



Dragoness Progress Meeting



Work Package 3

Review of Level of Data Integration and Information Management

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- **4 Data Integration: An Example**
- **5 Recommendations**

Overview

During the past year, main Chinese oceanographic and meteorological institutions in charge of marine data observation, transmission, and management have been surveyed, as listed below:

Overview

1 State Oceanic Administration (SOA)

- 1.1 First Institute of Oceanography (FIO)
- 1.2 Second Institute of Oceanography (SIA)
- 1.3 Third Institute of Oceanography (SIA)
- 1.4 National Marine Environmental Forecast Center (NMEFC)
- 1.5 National Satellite Ocean Application Service
- 1.6 National Marine Data & Information Service (NMDIS)
- 1.7 North China Sea Bench of the State Oceanic Administration
- 1.8 East China Sea Bench of the State Oceanic Administration
- 1.9 South China Sea Bench of the State Oceanic Administration
- 1.10 National Marine Environmental Surveillance Center (NMESC)
-

2 Chinese Academy of Sciences (CAS)

- 2.1 South China Sea Institute of Oceanology (SCSIO)
- 2.2 Institute of Oceanology (IO)
- 2.3 Institute of Atmospheric Physics
- 2.4 Institute of Remote Sensing Applications
- 2.5 Center for Earth Observation and Digital Earth
-

Overview

3 China Meteorological Administration (CMA)

- 3.1 National Beijing Climate Center (NBCC)
- 3.2 National Satellite Meteorological Center (NSMC)
- 3.3 Chinese Academy of Meteorological Science (CAMS)
-

4 Universities under Ministry of Education (MOE)

- 4.1 Ocean University of China
- 4.2 Peking University
- 4.3 Beijing Normal University
- 4.4 Xiamen University
- 4.5 Wuhan University
-

5 Oceanic Military Agencies

- 5.1 Navy Marine Meteorology and Hydrology Center
- 5.2 Compass Department of the Admiralty
-

Contents

- 1 Overview
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- 3 Data Management
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- 5 Recommendations

Data Policy

Due to security and copyright reasons, oceanographic and meteorological data are classified into five confidential levels in China:

1.

Absolutely confidential

2.

Highly confidential

3.

Confidential

4.

Internal

5.

Public

Data Policy

1.

Absolutely confidential

Special oceanic and meteorological data especially for important military activities

2.

Highly confidential

- a. Special oceanic and meteorological data especially for activities of Party and National leaders
- b. Observation data from special oceanic and meteorological stations built for confidential tasks of national or military agencies
- c. Special oceanic and meteorological data for military tasks
- d. Spatial data of air surveillance for high-technology or special scientific experiment

Data Policy

2.

Highly confidential

- a.** Special oceanic and meteorological data especially for activities of Party and National leaders
- b.** Observation data from special oceanic and meteorological stations built for confidential tasks of country or military agencies
- c.** Special oceanic and meteorological data for military tasks
- d.** Spatial data of air surveillance for high-technology or special scientific experiment

Data Policy

3.

Confidential

- a.** Important statistic oceanic and meteorological data especially for confidential national or military tasks
- b.** Abroad oceanic and meteorological data obtained by commercial mean

Data Policy

4.

Internal

- a. Surface and upper levels observation data from oceanic and meteorological stations not included in normal broadcast
- b. Data from special project and dedicated observation including radiance, agricultural meteorological data, etc
- c. Observation data from oceanic and meteorological stations located inside our country in unresolved border areas
- d. Delayed data from satellite remote sensing and precipitation data from radar

Data Policy

5.

Public

- a. Surface, upper levels observation data and satellite data from oceanic and meteorological stations included in normal broadcast
- b. Weather data and grid data collected from abroad
- c. Abroad oceanic and meteorological data obtained by exchange way
- d. Oceanic and meteorological data published before liberation
- e. Contour maps of basic oceanic and meteorological variables

Data Policy

Remote Sensing Data

1 FY-1 and FY-2

2 HY-1

3 BJ-1

4 International Satellites

In Situ Marine Data

1 Argo

2 Station observation

3 Oceanographic research vessels

Data Policy: FY-1 and FY-2

Two kinds of data:

a.

Real-time data

Register online

Access from website directly

b.

Delayed data

Classified as internal

Permission Required

Data Policy: FY-1 and FY-2

Means to share public real-time data: Grade-based sharing

User Class	Daily accessible data through internet
High class user (Grade B)	10GB/Day; 3GB/Order
Middle class user (Grade C)	5 GB/Day; 1 GB/Order
Common user (Grade D)	500 MB/Day; 200 MB/Order

Data Policy

Remote Sensing Data

1 FY-1 and FY-2

2 HY-1

3 BJ-1

4 International Satellites

In Situ Marine Data

1 Argo

2 Station observation

3 Oceanographic research vessels

Data Policy: HY-1

Data: free besides costs for product creation

a.

Target users

- 1 Administrations, institutes and business centers affiliated with SOA**
- 2 Governments, research and management departments, agricultural and industrial department, research institutes and universities**
- 3 National military research, management, application departments**
- 4 Relevant marine research agencies abroad**

b.

Applicable fields

- 1 Domestic managing, scientific, production, public activities**
- 2 Marine research, educational activities abroad**
- 3 International collaborative projects**

Data Policy: HY-1

Data service cost

	Products	Prices one (Yuan/orbit)	Prices two (Yuan/orbit)
COCTS	COCTS delayed data (L1B)	30	60
	COCTS delayed data (L2A)	30	60
	COCTS real-time data (L1B)	30	60
	COCTS real-time data (L2A)	30	60
	COCTS data (L3A)	30	60
	COCTS data (L3B)	30	60
CCD	CCD data (L1B)	30	60
	CCD data (L2A)	30	60
	CCD real-time data (L2B)	30	60

Notes: Price one: data less than or equal to 100Mbytes

Price two: data greater than 100Mbytes

Data Policy

Remote Sensing Data

1 FY-1 and FY-2

2 HY-1

3 BJ-1

4 International Satellites

In Situ Marine Data

1 Argo

2 Station observation

3 Oceanographic research vessels

Data Policy: BJ-1

Beijing-1 is a mini-satellite for earth observation which carries two sensors with medium and advanced resolution. It is jointly supported by the Chinese Ministry of Science and Technology, Beijing city, the Chinese Ministry of Land and Resources, State Bureau of Surveying and Mapping, Twenty First Century Aerospace Technology Corporation. It was launched on 27th October 2005.

Data Policy: BJ-1

Products

- 1 Radiometrically corrected standard scene**
- 2 Radiometrically and geometrically corrected standard scene**
- 3 Fine geometrically corrected image**
- 4 Orthographically corrected image**
- 5 Three dimensional image**
- 6 Fusion image**

Data Policy: BJ-1

a.

Target users

- 1 Center and local governments**
- 2 Administration authorities**
- 3 Research and educational institutions**
- 4 Commercial users**

b.

Means to distribute data

- 1 CD, DVD**
- 2 FTP**
- 3 VSAT**
- 4 Films**
- 5 Image paper**

Data Policy: BJ-1

Price List

Products / Service		Price
Color image product with 4m resolution	normal	6yuan/km ²
	standard scene (24km*24km)	3450yuan
Multi-spectrum image product with 32m resolution	normal	0.07yuan/km ²
	standard scene(300km*300km)	6300yuan
Programming service of color image product with 4m resolution	normal service	3000yuan/scene
	priority service	5000yuan/scene
Programming service of multi-spectrum image product with 32m resolution	normal service	2000yuan/scene
	priority service	4000yuan/scene

Data Policy

Remote Sensing Data

1 FY-1 and FY-2

2 HY-1

3 BJ-1

4 International Satellites

In Situ Marine Data

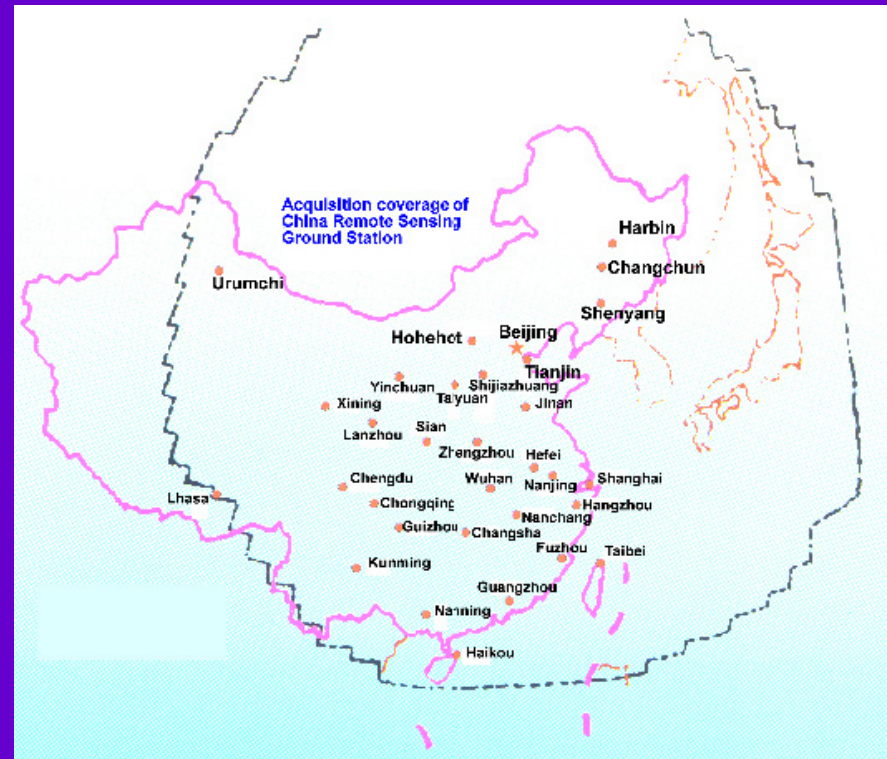
1 Argo

2 Station observation

3 Oceanographic research vessels

Data Policy : International Satellites

The China Remote-Sensing Satellite Ground Station was inaugurated and put into operation in December 1986. China RSGS can receive and process remote-sensing data from domestic and international satellites which cover 80% of the Chinese territory.



