Ocean	2006/6/26 - 2006/7/12	G
HOD, JCG	MEIYO	Japan Sea, Sea of Okhotsk, North Pacific Ocean	2006/6/15 - 2006/7/7	H, P
ORI, UT	TANSEI MARU	North Pacific Ocean	2006/6/16 - 2006/6/21	H
HyARC, NagoyaU	TANSEI MARU	Sagami Bay	2006/8/7 - 2006/8/10	
HOD, JCG	TENYO	North Pacific Ocean , Philippine Sea	2005/11/26 - 2005/12/16	H
HOD, JCG	TENYO	North Pacific Ocean	2006/9/23 - 2006/9/29	
ORI, UT	TANSEI MARU	Pacific Ocean	2006/8/14 - 2006/8/18	H, P
ORI, UT	TANSEI MARU	Sea of Japan	2004/10/1 - 2004/10/5	
ORI, UT	TANSEI MARU	Sea of Japan	2005/5/10 - 2005/5/13	
ORI, UT	TANSEI MARU	Sea of Japan	2006/9/11 - 2006/9/11	B
ORI, UT	TANSEI MARU	Sea of Japan	2005/11/21 - 2005/11/27	D
ORI, UT	TANSEI MARU	North Pacific Ocean	2005/12/13 - 2005/12/17	D
ORI, UT	TANSEI MARU	NW Pacific	2006/9/12 - 2006/9/12	G
ORI, UT	TANSEI MARU	Western North Pacific, off Honshu, Japan.	2004/8/14 - 2004/8/19	B
ORI, UT	TANSEI MARU	North Pacific Ocean	2005/3/22 - 2005/3/31	G
ORI, UT	TANSEI MARU	North Pacific Ocean	2005/3/22 - 2005/3/31	G
ORI, UT	TANSEI MARU	Japan Sea	2005/4/23 - 2005/4/29	G
HOD, JCG	MEIYO	Philippine Sea	2006/8/30 - 2006/9/21	G
HOD, JCG	KAIYO	Japan Sea, North Pacific Ocean, East China Sea	2006/8/23 - 2006/9/4	H, P
HMO, JMA	KOFU MARU	North Pacific Ocean	2006/4/28 - 2006/6/1	G, M, H, P
ORI, UT	HAKUHO MARU	Western North Pacific	2006/1/5 - 2006/3/17	B, H, P
ORI, UT	TANSEI MARU	East China Sea, Japan Sea	2006/10/6 - 2006/10/9	
ORI, UT	TANSEI MARU	East China Sea, Japan Sea	2006/10/28 - 2006/11/3	B, H

AGENCY	SHIP	AREA	PERIOD	DATA
MMO, JMA	SEIFU MARU	Japan Sea, Sea of Okhotsk	2006/4/27 - 2006/5/31	B, G, M, D, H, P
HMO, JMA	KOFU MARU	North Pacific Ocean	2006/6/22 - 2006/8/10	M, D, H, P
KMO, JMA	KEIFU MARU	North Pacific Ocean	2006/4/18 - 2006/5/22	B, G, M, D, H, P
KMO, JMA	KEIFU MARU	North Pacific Ocean	2006/6/14 - 2006/8/11	B, G, M, D, H, P
MMO, JMA	SEIFU MARU	Japan Sea	2006/6/22 - 2006/8/10	B, G, M, D, H, P
HOD, JCG	MEIYO	Philippine Sea	2006/11/5 - 2006/11/17	G
FF, NU	Nagasaki Maru	East china sea, Japan sea.	2006/7/19 - 2006/7/28	
FF, NU	Nagasaki Maru	Japan sea	2006/8/18 - 2006/9/1	
FF, NU	Nagasaki Maru	East China sea, Japan sea.	2006/10/12 - 2006/10/21	
KMO, JMA	KEIFU MARU	Western North Pacific Ocean	2006/10/13 - 2006/10/31	B, G, M, D, H, P

Data Type Code

B: Biology & Fisheries
G: Geology & Geophysics
M: Meteorology
D: Physical Oceanography (Current)
H: Physical (Salinity & Temperature) & Chemical Oceanography
P: Contamination

Abbreviations of Agencies

Japan

FF, NU	Faculty of Fisheries, Nagasaki University
GSJ, AIST	Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology
HMO, JMA	Hakodate Marine Observatory, Japan Meteorological Agency
HOD, JCG	Hydrographic and Oceanographic Department, Japan Coast Guard
HyARC, NagoyaU	Hydrospheric-Atmospheric Research Center, Nagoya University
KMO, JMA	Kobe Marine Observatory, Japan Meteorological Agency
MMO, JMA	Maizuru Marine Observatory, Japan Meteorological Agency
ORI, UT	Ocean Research Institute, University of Tokyo
PL, HU	Plankton Laboratory, Hokkaido University
YNCMT	Yuge National College of Maritime Technology
CMES, EU	Center for Marine Environmental Studies, Ehime University
OPMSHS	Oita Prefectural Marine Science High school
MFHS	Aichi Prefectual Miya Fishery High School
ADE	Aichi Prefecture (Department of the Environment)