Data Policy : International Satellites

Satellites Data Received and Archived

Satellites	Nation	Satellite Operation Organization	Period
LANDSAT-5	American	NASA/NOAA/EOSAT	1986 --
JERS-1	Japan	NASDA	1993 -- 2001
ERS-1	ESA	ESA	1994 -- 2000
ERS-2	ESA	ESA	1996 --
RADARSAT	Canada	CSA/RSI	1997 --
SPOT-1	France	CNES/SPOT IMAGE	1997 -- 2003
SPOT-2	France	CNES/SPOT IMAGE	1997 --
SPOT-4	France	CNES/SPOT IMAGE	1997 --
LANDSAT-7	American	USGS	2000 --
SPOT-5	France	SPOT IMAGE	2001 --
ENVISAT	ESA	ESA	2003 --

Data Policy : International Satellites

Standard Product : Example

Satellites	Level
LANDSAT-5	> Product Level 0 : raw data , without fundamental corrections.
	> Product Level 1 : radiometrically corrected data.
	> Product Level 2 : radiometric ally and systemically corrected data.
	> Product Level 3: radiometric ally and geographically corrected data with GCP.
	> Product Level 4: radiometrically and geographically corrected data with GCP and DEM.
LANDSAT-7	> Product Level L0R: raw data, without any fundamental corrections.
	> Product Level L1G: radiometrically and systemically corrected data.
	> Product Level L1P: radiometrically and geographically corrected data with GCP.
	> Product Level L1T: radiometrically and geographically corrected data with GCP and DEM.

Data Policy : International Satellites

Price List I: Example

Digital Products	Full Scene	1/2 scene	1/4 scene
Landsat 5 (7 bands) ----Data acquired before Dec.31,1998	USD700	USD450	USD300
Landsat 5 (7 bands) ----Data acquired after Jan. 1, 1999	USD500	USD400	USD260
Landsat 5 (1 band) ----Data acquired before Dec.31,1998	USD200		
Landsat 5 (1 band) ----Data acquired after Jan. 1, 1999	USD150		
Landsat 7 (7 bands + Pan)	USD600	USD450	USD300
Landsat 7 (7 bands)	USD500	USD400	USD260
Landsat 7 (Pan)	USD500	USD400	USD260
Landsat 7 (1 band)	USD150	USD100	USD70

To purchase multiple bands:

Total price = Number of bands × Unit Price per band

Data Policy : International Satellites

Price List II

Photographic Products

1. Paper Products:

Total Fee = Information fee + paper product processing fee

2. Film Product:

Total Fee=Information fee + Film product processing Fee

3. Film + Paper Products:

Total Fee = Information fee + Film product processing Fee + paper product processing fee

Notes:

Information fee =Data fee \times 50%; Film size=24cm \times 24cm

Color Film Product Processing Fee = USD150 per film

B/W Film Product Processing Fee = USD100 per film

Color Paper Product Processing Fee = USD50/ m²

B/W Paper Product Processing Fee = USD40/ m²

Data Policy

Remote Sensing Data

1 FY-1 and FY-2

2 HY-1

3 BJ-1

4 International Satellites

In Situ Marine Data

1 Argo

2 Station observation

3 Oceanographic research vessels

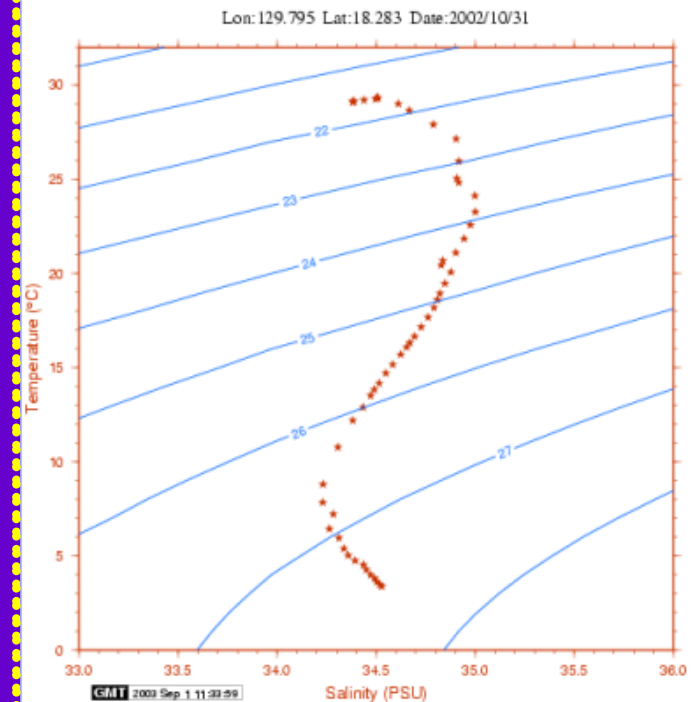
Observing marine data: ARGO

Products

Data types	Access to data	Data format	Time
Float Trajectory Map	Webpage	.tif	2002~present
T-S Diagram Map	Webpage	.tif	2002~present
Profile Data	Webpage	ASCII	2002~present
	FTP	NetCDF	2002~present

Trajectory map (sample)

T-S Diagram Map



Data Policy: ARGO

Free sharing

China ARGO Real-time Data Center

FTP 目录 /pub/ARGO/china/qcfiles/2008/04/ 位于 ftp.argo.org.cn

[转到高层目录](#)

04/04/2008 11:10下午	8,555	0001_08173_189.qc
04/13/2008 11:10下午	8,208	0001_08173_190.qc
04/04/2008 11:10下午	9,278	0020_26608_117.qc
04/04/2008 11:10下午	9,395	0024_26596_117.qc
04/04/2008 11:10下午	9,277	0025_26607_117.qc
04/07/2008 11:10下午	9,695	0028_28203_068.qc
04/09/2008 11:10下午	9,227	0029_28204_068.qc
04/07/2008 11:10下午	9,578	0040_28205_065.qc
04/08/2008 11:10下午	9,754	0041_28206_065.qc
04/07/2008 11:10下午	9,582	0042_28207_066.qc
04/04/2008 11:10下午	9,342	0043_28208_063.qc

0015 | 24077 | 2900242 | PROVER | 2002-11-26 | 128.91 | 10.00 | [NO_TRANSMISSION](#) | >> | >>>

Data Policy

Remote Sensing Data

1 FY-1 and FY-2

2 HY-1

3 BJ-1

4 International Satellites

In Situ Marine Data

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2 Station observation

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Data Policy: Station observation marine data

Due to security and copyright reasons, original data from station observation are generally unpublicized and confined to limited sharing. While products generated out of these original data are available to the public free of charge.

Since data from station observation are widely spread along the coasts of the China Seas, management of this kind of data is very complicated. The following are just some examples from the data sharing platform for the South China Sea.

Data Policy: Station observation marine data

I. Free sharing data sample:

Dataset name	Time
Sea surface temperature forecast in south China sea	2007~ 2008
Wave forecast in south China sea	2007~ 2008
Global grid sea surface temperature monthly anomaly	1957~ 1978
Monthly average thermal Station maps and data in north hemisphere	1956 ~ 1975
Height of 500hPa and its anomaly in north hemisphere	1951 ~ 1979
Sea surface pressure and anomaly of north hemisphere	1951~1976
Data from ships observation	1970.8 ~1990.11
Climate maps of Pacific	1963 ~1967
Typhoo maps in south China sea	1964 ~ 1979
Investigation maps in southern sea	1984 ~ 1985
Mean circulation maps in global tropical areas	1980 ~ 1986

Data Policy: Station observation marine data

II. Limited sharing data:

Marine stations	Variables	Time
Naozhou	Meteorological observation data	1960~2005
	SST, Salinity, luminescence of the sea, wave observation	1959.10~2005
Shanwei	Meteorological observation data	1970~1983
Beihai	Meteorological observation data	1959.9~1983.3
	SST, Salinity, luminescence of the sea	1959.9~2005
	Tide data	1966~2005
Zhapo	Tide data	1959~2005
Haikou	Meteorological observation data	1970~1984.4
	SST, Salinity, luminescence of the sea	1959.9~2005
	Tide data	1976~2005
Dongfang	Meteorological observation data	1960.3~1984
	SST, Salinity, luminescence of the sea, wave data	1960.6~2005
	Tide data	1965~2005

Data Policy

Remote Sensing Data

1 FY-1 and FY-2

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Data Policy: Oceanic Research Vessels

In order to promote communication and cooperation as well as interdisciplinary study in field of oceanic research, and make effective data sharing possible, cruise sharing has been implemented among different institutions.

South China Sea Institute of Oceanography (SCSIO), CAS:

SHIYAN-III: A comprehensive ocean research vessel

Time: 2004; 2005; 2006; 2007

Institute of Oceanology of CAS (IOCAS):

Kexue-III : A comprehensive ocean research vessel

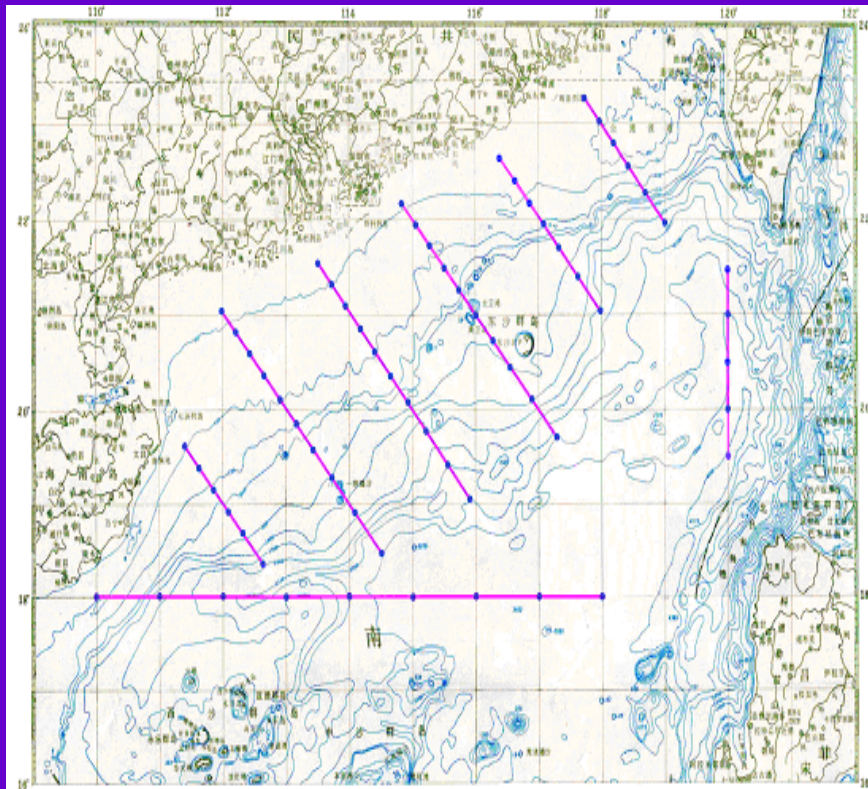
Time: 2006; 2007; 2008

Data Policy: Oceanic Research Vessels

Means to Share: 1--Cruises sharing

SHIYAN-III (SCSIO)

Basic sections and stations in Northern South China Sea

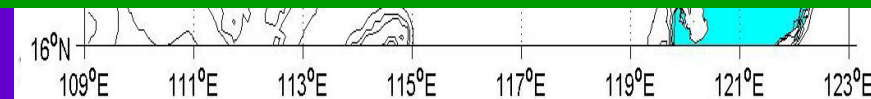


Practical sections and stations, 2007



observation contents:

- 1) hydrology and current
- 2) marine biology and ecology
- 3) marine geology and sediment

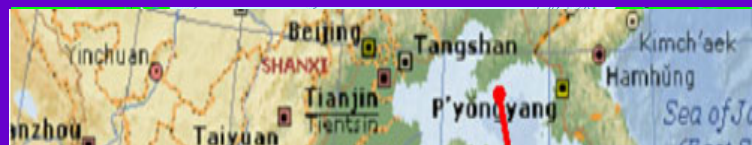
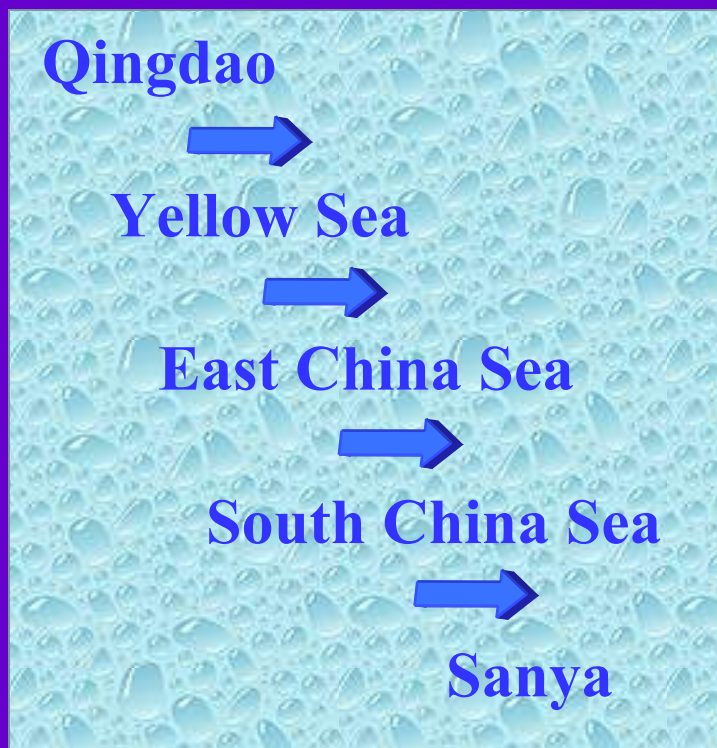


Data Policy: Oceanic Research Vessels

Means to Share: 1--Cruises sharing

Sections of sharing investigation in
Yellow sea and Eastern China sea, 2008

Kexue-III (Institute of Oceanology)



observation contents:

- 1) Marine hydrology meteorological observation
- 2) Marine geological observation
- 3) Marine biological and ecological observation
- 4) Marine chemical observation



Data Policy: Oceanic Research Vessels

Means to Share: 1---Cruises sharing

Advantages:

- 1) Basic sections and stations remain identical for cruises of different years. This makes comprehensively long time series observation data available. It would be very useful for climatic studies about the China Seas.
- 2) Exchange surveys results conducted individually by SCSIO and IOCAS which are spatially complementary in the China Seas.

Data Policy: Oceanic Research Vessels

Means to Share: 2---Free data sharing

SCSIO:

- 1) SCSIO, CAS has set up a special data management team to manage observation data and samples from cruises. This team is in charge of data collection and makes information and data sharing through network or database, and also publicizes them regularly. And according to different scientific fields, each research team should submit data after one to two years of collection to SCSIO for data and information exchange and sharing.**

IOCAS:

- 2) According to different scientific fields, each team should submit cruise observation data to the Department of Research and Technology of for data and information exchange and sharing.**

Data Policy: Oceanic Research Vessels

Means to Share: 2---Limited data sharing

Investigation dataset	Variables	Time
Joint investigation by United States and China on air-sea interaction in tropical western Pacific	Temperature and salinity, ocean current, meteorological, sounding, biochemical data	1984.5~1990.7
Nation experimental investigation of air-sea interaction	Temperature and salinity, meteorological, nutrient, upper lever detection, eye detection wave data	1992.11~1993.3
Joint investigation of subtropical gyre by Japan and China	Temperature and salinity, meteorological, dissolved oxygen analysis, ocean current, eye detection wave data	1995.10~1997.12
National islands and coasts comprehensive survey	Hydrological, ocean current, chemical, environmental, meteorological data	1987.10~1992.6

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- 5 Recommendations

Data Management: FY-1, 2

Remote Sensing Data

1 FY-1,2

2 HY-1

In Situ Marine Data

1 Argo

2 Station and vessels observation

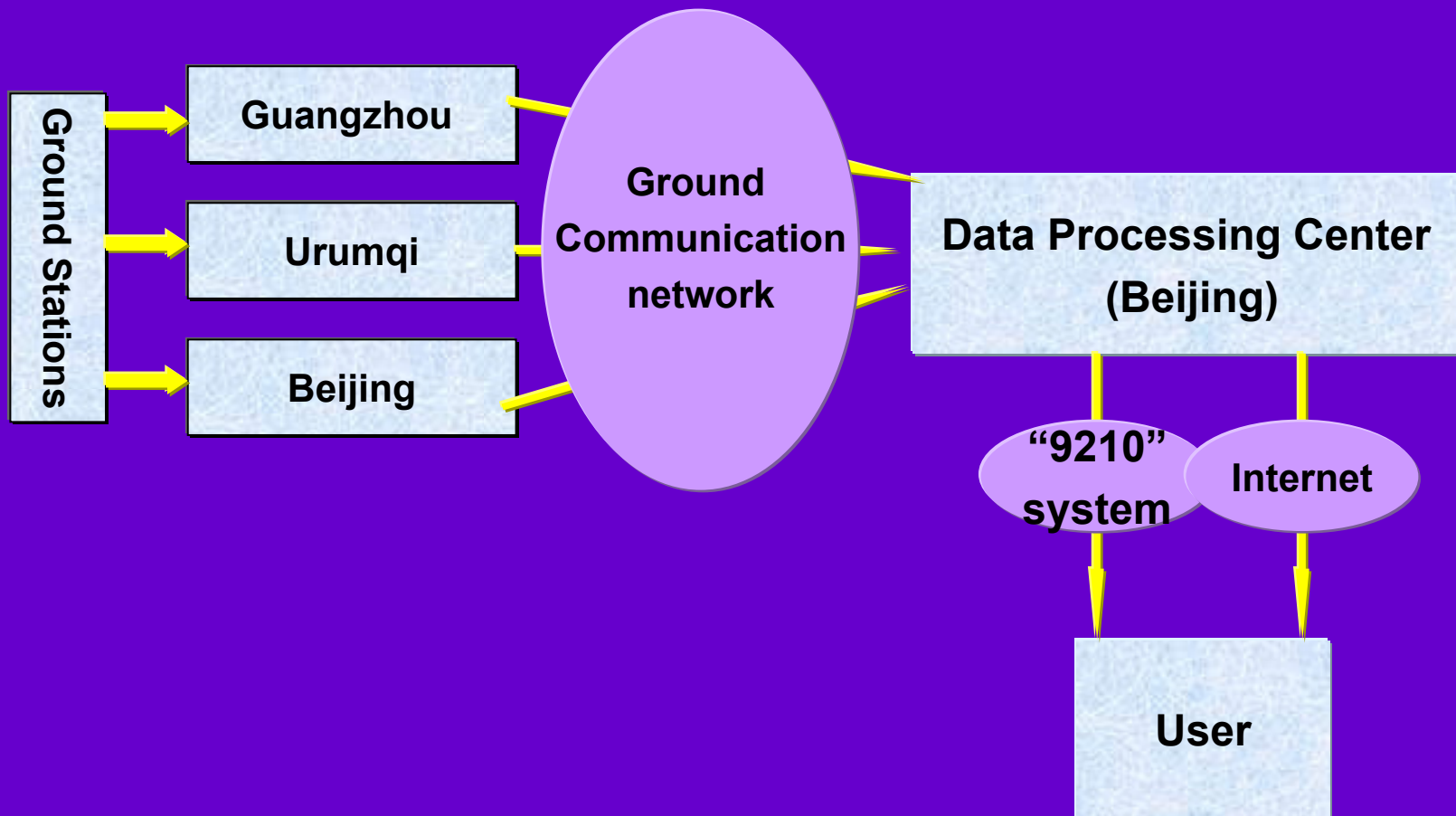
2.1 data collection

2.3 data transmission

2.4 data distribution

Data Management: FY-1, 2

1. Data processing system



Data Management: FY-1 , 2

2.