Table 2 Number of Archived Data in the WESTPAC Region

YEAR	SD	STD	CTD	XCTD	XBT	DBT	AXBT	BT	GEK	DRIFT	ADCP	Unknown
1979	7,225	47	2,706	0	8,090	672	0	17,226	5,247	118	0	12,370
1980	8,165	643	2,299	0	11,625	2,293	0	17,083	6,215	186	0	12,666
1981	6,857	120	3,081	0	9,111	2,345	1,231	16,825	5,982	215	0	12,825
1982	7,836	214	2,967	0	11,040	2,870	509	15,076	6,035	52	0	12,761
1983	7,967	368	3,965	0	11,426	3,068	824	13,290	6,016	109	0	12,386
1984	6,021	3	4,670	0	11,610	3,855	860	15,786	7,039	68	0	12,776
1985	5,446	463	5,773	0	14,941	3,510	1,073	15,206	5,426	85	3,386	12,346
1986	8,536	269	5,770	0	16,994	2,365	1,517	11,739	5,793	29	2,994	9,822
1987	10,048	231	7,087	0	17,799	1,700	1,272	12,907	4,971	4	4,483	6,664
1988	10,210	29	9,853	0	19,658	1,045	1,197	9,990	2,811	248	13,359	5,736
1989	8,849	62	10,528	0	18,666	475	1,323	7,796	1,626	314	59,587	4,744
1990	8,751	360	11,852	0	24,278	1,314	1,291	6,286	871	311	73,460	4,554
1991	6,408	0	15,016	0	23,190	1,405	1,509	1,825	841	348	50,362	3,564
1992	4,487	105	15,824	0	25,576	18	1,199	1,146	216	227	91,934	3,516
1993	3,684	119	14,296	0	38,099	1,313	1,160	1,420	152	20	92,541	3,148
1994	1,601	128	2,050	0	29,281	108	0	7,763	320	0	24,123	0
1995	1,381	0	1,867	0	42,318	115	1,002	659	97	0	287,575	0
1996	1,323	0	2,168	0	32,782	208	939	344	61	0	793,067	0
1997	1,259	0	2,022	0	10,022	242	918	91	73	0	611,239	0
1998	1,166	0	1,755	7	11,274	178	934	101	146	0	538,944	0
1999	962	0	1,941	40	10,132	208	1,017	56	0	0	500,128	0
2000	958	0	1,865	48	11,237	155	875	72	313	0	240,617	0
2001	935	0	1,897	77	11,954	146	1,898	7	316	0	143,631	0
2002	0	0	2,427	178	9,338	65	1,133	33	443	0	77,979	0
2003	0	0	53	79	8,172	0	1,016	0	884	0	347,347	0
2004	0	0	0	127	855	0	0	0	0	0	232,039	0
2005	0	0	0	0	25	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0
Total	**120,075**	**3,161**	**133,732**	**556**	**439,493**	**29,673**	**24,697**	**172,727**	**61,894**	**2,334**	**4,188,795**	**129,878**

Data Items

SD: Serial station Data
STD: Salinity, Temperature, Depth profiler
CTD: Conductivity, Temperature, Depth profiler
XCTD: eXpendable Conductivity, Temperature, Depth profiler
XBT: eXpendable BathyThermograph
DBT: Digital memorial BathyThermograph
AXBT: Airborne eXpendable BathyThermograph
BT: BathyThermograph
GEK: Geomagnetic ElectroKinetograph
DRIFT: ship DRIFT
ADCP: Acoustic Doppler Current Profiler

2.1.2. NEAR-GOOS RDMDB

The NEAR-GOOS (North-East Asia Regional – Global Ocean Observing System) has been implemented as regional GOOS by Russia, China, Korea and Japan. The NEAR-GOOS RDMDB (Regional Delayed Mode Data Base) undertakes the final management of the oceanographic and marine meteorological data of the NEAR-GOOS.

The JODC has managed and operated the RDMDB based on the Recommendation of the 1st NEAR-GOOS Coordinating Committee held in 1996. The RDMDB started to operate as a DMDB in October 1996 and was given the status of the RDMDB by the Recommendation of the 3rd Coordinating Committee in August 1998, and at the same time the registration application procedure was abolished to activate its use. In addition, the provision of data to the anonymous users using guest account became possible based on the approval of the 7th NEAR-GOOS Coordinating Committee in October 2002. Incidentally, the user name of guest account is *guest@onetime*.

In the current system, each country's NRTDB (National Real Time Data Base) is supposed to collect data and send them to its own country's NDMDB (National Delayed Mode Data Base) and the RRTDB (Regional Real Time Data Base) operated by the Japan Meteorological Agency. The NDMDB independently collects the delayed mode data other than the data received from the NRTDB. The RDMDB receives the data collected by each country's NRTDB via the RRTDB and collects the delayed mode data from other sources to provide data for the users with monthly update.

At first, the data to be registered in the DMDB were only 6 items, which were collected by the RTDB via the GTS. With the items added every year, the data to be registered in the RDMDB today are up to 40 items. Below is the main part of the data items:

- Oceanographic data obtained by the Meteorological Agency via the GTS
  (BATHY, BUOY, SHIP, TESAC, TRACKOB)
- Data converted into unified format by RRTDB
  (Water Temperature, Salinity, Wind)
- Average water temperature data developed by the Meteorological Agency
  (Serial Station, Sea Surface)
- Tide data with 30-second interval by the Japan Coast Guard
- Water temperature data provided by the Russia Far Eastern Regional Hydrometeorological Research Institute
- Water temperature data provided by the Japan Fisheries Information Service Center (JAFIC)
- Water temperature data provided by the Ocean Research Institute of the University of Tokyo
- XBT observation data provided by the Tohoku University
- Wave observation data provided by the Port and Airport Research Institute
- Quality controlled data by the Canada Marine Environmental Data Service (MEDS)
  (Water Temperature, Salinity)

The data registered in the RDMDB can be obtained through the Internet. The RDMDB data provision system displays a list of data by item and by period so that data can easily be obtained only by selecting the item on the screen. The URL of the RDMDB data provision system is given below.

http://near-goos1.jodc.go.jp/index.html

Archived data type and volume of NEAR-GOOS RDMDB is shown in Table 3.

Table 3 Data Type and Volume of NEAR-GOOS RDMDB

TYPE OF DATA	DESCRIPTION OF DATA	PERIOD	VOLUME (MB)
BATHY	Regional Datasets of BATHY Report	Jun,1996 -	14.4
BATHY_G	Global Datasets of BATHY Report	Apr,2000 -	79.3
BUOY	Regional Datasets of BUOY Report	Jun,1996 -	340.1
BUOY_G	Global Datasets of BUOY Report	Apr,2000 -	4,783.4
SHIP	Regional Datasets of SHIP Report	Jun,1996 -	183.2
SHIP_G	Global Datasets of SHIP Report	Apr,2000 -	2,311.3
TESAC	Regional Datasets of TESAC Report	Sep,1998 -	44.5
TESAC_G	Global Datasets of TESAC Report	Jan,1996 -	479.7
TRACKOB	Regional Datasets of TRACKOB Report	Jun,1996 -	1.0
TRACKOB_G	Global Datasets of TRACKOB Report	Apr,2000 -	36.0
SUBST	Subsurface Temperature Decode Result	Jun,1997 -	784.4
SUBST_ERROR	Subsurface Temperature Decode Error Report	Jun,1997 -	5.5
TS	Temperature and Salinity Decode Result	Jul,2001 -	810.7
GLBTS	Global Temperature and Salinity Decode Result	Aug,2001 -	10,616.4
WIND	Wind Data Decode Result	Jan,1998 -	143.5
WIND_ERROR	Wind Data Decode Error Report	Jan,1998 -	1.4
WIND2	Wind Data (Format Ver.2.0)	Jul,2001 -	114.0
GLBWIND	Global Wind Data Decode Result	Aug,2001 -	1,820.6
SSTANL	Gridded Daily Sea Surface Temperature Data in the Northwest Pacific	Jun,1996 - May,2000	101.0
DAILYSST (JMA)	Daily Sea Surface Temperature Data Analysis	Apr,2000 -	229.7
WNPSST (JMA)	10-day Mean Sea Surface Temperature in the Northwest Pacific	Apr,2000 -	5.7
WNPSSTNORM (JMA)	Normals and Standard deviations of WNPSST	Jan,2000 - Dec,2000	1.0
GLBSST (JMA)	Global Monthly Mean Sea Surface Temperature	Apr,2000 -	5.6
ADJSUBS (JMA)	Monthly Mean Subsurface Temperature in Seas Around Japan (100m,200m,400m)	Mar,2000 -	19.0

TYPE OF DATA	DESCRIPTION OF DATA	PERIOD	VOLUME (MB)
PACSUBS (JMA)	Monthly Mean Subsurface Temperature in Pacific (100m,200m,400m)	Mar,2000 -	31.7
ASMDAY (JMA)	Daily subsurface temperature around Japan (100m, 200m, 400m)	Nov,2005 -	68.3
SSDH (JMA)	Analyzed Sea Surface Dynamic Height in the Pacific	Jan,2003 -	179.2
SSHA (JMA)	Analyzed Sea Surface Height Anomalies in the Pacific	Jan,2003 -	179.2
COBESST (JMA)	Monthly mean sea surface temperatures for 1 each degree squares over the global ocean	Jan,1996 -	26.5
COBESSTNORM (JMA)	Normals and Standard Deviations of COBESST	Jan,2000 - Dec,2000	4.8
SEA_ICE	Sea Ice Concentration in the Northeast Asia marginal Seas	Dec,2003 -	635.6
MGDSST	Merged satellite and in-situ data Global Daily Sea Surface Temperature	Apr,2004 -	2,920.2
GTSPP	GTSPP Quality Controlled Subsurface Temperature and Salinity Data Provided by MEDS	Jan,2003 -	271.0
FERHRI ship	Marine Meteorological Onboard Observation Data by FERHRI, Russia	Sep,1997 -	4.0
FERHRI station	Marine Meteorological Observation Data at the Station by FERHRI, Russia	Apr,2002 -	0.3
JAFIC	Sea Surface / Subsurface Temperature Data from Japan Fisheries Information Service Center	Jul,1998 -	54.1
PALACE	Subsurface Temperature Profile Data Observed by PALACE Float of Ocean Research Institute, University of Tokyo	Aug,1998 - Nov,2000	0.1
TOHOKU Univ.	XBT Data Observed by Tohoku University	Nov,1999 - Sep,2000	0.1
NOWPHAS	Japanese Nationwide Coastal Wave Data by Port and Airport Research Institute	Jan,2001 - Dec,2004	79.09
30s_TIDEST	30-sec. Interval Sea Tide Data at Tidal Stations of Japan Coast Guard	Jan,1999 -	7,395.8
Total			**34,781.5**

2.2. RNODC for IGOSS

JODC has been acting as RNODC for IGOSS since September 1979 with the USA and Russia.

KODC has regularly submitted the log form of IGOSS BATHY/TESAC, totally 244 sheets of the log sheets were submitted by KODC in 2006. Data Holding Status is shown in Table 4 and Station Plots are shown in Fig. 2-1 and Fig. 2-2.

Table 4 Data Holding Status of IGOSS BATHY/TESAC

YEAR	BATHY	TESAC
1982	22,667	710
1983	25,478	5,443
1984	22,980	7,068
1985	26,079	5,784
1986	31,044	5,640
1987	40,301	6,580
1988	32,345	5,074
1989	27,933	4,996
1990	30,027	4,947
1991	22,731	2,137
1992	34,071	1,303
1993	35,058	2,153
1994	32,721	2,619
1995	33,908	2,207
1996	34,722	2,221
1997	37,993	1,427
1998	20,772	4,870
1999	19,701	9,632
2000	22,069	8,240
2001	26,998	21,126
2002	26,446	24,204
2003	29,192	55,212
2004	33,969	156,136
2005	33,317	248,751
2006	24,175	277,466