Ground Segment

Command and Data Acquisition Station (CDAS)

operational data receiving and operational telemetry;
the interface between satellite and ground system

Satellite Operational Control Center (SOCC)

Be responsible for the management and scheduling of the systems

Data Processing Center (DPC)

In charge of data processing and products generation

Computer Network and Archiving System (CNAS)

consists of computer, network, storage unit, and software ;
the supporting platform for the operation of SOCC, DPC, and ASC

Application and Service Center (ASC)

generates the man-machine interactive product;
integrates various satellite data and quantitative products
to make demonstration of FY-2 data application

Data Management: HY-1

Remote Sensing Data

1 FY-1,2

2 HY-1

In Situ Marine Data

1 Argo

2 Station and vessels observation

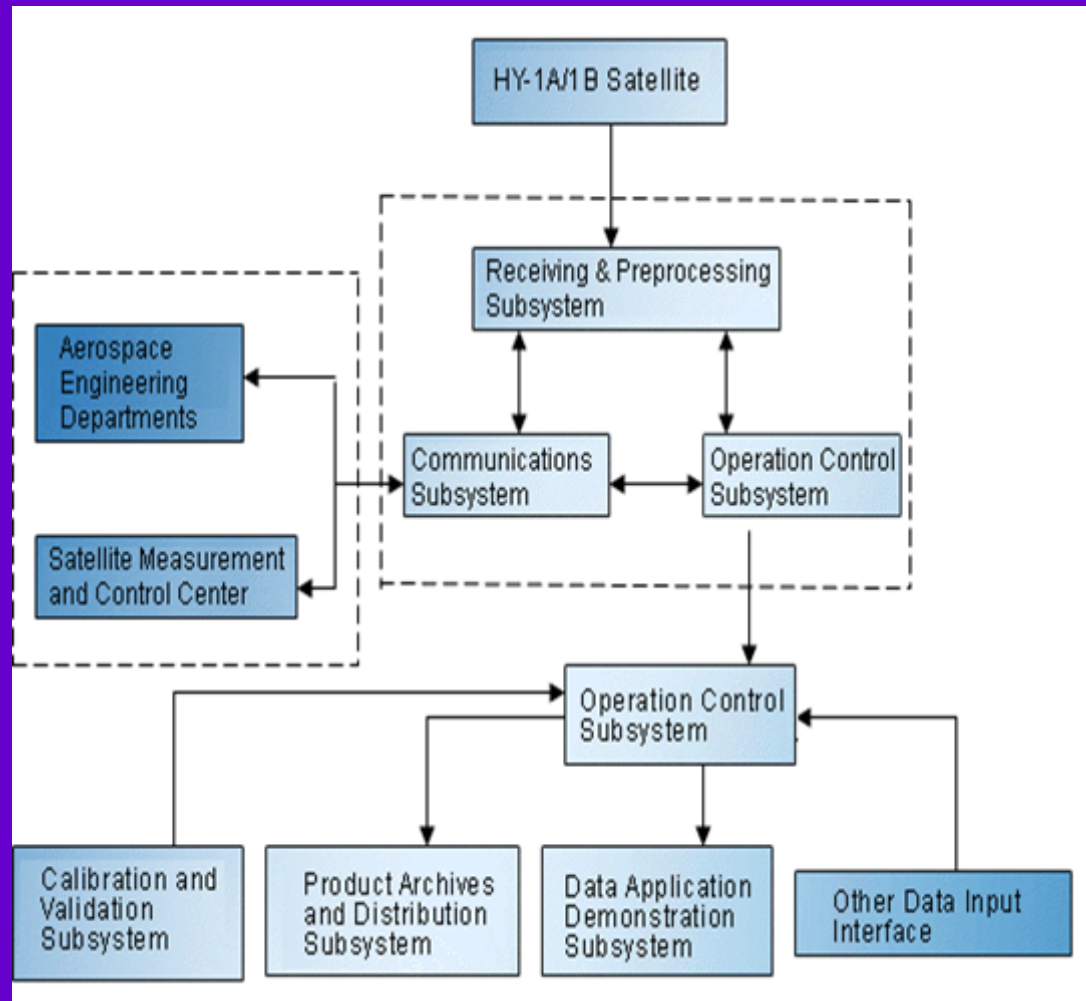
2.1 data collection

2.3 data transmission

2.4 data distribution

Data Management: HY-1

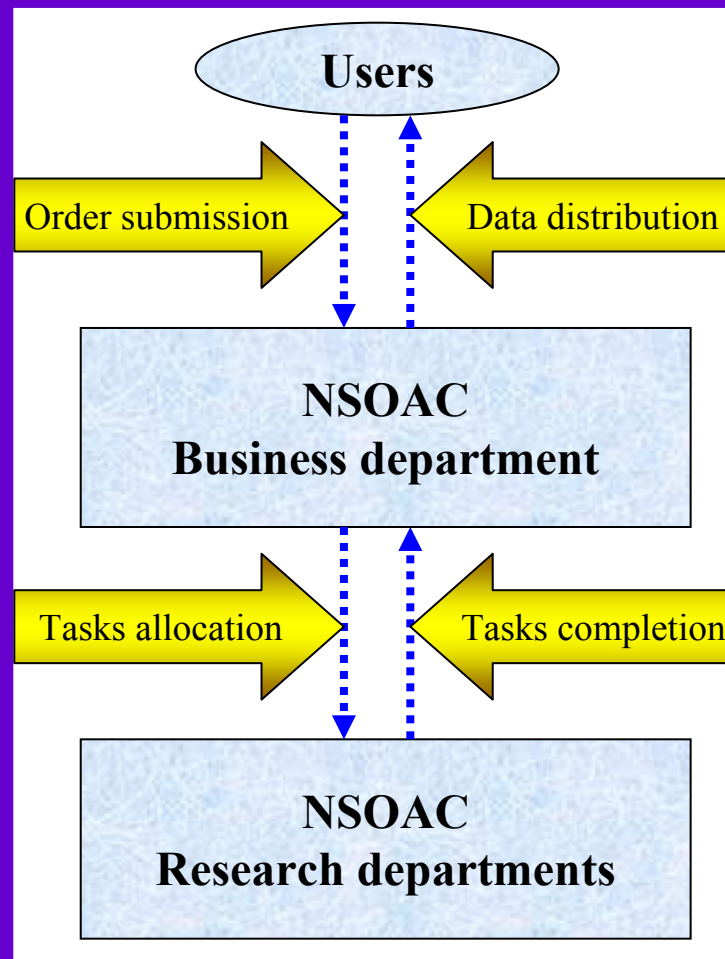
a. Data processing system



Data Management: HY-1

b.

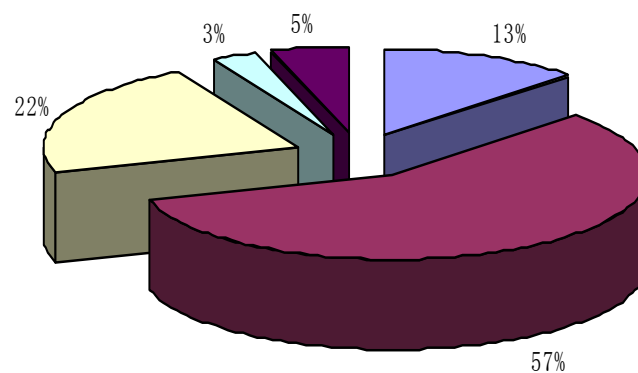
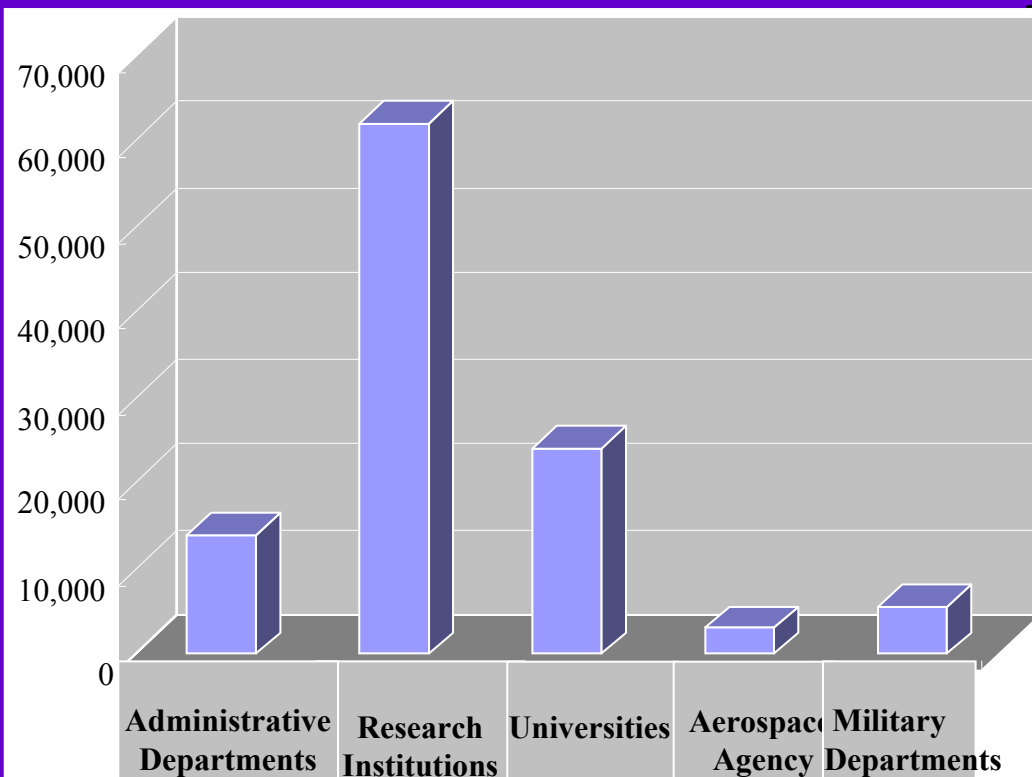
Data distribution process



Data Management: HY-1

C.

Data distribution status



管理部门 科研院所 大专院校 航天部门 军事部门

Data Management: Argo

Remote Sensing Data

1 FY-1,2

2 HY-1

In Situ Marine Data

1 Argo

2 Station and vessels observation

2.1 data collection

2.3 data transmission

2.4 data distribution

Data Management: Argo

There are two main websites constructed to manage Argo data in China at present. They are the China Argo Data Center and the China Argo Real-time Data Center.

The former provides access to the global Argo profiles data, meta data, trajectory data and deployment information from the Argo Database. The later provides the up-to-date information of Chinese Argo floats including TS profiles and trajectories.

Data Management: Argo

1.a China Argo Data Center (CADC)

CADC is established in Nov. 2002, and is operated by the National Marine Data & Information Service.

<http://www.argo-cndc.org/argo-eng>

The screenshot shows the homepage of the China Argo Data Center. At the top, there is a navigation bar with links for 'About Argo', 'China Argo', 'About CADC', 'Argo Literature', 'Hot Link', and 'Chinese'. The main content area is divided into several sections:

- Data Service:** A sidebar menu with links to 'China Argo Data', 'Global Argo Data', 'Metadata Navigation', 'Deployment Information', 'Application and Products', 'FTP Download', 'Data Formats', and 'Contact Us'. A '7th ADMT' link is also present at the bottom of the sidebar.
- Latest status:** A section titled 'For Argo Status Map See:' with links to 'Argo status monthly' and 'Argo Latest Status'. It includes a note that data is from AIC (The Argo Information Centre) and a small map showing the global distribution of Argo floats.
- Argo Data and Products:** A section titled 'Data Access' with two main points: '1) FTP Download' (with links to 'Browse China Argo Data Via FTP' and 'Browse Global Argo Data Via FTP') and '2) Search tools'. It mentions providing convenient tools for searching, generating trajectories, T-S diagrams, and maps. Below this are links for 'China Argo Data', 'Global Argo Data', 'Metadata Navigation', and 'Deployment Information'.
- Products Access:** A section titled 'Products Access' with the note 'Four types of Argo products are provided.'
- Notices:** A section titled 'Notices' with a link to 'New Products-the global surface current distribution maps NEW' dated '2007-1-17'.
- News:** A section titled 'News' with a link to 'The 7th ADMT Meeting will be held in NMDIS in Tianjin' dated 'April 25th 2006' and another link to 'The 6th Argo Data Management Meeting was successfully held in the'.

Data Management: Argo

1.b

Accomplishments in CADDC

- 1) Integrated operational workflow
- 2) Global Argo real-time data processing system
- 3) Metadata database, deployment database and profile database, etc
- 4) Automatic generation of the specific datasets in accordance with the requirements of users
- 5) Online data service
- 6) Online Argo data products: floats' trajectories maps, waterfall maps, T-S diagrams maps, and temperature and salinity horizontal distribution maps
- 7) Calibrated Chinese Argo floats salinity data

Data Management: Argo

2.a

China Argo Real-Time Data Center

China Argo Real-Time Data Center Website was set up in Hangzhou, China on April 5, 2002. It is running under support from the Basic Research Department of MOST, the Science Technology Department of SOA, the Foreign Affairs Cooperation Department of SOA, the Second Institute of Oceanography (SOA), and the Key Laboratory of Ocean Dynamic Processes and Satellite Oceanography (SOA).

<http://www.argo.org.cn/english>

Welcome to
China Argo Real-time Data Center

Understanding Global Ocean, Predicting Global Climate

Navigator

- Home
- About Us
- About Argo
- China Argo
- Application
- Argo Data
- Related Links
- Contact Us
- Chinese Version

2008/9/5 Friday

Google™

keywords

Search

- Search WWW
- Search our site

China Argo Project has deployed **46** floats in the Western Pacific and Eastern Indian Oceans. Now there are **20** floats still active. [Click here](#) to get the Argo data of China floats.

The visual network integration platform of Argo data which based on web-GIS technology is testing now. [Click here](#) to search and obtain the global Argo data from the platform.

Recent News

- AST-10 and ASW-3 to be held early 2009 in Hangzhou, China
- Study on the Argo Float Observation and Application got financial support from the special scientific research project of the State Oceanic Administration (SOA)
- September 25-28, 2007 Argo TC Visits China
- China Argo Likely to Win Support from Different Channels of the Country
- China Argo Win Support from IOC
- March 19-20, 2007 Prof. Chen Changsheng visited the China Argo Real-time Data center.

1. The first Argo Science workshop of China

01 02 03 04

Links:

- AIC
- China-CADC
- China-SIO

More Links »

Email Us

Last Updated: 06/30/2008 08:03:06

Data Management: Argo

2.b

Tasks of China Argo Real-Time Data Center

- 1) Argo floats deployment**
- 2) Real-time data receiving and processing**
- 3) Data quality control**
- 4) Fast delivery of the data to Argo-related users**