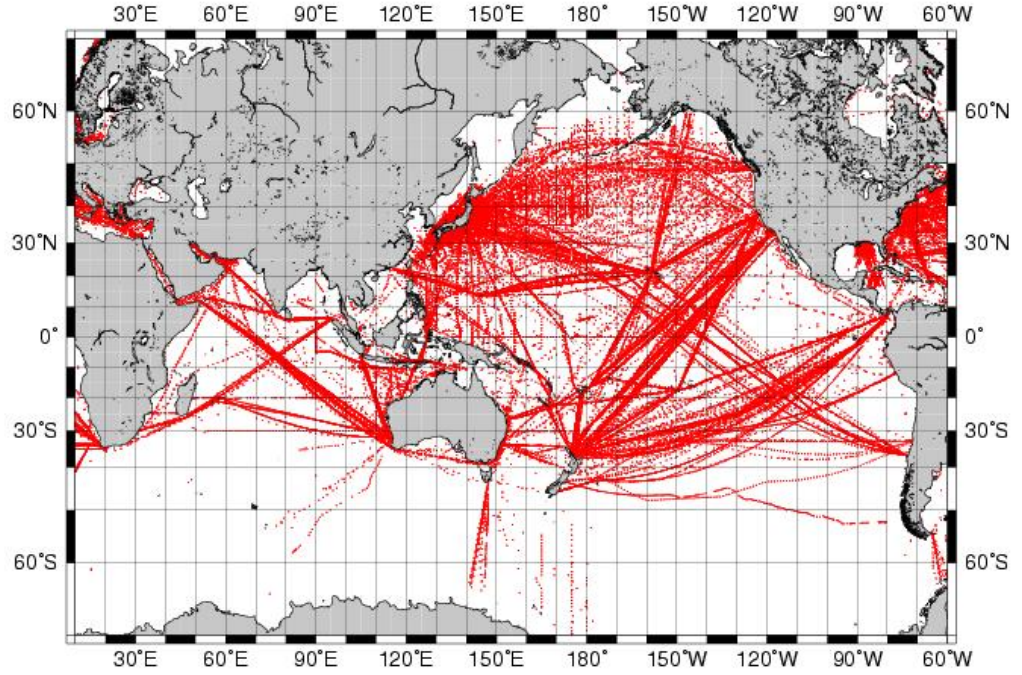

Fig. 2-1 Station Plots for BATHY

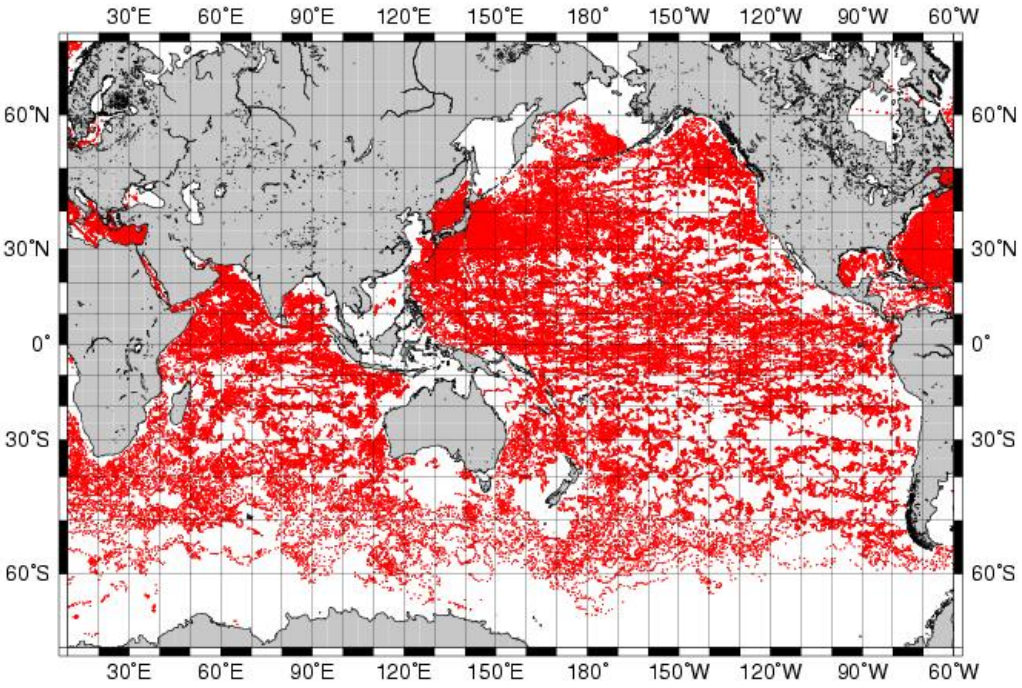

Fig. 2-2 Station Plots for TESAC

2.3. RNODC for MARPOLMON

In response to a recommendation by the United Nations Conference on the Human Environment (Stockholm, 1972), the IOC and WMO agreed to jointly undertake the design, planning, and development of a marine pollution-monitoring program.

As an initial step in this direction, a Pilot Project on Marine Pollution (Petroleum) Monitoring (MAPMOPP) was launched in 1975 within the framework of the Integrated Global Ocean Station System (IGOSS) and was aimed at monitoring petroleum-derived oils.

Bearing in mind the recommendations of the IOC Scientific Committee for the Global Investigation of Pollution in the Marine Environment adopted at its Sixth Session (Paris, 25 September - 1 October 1986) on the regional relevance to marine pollution management activities, RNODC for MARPOLMON have been established in Japan for the WESTPAC region, in the USA for the Caribbean region, and in the Russian Federation for the Atlantic, Mediterranean and Baltic Seas.

The major activities of the JODC are the collection and management of four types of data: oil slicks, tar-ball, beach tar, and hydrocarbon, since 1975. Station Plots are shown in Fig. 3 and Data holding status is shown in Table 5.

With regard to other type of Marine Pollution data, the present holding status of these data in JODC is introduced in Table 6, and the Station Plots of the cadmium, lead and polychlorinated biphenyls data are indicated as Fig. 4-1, Fig. 4-2 and Fig. 4-3, respectively.