Data Management: Station and Vessels Observation

Remote Sensing Data

1 FY-1,2

2 HY-1

In Situ Marine Data

1 Argo

2 Station and vessels observation

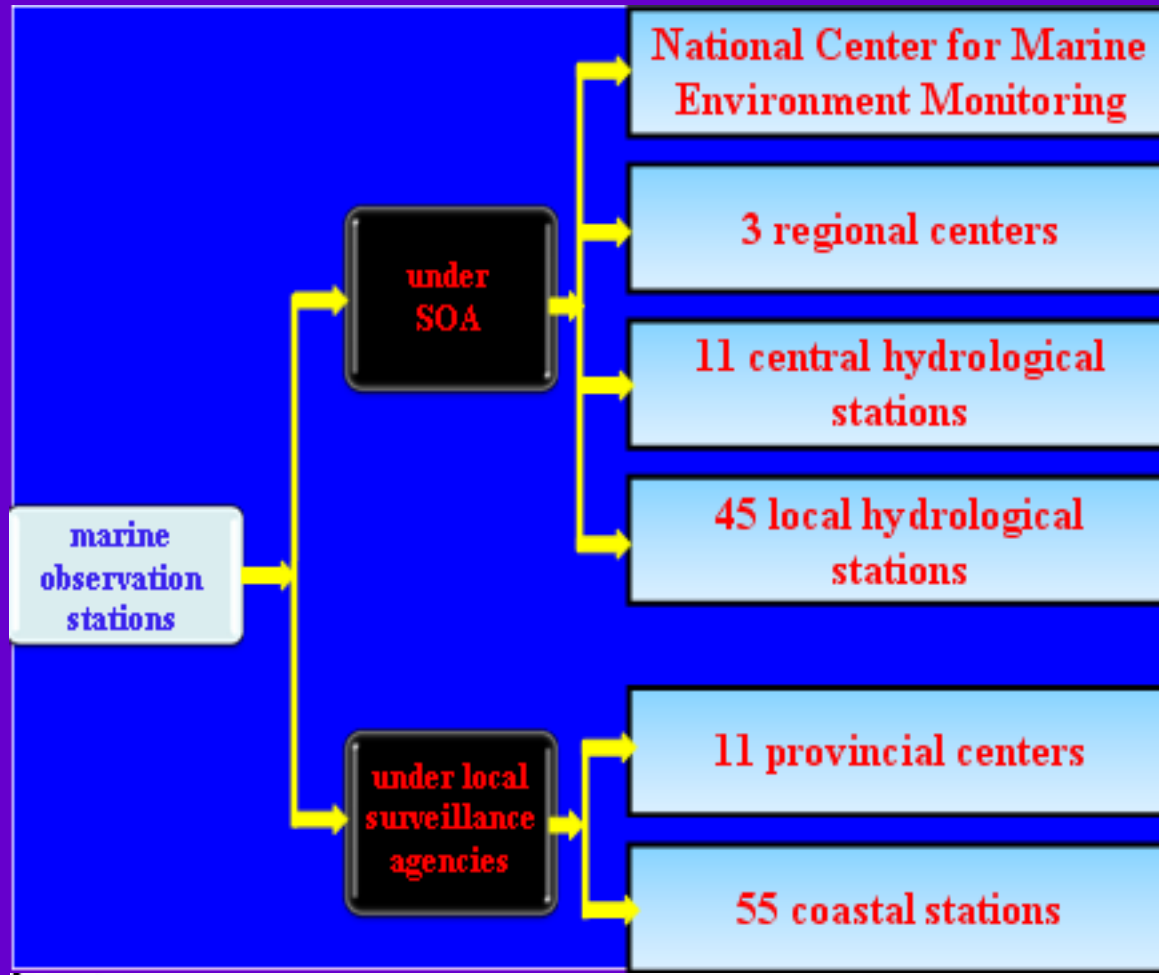
2.1 data observation

2.3 data transmission

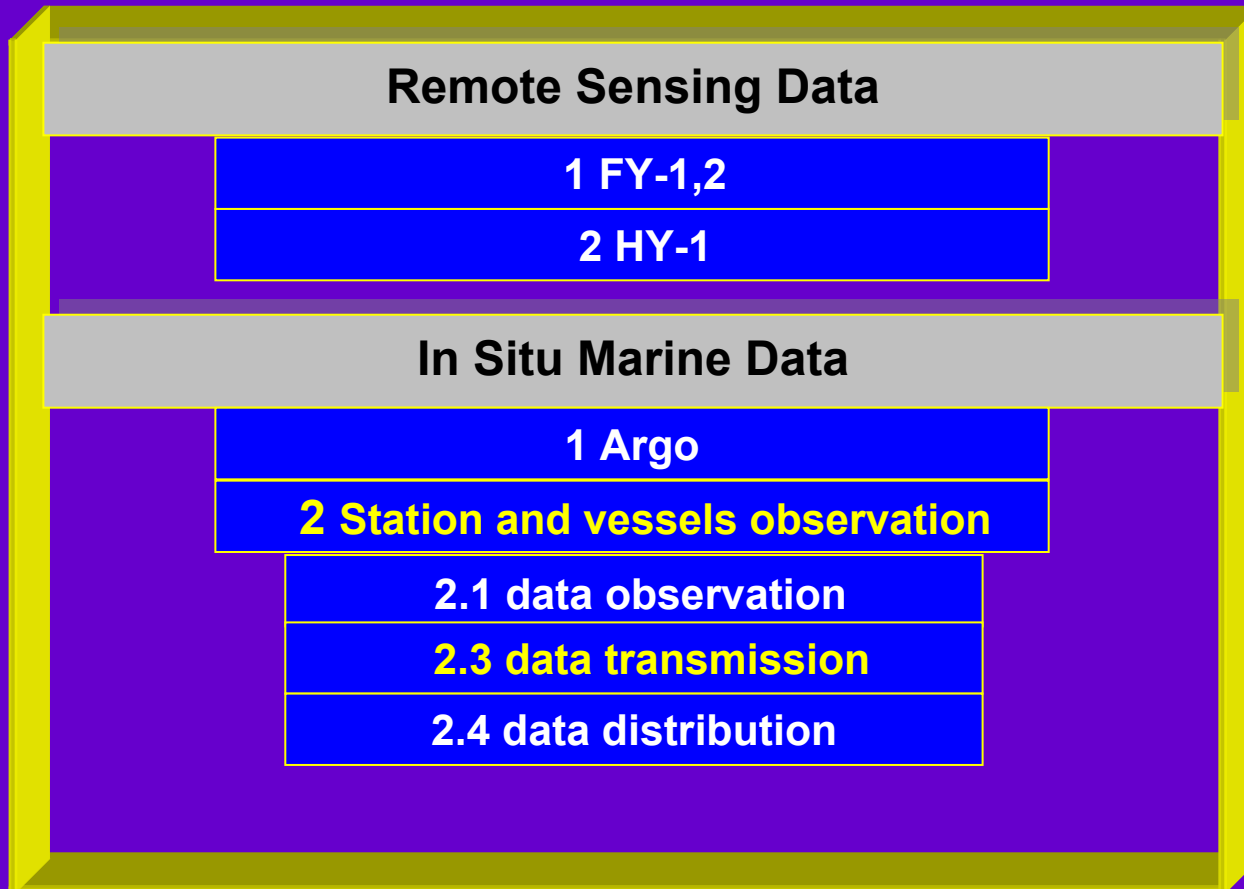
2.4 data distribution

Station and Vessels Observation: Data Observation

1. Marine observation stations along coast



Data Management: Station and Vessels observation



Station and Vessels Observation: Data Transmission

2. Formats of data transmission

Code and File transmission

Code:

- 1 marine surveillance report code format
- 2 voluntary report code format
- 3 buoy report code format

Document:

T011、 T012、 T021、 T022、 T023、 T031、
T032、 T041、 T051、 T052、 T053、 T54、
WR (polluted surveillance) and CB
(surveillance of voluntary ship)

**Note: T is the mark of coast observation report; 0HH is the type of file report
Example: T021 is tide file report**

15.7 观测资料数据文件

15.7.1 数据文件命名规则

海滨观测资料的数据文件按以下规则命名：

文件名以字母“T”开始，包括数据文件类型和时间信息，扩展名为海洋环境监测站名称代码。

形式为：T0HH××××.×××

T——海滨观测资料标识；

0HH——数据文件类型；

××××——观测数据的年、月；

.×××——海洋环境监测站名称代码。

15.7.2 数据文件分类

根据海滨观测资料的项目和要素，将观测资料分为十二个数据文件（见表 13）。

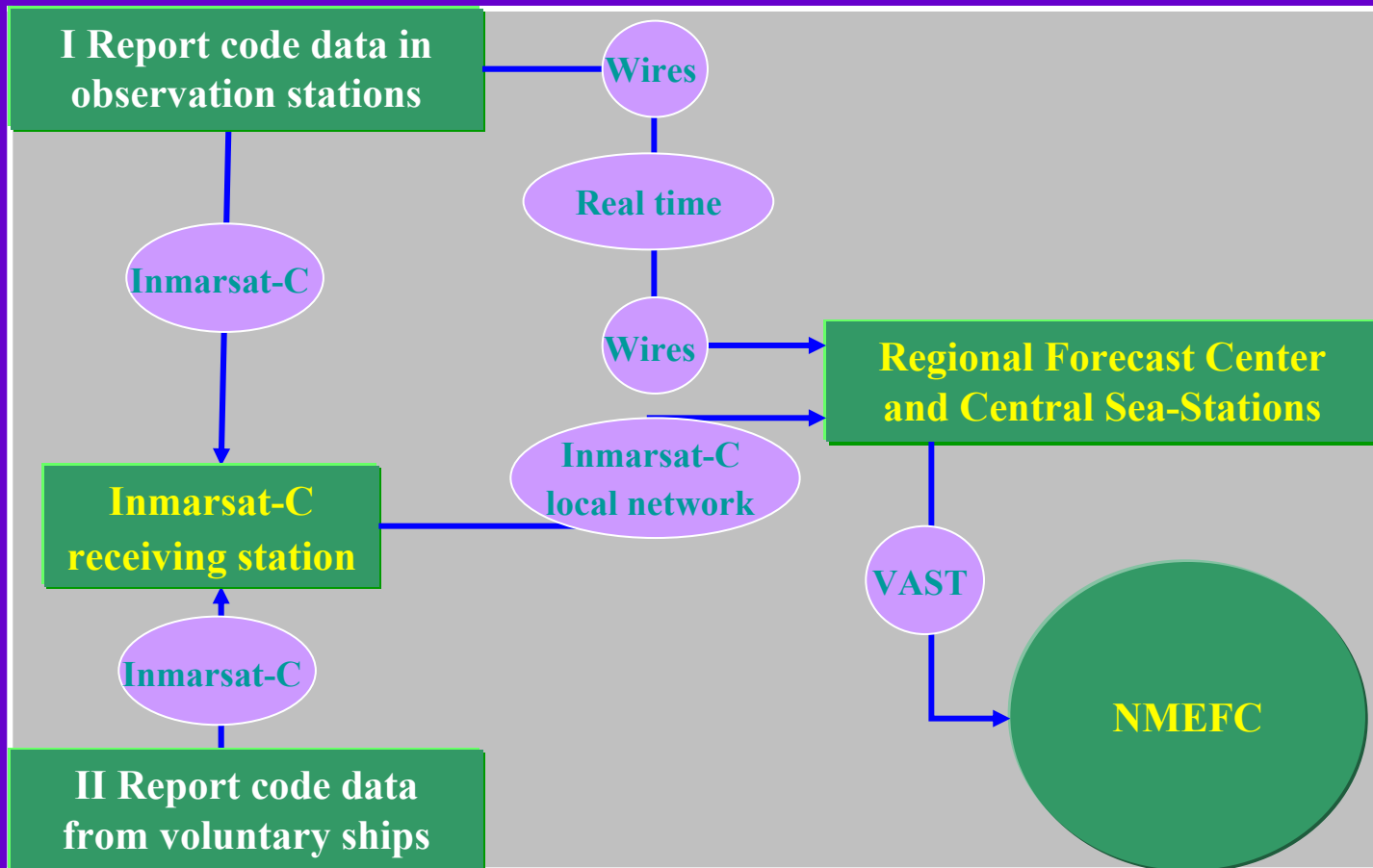
表 13 数据文件名及其内容

文件名	文件内容
T011××××.×××	表层海水温度、表层海水盐度、海发光数据
T012××××.×××	表层海水温度、表层海水盐度逐时数据
T021××××.×××	潮汐数据
T022××××.×××	5 min 潮高数据
T023××××.×××	1 min 潮高数据
T031××××.×××	海浪数据
T032××××.×××	自记测波仪原始采样数据
T041××××.×××	海冰数据
T051××××.×××	气象数据
T052××××.×××	逐时气压、空气温度、相对湿度、海面有效能见度数据
T053××××.×××	10 min 风观测数据
T054××××.×××	1 min 气压、空气温度、相对湿度、风、降水量数据