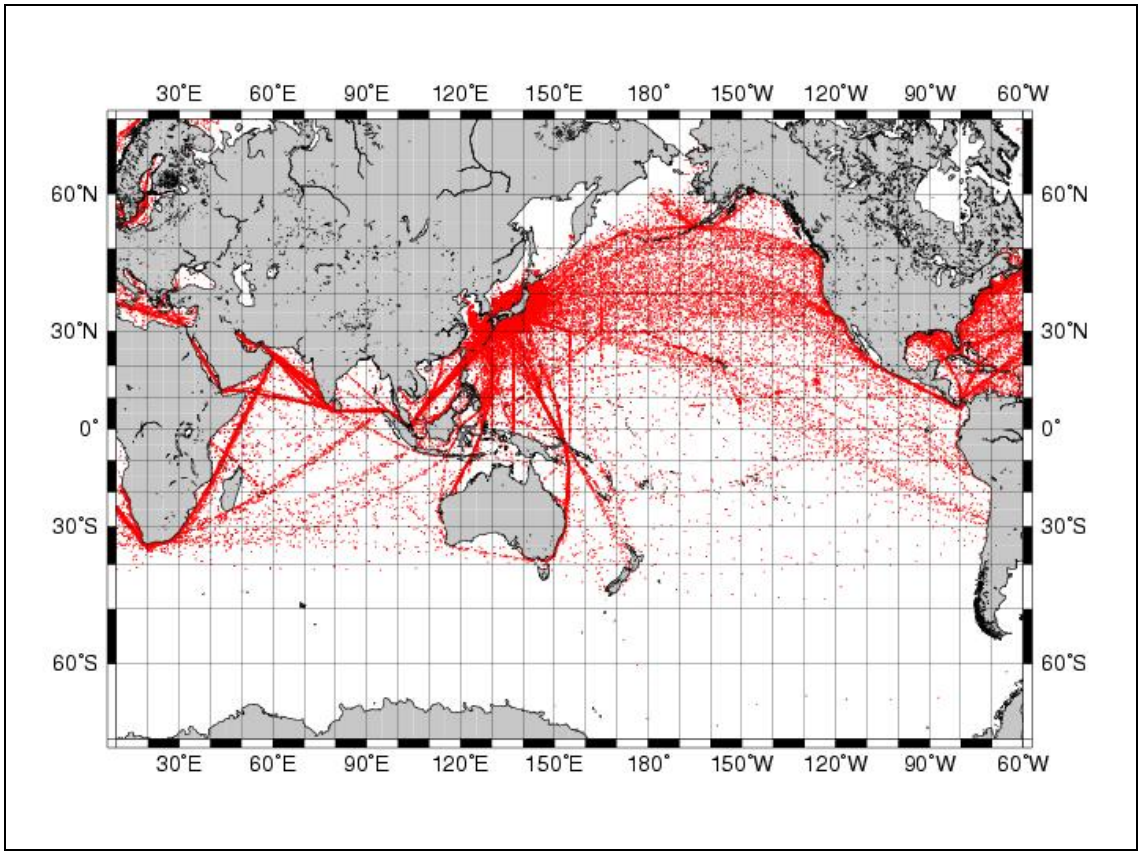

Fig. 3 Station Plots for Oil Slick

Table 5 Number of Archived Data for MARPOLMON

YEAR	BEACH TAR	TAR BALL	HYDRO CARBON	OIL SLICK
1973	0	341	0	0
1974	0	229	10	1,493
1975	404	1,059	604	16,712
1976	799	1,096	722	16,236
1977	740	738	877	19,683
1978	665	606	482	22,580
1979	676	384	387	14,699
1980	581	504	423	5,988
1981	570	501	362	3,948
1982	588	459	334	1,122
1983	560	585	329	583
1984	588	417	98	277
1985	582	449	239	382
1986	624	536	81	865
1987	638	598	62	1,015
1988	653	495	65	1,492
1989	679	564	68	1,948
1990	650	527	65	1,674
1991	647	467	60	1,286
1992	634	441	61	1,215
1993	618	420	60	991
1994	588	346	52	1,221
1995	583	324	53	1,517
1996	0	119	71	1,413
1997	0	110	86	1,783
1998	0	90	26	2,152
1999	10	95	66	1
2000	544	231	67	0
2001	538	207	40	0
2002	474	169	71	0
2003	469	164	55	0
2004	0	0	0	0
2005	0	0	0	0
2006	0	0	0	0
Total	**15,102**	**13,271**	**5,976**	**122,276**

Table 6 Number of Data Related Marine Pollution

DATA TYPE	NUMBER	DATA TYPE	NUMBER
COD	1,922	PCB	1,603
NH4-N	3,969	As	1,127
Chlorophyll-a	98,845	Pb	1,125
Phaeophytin	19,941	Hg	1,866
TOC	1,126	Total-Hg	2,078
HC	2,054	Cd	3,740

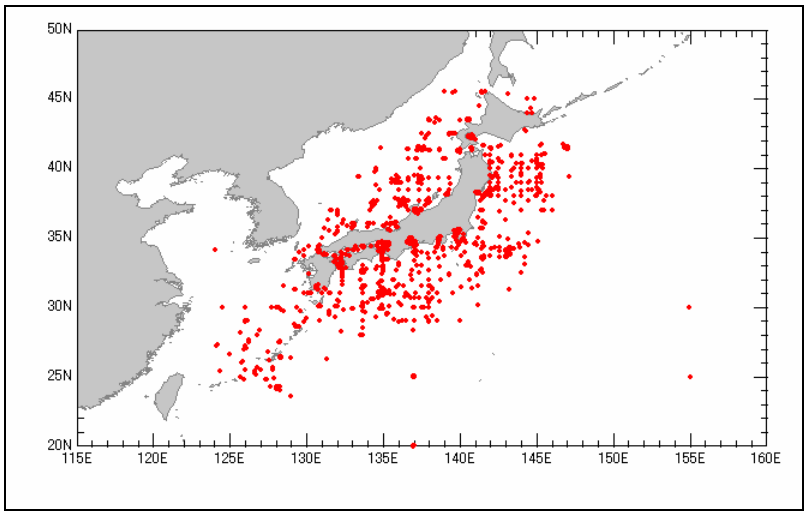

Fig. 4-1 Station Plots for Cd Data in the Northwest Pacific Ocean

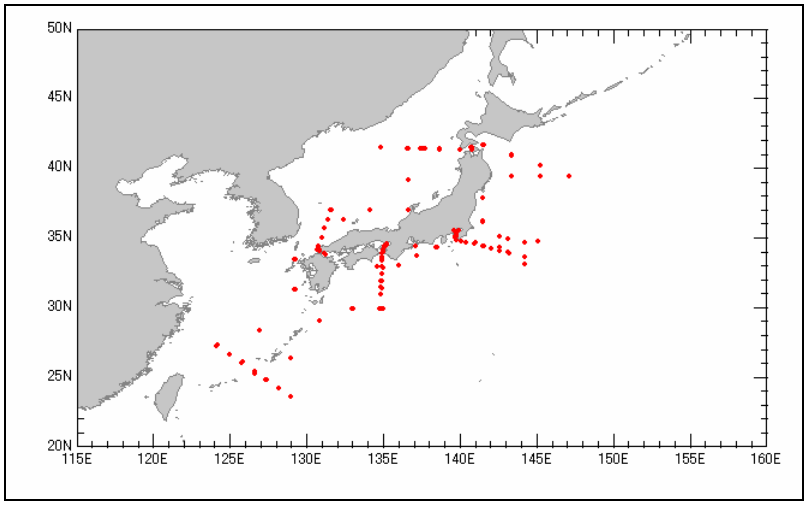

Fig. 4-2 Station Plots for Pb Data in the Northwest Pacific Ocean

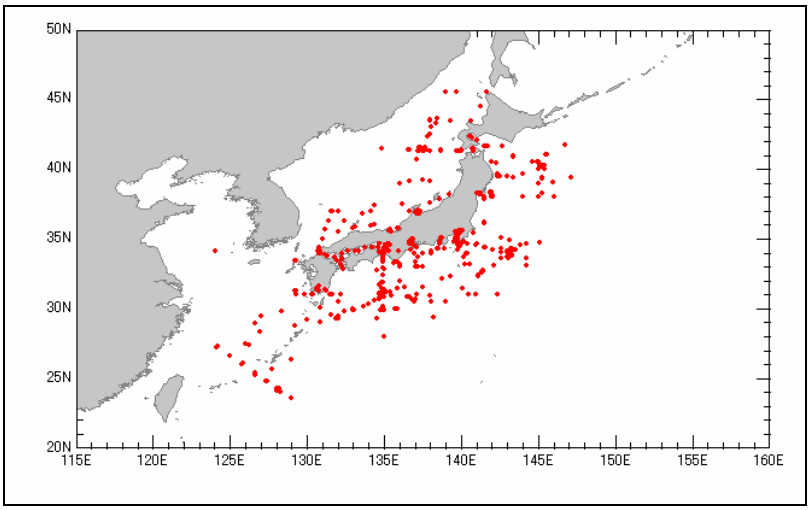

Fig. 4-3 Station Plots for PCB Data in the Northwest Pacific Ocean

2.4. RNODC for ADCP

The JODC has been RNODC for ADCP since 1991.

The major activities of the JODC are the collection and archiving of data. Data holding status is shown in Table 7 and Station Plots are shown in Fig. 5-1 and Fig. 5-2.

Table 7 Number of Archived Data for ADCP

YEAR	NUMBER	YEAR	NUMBER
1985	3,545	1996	805,385
1986	2,994	1997	636,971
1987	4,932	1998	555,127
1988	13,553	1999	520,752
1989	66,249	2000	255,013
1990	77,474	2001	154,541
1991	63,034	2002	82,902
1992	110,666	2003	359,171
1993	125,476	2004	234,322
1994	57,007	2005	0
1995	319,734	2006	0
Total			**4,448,848**

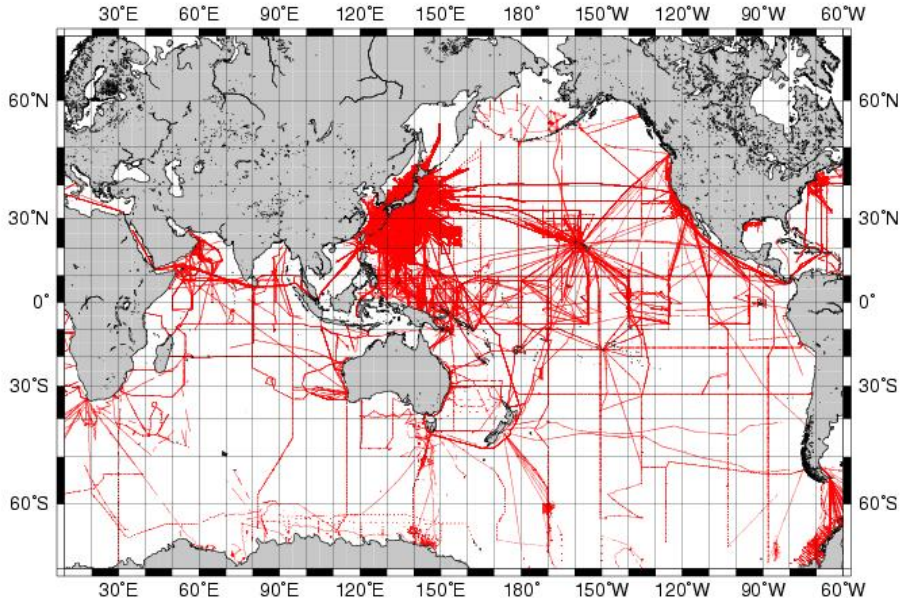

Fig. 5-1 Station Plots for ADCP Data in the Indian Ocean and the Pacific Ocean

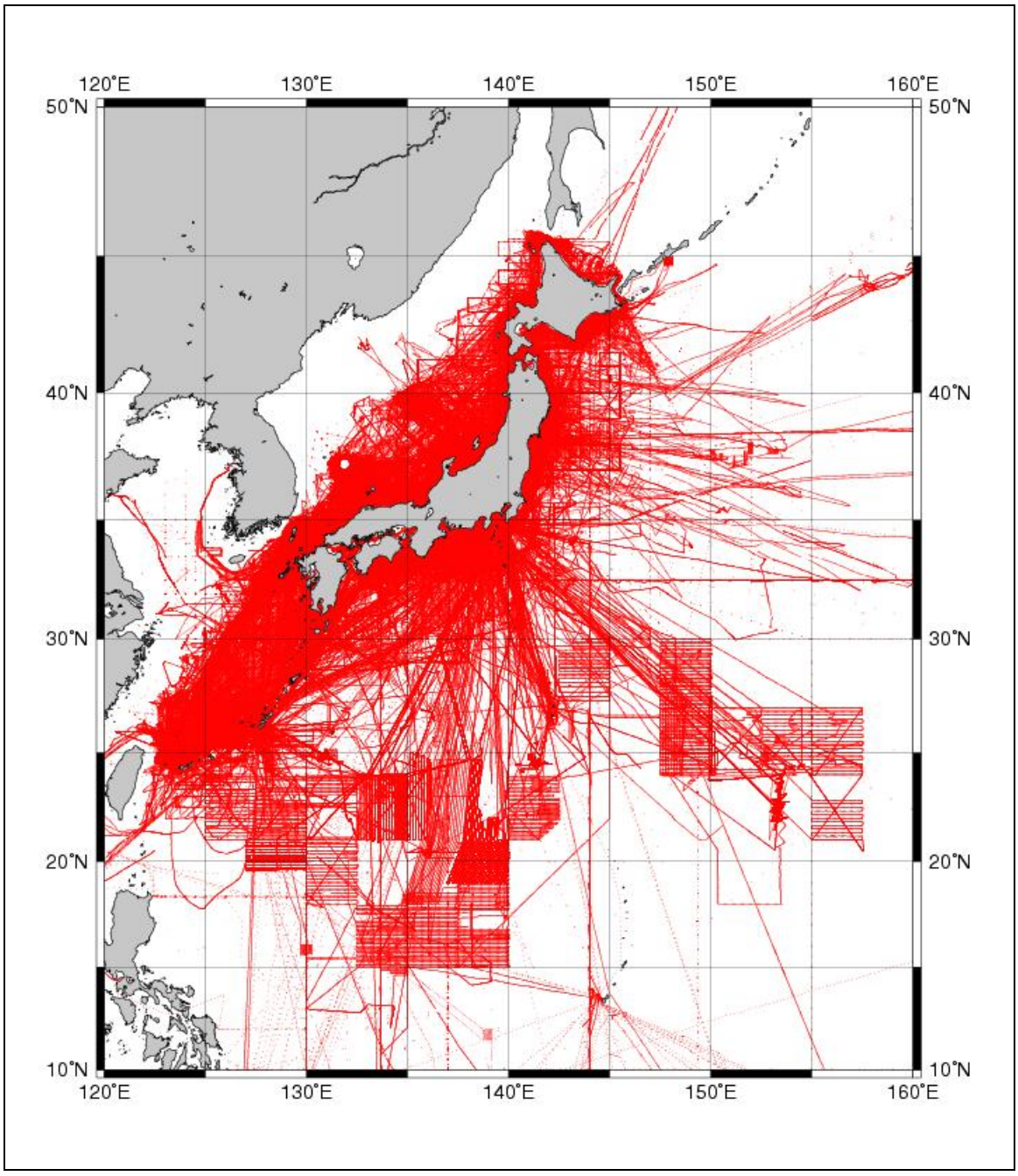

Fig. 5-2 Station Plots for ADCP Data in the Northwest Pacific Ocean

ANNEX I.