Data Transmission: Code Data

2.a

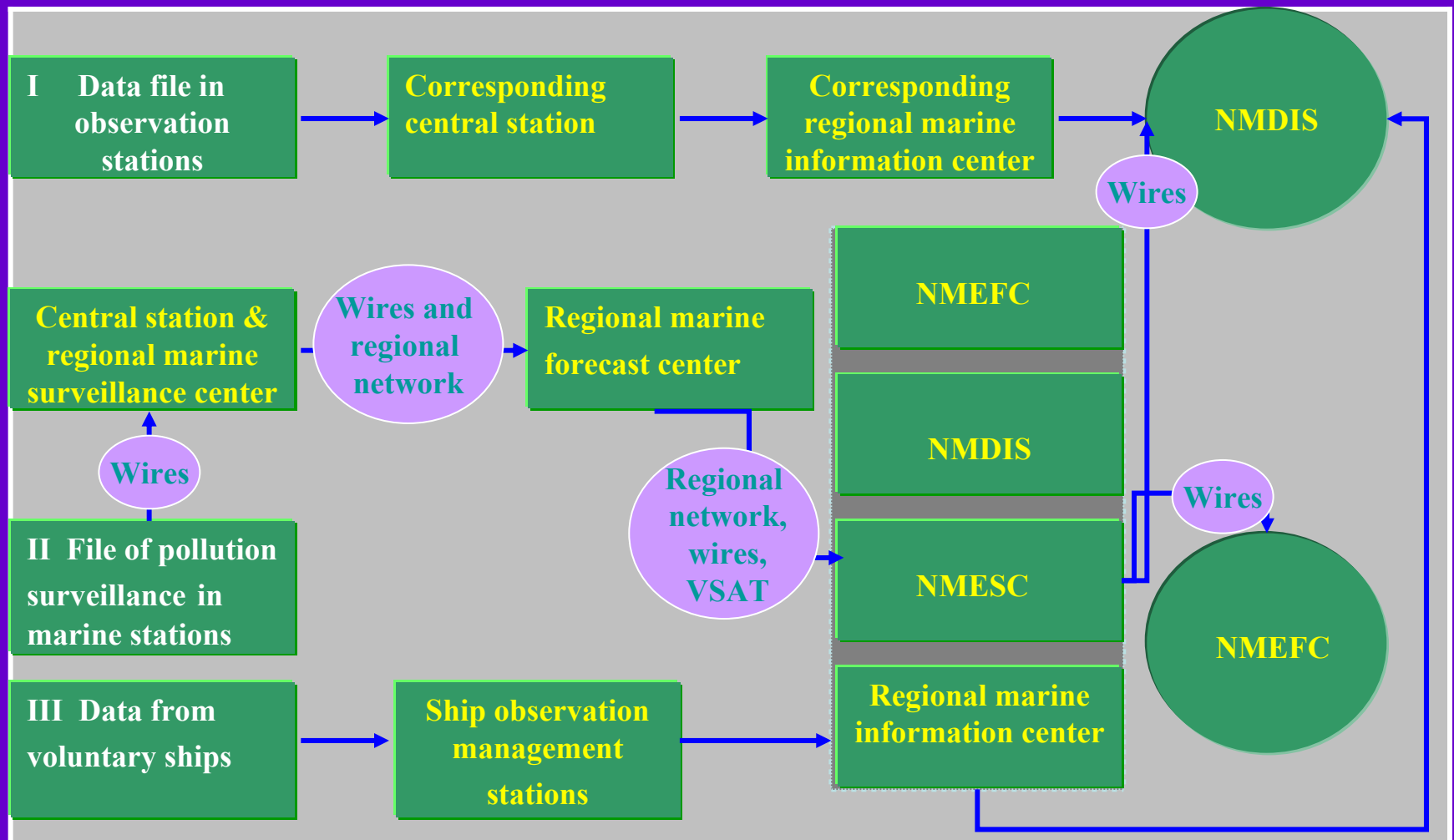
Code data transmission process



Data Transmission: Document Data

2.b

Document data transmission process



Data Management: Station and Vessels Observation

Remote Sensing Data

1 FY-1,2

2 HY-1

In Situ Marine Data

1 Argo

2 Station and vessels observation

2.1 data observation

2.3 data transmission

2.4 data distribution

Station and Vessels Observation: Data Distribution

Means of Data Distribution:

1 Online sharing : construction of platforms

- a Marine scientific data center**
- b Northern China Seas Marine data sharing platform**
- c Southern China Seas data sharing platform**
- d Qingdao marine data sharing platform**

2 Offline delivery: DVD, tapes, etc

Data distribution: Online sharing

a. Marine scientific data center

<http://mds.coi.gov.cn>

Operational

Thirteen marine scientific database system and metadata system have been built in Marine Scientific Data Center. And operation service can be supplied now.

The screenshot shows the homepage of the Marine Scientific Data Center. At the top, there is a logo and the name '海洋科学数据中心' (Marine Scientific Data Center). Below this is a navigation menu with links for '首页', '本站简介', '用户指南', '基础数据', 'WebGIS', '预报服务', '信息产品', '元数据', '联系我们', '会员注册', and '友情链接'. The main content area is divided into several sections:

- 网站搜索 (Website Search):** Includes a search input field, '搜索' (Search) and '重置' (Reset) buttons, and a '用户登录' (User Login) section with fields for '用户名' (Username) and '密码' (Password), and '登陆' (Login) and '重置' (Reset) buttons.
- 元数据信息 (Metadata Information):** A section titled '元数据信息' with a sub-section '项目动态信息' (Project Dynamic Information) listing various data resources and their status.
- 公告栏 (Notice Board):** A section titled '公告栏' with a list of recent notices, including reports and updates from the center.
- 水文数据资料 (Hydrological Data Resources):** A list of data resources on the right side of the page, including '水文数据资料', '南深站数据资料', 'CTD数据资料', 'BT数据资料', '表层海流数据资料', '海面气象数据资料', '海洋化学数据资料', '海洋生物数据资料', '地球物理', 'ARGO浮标数据库', 'GTSPP数据资料', 'Near-Goos气象数据', '气象数据资料', '水位数据资料', '海洋环境监测站资料库', 'modis数据资料', and '中巴资源卫星元数据资料'.

Data distribution: Online sharing

Sharing status in present:

Marine data information center

Up to December, 2007, accumulated visit count reached 62323. Most users are from SOA, Chinese Academy of Sciences, China Meteorological Administration, Ministry of Land Resources, Ministry of Agriculture, Universities and public. Registered user is 352 and with real-name users of 238. Data more than 24GB has been downloaded.

Data distribution: Online sharing

b.

Northern China Seas marine data sharing platform

Gradually operational

New data added in 2007

From marine environmental surveillance stations:

- 1 Dongfang
- 2 Shidao
- 3 Xiaomaidao

<http://222.173.119.130/Index.aspx>

北海区海洋科学数据共享平台

2008年4月17日 星期四

首页 动态信息 元数据 海洋基础信息 海洋信息产品 监测预报 控制面板 用户指南

用户登录 YINGHUNDENGU

用户名:

密码:

登录 注册

密码找回

元数据 YUANSHUJU

- ▶ 海洋站观测资料元数据
- ▶ 志愿船观测资料元数据
- ▶ 断面调查资料元数据
- ▶ 历史海洋调查资料元数据
- ▶ 全国海洋综合调查资料
- ▶ 中太平洋西部调查资料
- ▶ 黑潮资料元数据
- ▶ 海上船舶观测资料元数据
- ▶ 海洋站观测资料产品
- ▶ 浮标资料产品元数据

基础信息

- ▶ 海洋站观测资料
- ▶ 志愿船观测资料
- ▶ 断面调查资料
- ▶ 历史海洋调查资料
- ▶ 全国海洋综合调查资料
- ▶ 中太平洋西部调查资料
- ▶ 黑潮资料
- ▶ 海上船舶观测资料

信息产品

- ▶ 海洋站观测资料产品
- ▶ 浮标资料产品

监测预报

- ▶ 北海区海洋预报数据
- ▶ 北海区海洋预报数据

新闻公告 :: | MORE

▶▶▶ 系统内容"监测预报"简介	2007-01-06
▶▶▶ 系统内容"海洋信息产品"简介	2007-01-06
▶▶▶ 系统内容"海洋基础信息"简介	2007-01-06
▶▶▶ "北海区海洋科学数据共享平台"简介	2007-01-05
▶▶▶ "北海区海洋科学数据共享平台"试运行	2007-01-05

Data distribution: Online sharing

Sharing status in present:

Northern China Seas marine data sharing platform

Data type	Browse	Inquiry	Application
Products from marine observation stations	250	258	3
Marine environmental forecast in Olympic sea areas	22	273	1
Forecast data in northern sea	38	287	3
Products from buoys and floats	258	288	1
Surveillance data from floats A, B, C	18	300	1
Investigation data of western central Pacific	201	312	2
Data from research vessels observation	233	331	2
Data from Kuroshio investigation	264	334	1
Data from sections investigation	295	342	2
Data from national comprehensive investigation	261	357	3
Data from voluntary vessels observation	314	380	1
Data from marine observation stations	450	396	3

Data distribution: Online sharing

C.

Southern China Seas marine data sharing platform

<http://www.scssinfo.com/share/>

The screenshot shows the homepage of the Southern China Seas marine data sharing platform. The header features the SDSP logo and the title '南海区海洋数据共享平台'. The navigation menu includes '首页', '海洋基础信息', '海洋信息产品', '元数据信息', '本站信息', and '联系我们'. The main content area is divided into several sections: '网站搜索' with a search box and dropdown menu; '最新资讯' listing recent news items; '本站信息' listing site news; '元数据信息' listing metadata information; and '基础信息' listing basic information. A sidebar on the left contains '最新查看' (Latest Views) and '海洋预报' (Ocean Forecast) sections.

南海区海洋数据共享平台

SDSP

首页 海洋基础信息 海洋信息产品 元数据信息 本站信息 联系我们

网站搜索

标题 搜索

最新查看

- 1 海洋科学数据共享中心
- 2 海洋科学数据共享中心
- 3 海洋科学数据共享中心
- 4 海洋科学数据共享中心
- 5 海洋科学数据共享中心
- 6 海洋科学数据共享中心
- 7 1956年各月平均加
- 8 历年一月加热场距平资
- 9 累年各月平均加热场资
- 10 海洋站降水里

海洋预报

- 南海海浪预报
- 旅游区海洋预报
- 海水浴场预报
- 广州市海洋预报

相关链接

最新资讯 更多...

- ◎ 海洋科学数据共享中心工作
- ◎ 海洋科学数据共享中心工作
- ◎ 海洋科学数据共享中心工作
- ◎ 海洋科学数据共享中心工作

本站信息 更多...

- ◎ 海洋科学数据共享中心工作办公室《工作简报》2007年第4期(总6)
- ◎ 海洋科学数据共享中心工作办公室《工作简报》2007年第3期(总5)
- ◎ 海洋科学数据共享中心工作办公室《工作简报》2007年第2期(总4)
- ◎ 海洋科学数据共享中心工作办公室《工作简报》2007年第1期(总3)

元数据信息 更多...

基础信息 更多...

- ◎ 志愿船观测资料
- ◎ 断面调查资料

Data distribution: Online sharing

d.

Qingdao Marine
data sharing platform

<http://www.mdc.org.cn/oceanplan>

Just completed

1. Marine scientific basic information database
2. International marine information database
3. Special databases (including Jiaozhou bay, Yellow Sea and Bohai Sea, biological resource, engineering geology, environment assessment, marine drug resource and gene, and long time series database)
- 4 Historical databases

青岛海洋科学数据共享平台

首页 | 平台简介 | 用户指南 | 元数据 | 工作进展 | 其他资料 | 联系我们

2008年4月17日星期四 访问量: 877915

工作进展

- 青岛海洋科学数据共享平台建设召开06年课题验收会...
- 海洋科学研究基础信息数据库...
- 考核内容与指标...
- 青岛海洋科学数据中心存储设备邀标公告...
- 科学数据共享工程标准培训班(第三期)学习情况通报...

<<<更多>>>

用户登录

用户名:

密码:

友情链接

工作进展

青岛海洋科学数据共享平台建设召开06年课题验收会

2007年7月18日,青岛海洋科学数据共享平台建设专家委员会在市南软件园青岛海洋科学数据中心对“青岛海洋科学数据共享平台建设”项目课题进行了验收。专家委员会由来自中国科学院海洋所、中国海洋大学、农业部黄海所、国家海洋局一所、青岛海洋地质所等单位的专家组成。中科院海洋所代亮副所长担任专家委员会主任,青岛市科技局杨军副巡视员等参加了会议。

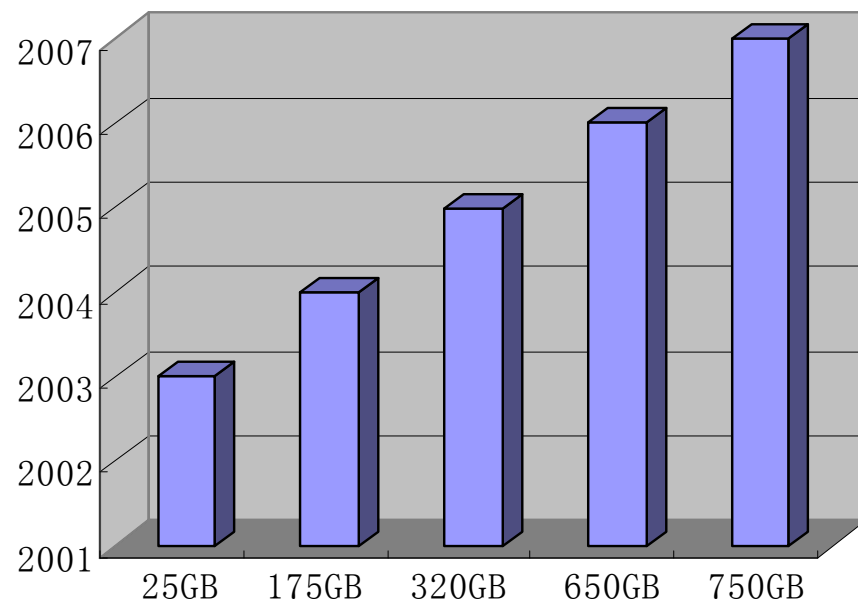
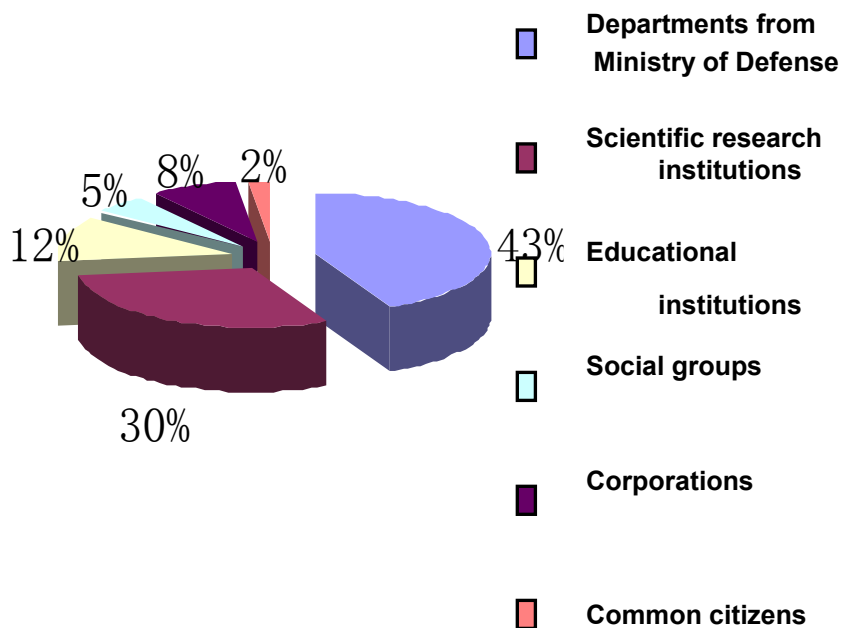
“青岛海洋科学数据共享平台建设”项目包括四个子课题,分别是“国际海洋信息数据库”、“海洋科学历史数据抢救”、“专项数据库建设”和“海洋科学研究基础信息数据库”。四个课题组长分别汇报了课题自我评价报告,并对门户网站的功能和系统进行了现场演示。专家委员会在听取汇报、审阅验收资料并对各课题工作完成情况进行质询、答辩的基础上认为:四个子课题均较全面完成了合同任务书规定的各项工作任务内容,达到了考核指标要求,在网站运行情况监测数据的分析工作方面具有一定的创新性,专家委员会一致同意通过课题验收,同时就课题存在的问题进行了分析,提出了整改措施,规定了完善期限。

青岛市科技局杨军副巡视员做了总结发言,他充分肯定了海洋数据共享平台建设取得的成绩,并对下一步平台建设提出了新的要求。他指出海洋数据共享平台是国家创新体系建设的

Data distribution: Offline sharing

Statistical analysis about offline service:

Offline service requests: 741;
Total volume of data delivered: 1920 GB.



Data distribution: Offline sharing

Examples of marine information and product service for important national marine scientific research projects:

Specific scientific research projects

1) National '863' Project 818-01-04:

marine vessels observation data; temperature and salinity data; ocean current data; marine observation variables data

2) Marine '973' Project of China Offshore Ocean Currents:

original data ; Temperature and salinity ; Sea surface meteorological data; Ocean current data

3) '973' Bohai Sea Investigation in Institute of Geographic Sciences and Natural Resources Research, CAS:

CTD data

4) '863' Project in Ocean University of China:

sea ice and transparency data in Bohai Sea, Yellow sea, East China Sea

Contents

- 1 Overview
- 2 Data Policy
- 3 Data Management
- **4 Data Integration: Two Examples**
- 5 Recommendations

Data Integration: Two examples

Two examples of marine data integration system are introduced briefly:

- 1 National Marine Data and Information Service;**
- 2 Spectral Database for Typical Objects (including water) of China.**

Data Integration 1:

The National Marine Data and Information Service (NMDIS) is a national facility under the State Oceanic Administration (SOA) of China for archiving, integrating and distributing data and information concerning the marine environment.

1 As a National Oceanographic Data Center

NMDIS maintains and develops the national marine database: a collection and integration of marine data sets originating mainly from China marine observation establishments.

2 As a Marine Data Service Provider

(1) provide marine data and information services

(2) provide technical support for national marine economic development, sea area management, marine environmental protection, and marine research community.

3 As a National Coordinator for International Marine Data Exchange

NMDIS also serves as the World Data Center for Oceanography, China Argo Data Center, China Delayed Mode Database for NEAR-GOOS.

Data Integration 1:

Newly added data in 2007 in NMDIS

- 1 From 31 Japanese sea-stations and Korea sea-stations (2004-2005)
- 2 Data from Nanseng station: 60000(per station)
- 3 On line data from Nanseng station: more than 500000(per station)
- 4 Sea surface meteorological dataset: 7250000(per station)
- 5 Sea surface current: 550000(per station)
- 6 GTSP: 250000(per station)
- 7 Meteorology, wave, temperature and salinity (20M, 1981 -2001)
- 8 Chemical data of sea water: 50000(per station)
- 9 Modis satellite data: 200GB
- 10 World ocean fishery dataset: 1000000(per station)
- 11 Data of gravity dataset and magnetic force dataset, western Pacific, 1GB
- 12 Marine biology dataset: 50000(per station)

Data Integration 1:

Newly added database and products in 2007 in NMDIS

New databases: Six marine islands databases

1 variables: climate, hydrology, chemic, biology, environment quality and soil, etc.

2 data volume: including 560000 pieces of information

New products:

1 routine statistical products

2 marine stations statistical products

3 sea surface meteorological products

4 grid depth products

Data Integration System 2:

Spectral Database for Typical Objects (including water) of China

It is jointly developed by the Research Center for Remote Sensing and GIS, Beijing Normal University (BNU), Institute of Remote Sensing Applications, CAS, National Engineering Research Centre for Information Technology in Agriculture, Shanghai Institute of Technical Physics, CAS, etc, and sponsored by national '863' project.

<http://spl.bnu.edu.cn/shou-001D.html>

国家 863 计划 · 信息获取与处理主题

我国典型地物标准波谱数据库

中文 CHINESE

英文 ENGLISH

北京师范大学 BEIJING NORMAL UNIVERSITY

版权所有 Copyright 北京师范大学 遥感与地理信息系统研究中心 遥感科学国家重点实验室 环境遥感与数字城市北京市重点实验室

The screenshot shows a website interface with a blue and white color scheme. At the top, it mentions the 'National 863 Plan - Information Acquisition and Processing Theme'. Below this, there are several small images of satellites and Earth. The main title is '我国典型地物标准波谱数据库' (Spectral Database for Typical Objects of China). There are buttons for '中文 CHINESE' and '英文 ENGLISH'. The logo of Beijing Normal University is visible. At the bottom, there is a copyright notice for Beijing Normal University, the Remote Sensing and Geographical Information System Research Center, the State Key Laboratory of Remote Sensing Science, and the Beijing Key Laboratory of Environmental Remote Sensing and Digital City.

Data Integration System 2:

Contents in Spectral Database for Typical Objects (including Water) of China:

1 Data

- 1). More than 30,000 in-situ spectra data for ground objects (crop, mineral, and water etc.)**
- 2). Airborne (OMIS Hyperspectral imagery) and satellite (Landsat TM imagery, MODIS etc.) data.**
- 3). About 130 meta data items**
- 4). Basic geography data**

2 Models

Public domain models for either online or offline running

Data Integration System 2:

Spectral Database for Typical Objects (including water) of China:

Techniques:

- 1). World Wide Web technology**
- 2). special ASP with COM**

Data format:

Stored in ORACLE database, user defined format.

Data policy:

Open to all registered users except the basic geography data

Contents

- **1 Overview**
- **2 Data Policy**
- **3 Data Management**
- **4 Data Integration: An Example**
- **5 Recommendations**

Recommendations to data management

Data and product access:

Strategic investments in improving access to observation data are likely to enhance data utility, to foster user-producer collaboration and cultivate further innovation.

Data & information delivery systems:

Be able to provide access to a wide range of disparate data types, to supply the functionality needed for assessing and accessing data integrity, to provide some level of functionality for distributed data analysis and integrity and long-term data archiving centers and data management protocols must be established

Functionality for Assessing and Documenting Data Integrity

It is important that accuracy assessments based on community standards be part of all data collection efforts

Distributed Archiving and Management Systems

Each partner will ensure long-term archiving and management of most of the data and information. A minimum set of standards that ensures permanence and long-term access to the archives of data must be established.

The End

谢谢各位!

Thank you!