List of Participants on Prep-ODINWESTPAC

MEMBER COUNTRIES

Country	Name	Organization
Australia	Mr. Gregory Reed	Australian Ocean Data Centre Joint Facility
China	Mr. Zhang Dongsheng	National Marine Data and Information Service
Japan	Mr. Kunikazu Nishizawa	Japan Oceanographic Data Center
Korea	Dr. In-Seong Han	National Fisheries Research and Development Institute
Philippines	Ms. Angelita Armentia	National Mapping and Resource Information Authority
UK	Dr. Lesley Rickards	Chair of IODE (British Oceanographic Data Center)
USA	Dr. Sydney Levitus	World Data Center for Oceanography, Silver Spring
Vietnam	Dr. Bui Hong Long	National Center for National Science and Technology
Vietnam	Dr. Tran Tuan Dung	Vietnamese Academy of Science and Technology

INTERNATIONAL ORGANIZATIONS

Organization	Name	
IOC/UNESCO	Mr. Peter Pissierssens	IODE Programme Coordinator
IOC/WESTPAC	Dr. Hyung-Tack Huh	Chair of WESTPAC
IOC/WESTPAC	Mr. Wenxi Zhu	Acting Head of the Office, IOC/UNESCO Regional Secretariat for WESTPAC
NOWPAP/UNEP	Mr. Norio Baba	NOWPAP Regional Coordinating Unit Toyama Office
NOWPAP/UNEP	Ms. An Tong	Data and Information Network Regional Activity
SEAFDEC	Ms. Siriporn Pangsorn	Southeast Asian Fisheries Development Center

RESEAECH INSTITUTES IN THE REGION

Country	Name	Organization
Japan	Prof. Sei-ichi Saitoh	Graduate School of Fisheries Sciences Hokkaido University
Japan	Mr. Osamu Yamamoto	Japan Meteorological Agency
Japan	Mr. Takashi Yoshida	Japan Meteorological Agency
Japan	Ms. Mizuho Hoshimoto	Japan Meteorological Agency
Japan	Mr. Masaru Okuno	Hydrographic and Oceanographic Department, JCG
Japan	Dr. Junko Shimura	National Institute for Environmental Studies
Japan	Dr. Yutaka Michida	Ocean Research Institute, The University of Tokyo
Japan	Dr. Akira Tomosada	Marine Information Research Center Japan Hydrographic Association
Japan	Dr. Toru Suzuki	Marine Information Research Center Japan Hydrographic Association
Japan	Mr. Takeshi Ogawa	Northwest Pacific Region Environmental Cooperation Center
Japan	Mr. Genki Terauchi	Northwest Pacific Region Environmental Cooperation Center
Malaysia	Dr. Mohd Kushairi Mohd Rajuddin	University Industri Selangor
Russia	Dr. Victor A. Akulichev	Far Eastern Branch, Russian Academy of Sciences
Russia	Dr. Igor Rostov	Far Eastern Branch, Russian Academy of Sciences

ANNEX II.

Proposal to initiate a pilot project of Ocean Data and Information Network for the Western Pacific region (ODINWESTPAC)

Preparatory Meeting for the Establishment of the ODINWESTPAC

5-6 December, Japan

1. Objectives

This pilot project aims to:

(i) develop a number of products that will promote communication and collaboration between WESTPAC member states, and between WESTPAC member states and other partners in the fields of ocean observations, data and information management, product/service delivery,

(ii) implement relevant capacity building activities, specifically related to ocean data and information management and,

(iii) prepare a formal proposal including objectives, deliverables, work plan, time table, budget and draft recommendation to establish an Ocean Data and Information Network for the WESTPAC region (ODINWESTPAC), in accordance with the decision of the Sixth Session of the IOC Regional Sub-Commission for the Western Pacific (IOC/WESTPAC-VI, Nha Trang, Vietnam, May 2005), bearing in mind the work assigned to the inter-sessional working group established through Resolution IOC/WESTPAC-VI.2 and the preparatory meeting towards the development of ODINWESTPAC, Tokyo, 5-6 December 2006. The proposal will be submitted to the Seventh Session of the IOC Regional Sub-Commission for the Western Pacific, planned to be held in September 2008, for its approval.

This pilot project proposal will be submitted to the 19th Session of the IODE Committee (Trieste, Italy, 12-16 March 2007) for adoption. If adopted, the pilot project implementation will start subsequently to IODE-XIX and end at WESTPAC-VII (provisionally planned in September 2008)

2. Activities

During the pilot project, it is expected to:

1. Establish management structure

Preparatory meeting recommended that the Secretariat functions will be assumed by the IOC/WESTPAC Secretariat, Bangkok, Thailand.
The meeting further nominated Mr. Kunikazu Nishizawa, Director of JODC as the Regional Coordinator for the Pilot Project

Timing: informally done on 5 Dec. 2006. To be confirmed by IODE-XIX, March 2007
Cost: in-kind

2. **Organize workshops**

The purpose of the meetings will be to finalize the formal proposal for WESTPAC-VII.

A workshop will be held to finalize a proposal for WESTPAC-VII.

Timing: March/April 2008
Responsibility: JODC and IOC/WESTPAC Secretariat
Cost: US$30-40K

3. **Establish an ODINWESTPAC pilot project web site and mailing list(s)**

Timing: starting in April 2007, maintenance continued until the end of project
Responsibility: JODC and IOC/IODE Secretariat
Cost: in-kind

4. **Start preparations for national and regional metadatabases documenting data holdings available in the region**

GeoNetwork is recommended if no tool is currently used. Otherwise current tool can be used but need to investigate if structure is ISO-19115 compliant[1].

Timing: starting in April 2007 until the end of project
Responsibility: member states
Cost: in-kind by member states

5. **Collect cruise summary reports**

Timing: starting in April 2007 until the end of project
Responsibility: member states
Cost: in-kind

6. **Continue the rescue and archival of historical oceanographic data as a follow-up to the GODAR-WESTPAC project**

Timing: starting in April 2007 until the end of project
Responsibility: member states
Cost: in-kind

7. **Prepare a directory of research institutions and experts in the region**

It is recommended to use the IODE OceanExpert system as a tool.[2]

Timing: starting in April 2007 until the end of project
Responsibility: input by member states; coordination by JODC
Cost: in-kind by member states

8. **Prepare a directory of ocean and coastal observation, research and management projects and programmes implemented in the region (not limited to IOC activities)**

European Directory of Marine Environmental Research Projects (EDMERP) will be good example.

Timing: starting in April 2007 until the end of project
Responsibility: JODC
Cost: in kind

[1] This activity should be coordinated with similar initiatives of other ODINs, projects or organizations (eg PICES TCODE Metadata Federation project)
[2] This activity should be coordinated with similar initiatives of other ODINs, projects or organizations (eg NOWPAP DINRAC: DINRAC can provide list of organizations and experts in the NOWPAP region)

9. **Prepare a regional e-repository of scientific publications published by WESTPAC experts[3];**

   Timing: starting in April 2007 until the end of project
   Responsibility: IODE project office for hosting; input by countries
   Cost: in kind

10. **Prepare a list of potential partners (international organizations, regional organizations, donors, IOC programmes, other projects/programmes active in the region)**

    Timing: April 2007 – May 2007
    Responsibility: JODC to host; input by member states
    Cost: in kind

11. **Assess capacity building requirements in the region**

    Timing: April 2007 – July 2007
    Responsibility: JODC and IOC/WESTPAC Secretariat
    Cost: in kind

12. **Collect and share information on capacity building activities implemented in the region (training courses, seminars and workshops)**

    The collected information will be published and updated on the webpage.

    Timing: starting in April 2007 until the end of project
    Responsibility: JODC and IOC/WESTPAC Secretariat
    Cost: in-kind

13. **Disseminate relevant data and information management tools and manuals.**

    Timing: starting in April 2007 until the end of project
    Responsibility: JODC and IOC/WESTPAC
    Cost: in-kind

14. **Implement training courses and workshops as required**

    The following training courses are planned at present. Other training courses may be considered depending on fund availability and assessment of needs.

    (i) NEAR-GOOS – NOWPAP Joint Training Course on Remote Sensing Data Analysis, Japan

    Timing: Summer in 2007
    Responsibility: JODC, NOWPAP CEARAC and NEAR-GOOS
    Cost: US$35K (UNESCO-Japan Funds-in-Trust: US$20K, NOWPAP: US$15K)

    (ii) Training Course on Basic Data Management and Information Management IODE Project office, Belgium

    Timing: 2007
    Responsibility: IODE Project Office and WESTPAC Secretariat
    Cost: US$40K (IODE Project Office Donor)

15. **Prepare a proposal for the ODINWESTPAC project to be submitted to WESTPAC VII.**

    The proposal will be developed by correspondence during the pilot project considering the results of activities above and finalized at the second workshop.

    Timing: by WESTPAC VII
    Responsibility: Project Co-coordinator and IOC/WESTPAC Secretariat
    Cost: in-kind

[3] Need to get guidance from marine librarians in WESTPAC region if they wish this to be included

3. Deliverables

The following are expected to be delivered by the 7th Session of IOC/WESTPAC, tentatively in September 2008:

1. ODINWESTPAC pilot project web site and mailing list(s);
2. National and regional metadatabases;
3. Updated WESTPAC cruise summary report database;
4. Directory of research institutions and experts in the region;
5. Directory of ocean and coastal observation, research and management projects and programmes implemented in the region;
6. Regional e-repository of scientific publications published by WESTPAC experts;
7. List of potential partners (international organizations, regional organizations, donors, IOC programmes, other projects/programmes active in the region);
8. Assessment report on the capacity building requirements in the region;
9. Several training courses and workshops;
10. Proposal for the ODINWESTPAC project to WESTPAC VII.

4. Timetable and budget for the pilot project

No.	Action/activity	Timing	Responsibility	Estimated cost
1	The pilot project approved at IODE-XIX	March 2007	JODCs Director as the Project Coordinator and WESTPAC Secretariat	In-kind
2	Announcement to start the pilot project	April 2007	WESTPAC Sec. and IODE HQ	No cost
3	Establish web site and mailing list of ODINWESTPAC-PP	April 2007	JODC and IOC/IODE Secretariat	In-kind
4	Start the preparation of national and regional metadatabases documenting data holdings available in the region	April 2007	member states	In-kind by member states
5	Collect cruise summary report	April 2007 until the end of project	member states	In-kind

No.	Action/activity	Timing	Responsibility	Estimated cost
6	Continue the rescue and archival of historical oceanographic data as a follow-up to the GODAR-WESTPAC project	April 2007 until the end of project	member states	In-kind
7	Prepare a directory of research institutions and experts in the region	April 2007 – end of 2007	Input by member states; Coordination by JODC	In-kind by member states
8	Prepare a directory of ocean and coastal observation, research and management projects and programmes implemented in the region	April 2007 – end of 2007	JODC	In-kind
9	Prepare a regional e-repository of scientific publications published by WESTPAC experts	April 2007 – end 2007	IODE Project office	In-kind
10	Prepare a list of potential partners	April 2007 – May 2007	Input by member states; Coordination by JODC	In-kind
11	Assess capacity building requirements in the region	April 2007 – July 2007	WESTPAC Sec. and JODC	In-kind
12	Collect and share information on capacity building activities implemented in the region	April 2007 until the end of project	WESTPAC Sec. and JODC	In kind
13	Disseminate relevant data and information management tools and manuals	April 2007 until the end of project	JODC	In kind
14	Implement training courses and workshops as required			
14 (i)	Training Course on basic data management and information, IODE Project office, Belgium	2007	IODE Project Office and WESTPAC Sec.	USD 30,000 (TBI) IODE Project office, Donor
14 (ii)	NEAR-GOOS – NOWPAP joint training course on remote sensing data analysis	Summer 2007	NOWPAP, JODC and WESTPAC Sec.	USD 35,000 NOWPAP 15k JFiT 20k (planed)
14 (iii)	Organization of a working meeting (tentative)	March/April 2008	JODC, WESTPAC Sec. and IODE HQ	USD 20,000 (TBI) IODE, JFiT, Donor
15	Prepare a proposal for the ODINWESTPAC project to be submitted to WESTPAC VII.	by WESTPAC VII	Project Co-ordinator and IOC/WESTPAC Secretariat	In kind
	Total			USD 85,000