

## WG4: Ocean and Society

### Scene setting for Session-2

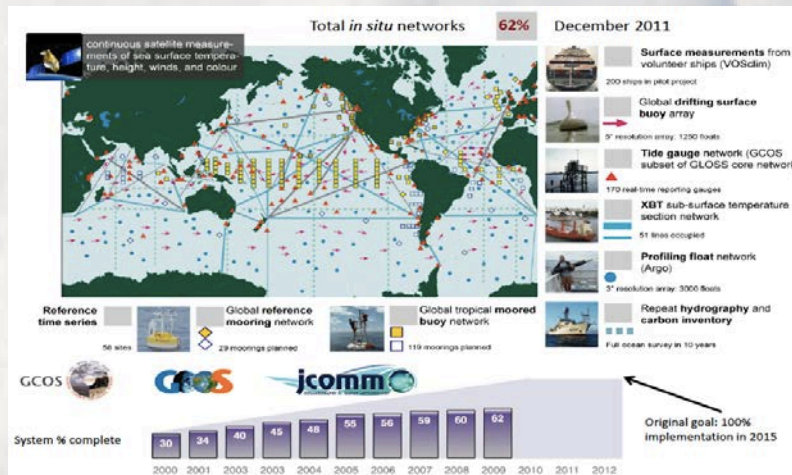
Since 2012, the Oceans and Society working group of the GEOSS-AP Symposium has been working to define, enhance and integrate the inventory of information exchanges of issues related to coastal data in the Asia-Pacific region which spans multiple jurisdictional waters.

We asked SEAGOOS, and various institutes/agencies in the Asian countries to talk about the current situation, and seek possible collaboration with the current activity for Ocean Data Networking System (ODNS) of GEOSS-AP.

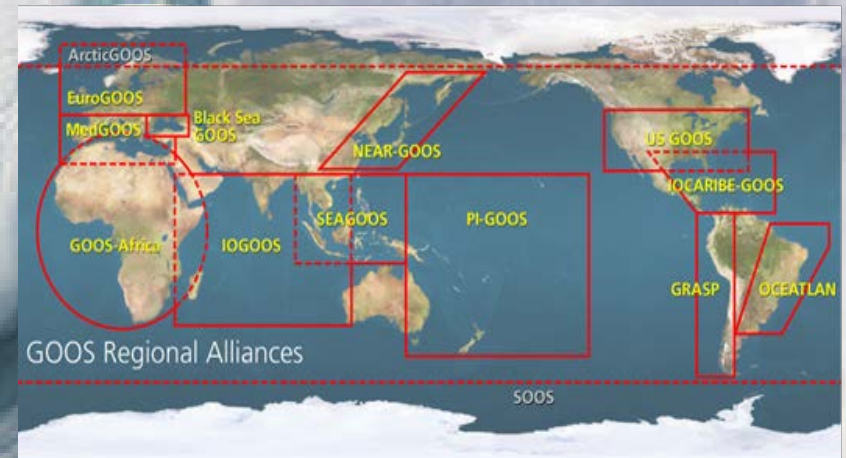
We also discuss future development of ODNS

# Ocean observation is core of “Blue Planet”

“Blue Planet” works with GOOS (Global Ocean Observing System)



**Global module of GOOS** is implemented by several components of surface buoy array, Argo floats and hydrographic ship-based observations for climate monitoring and forecasting, assessment, research, and global operational oceanography, as well as Biological and Ecosystem monitoring. Data are collected by each component, shared and disseminated.



**Coastal module of GOOS** is implemented by member states and participating organizations usually cooperating through GOOS Regional Alliances for coastal ocean services.

NEAR-GOOS, SEA-GOOS, IO-GOOS, and PI-GOOS are linked with GEOSS-AP

# Regional GOOS Alliances in the AP region

Regional Alliance	Status of Data Availability
NEAR-GOOS (North Eastern Asian Regional GOOS)	Well collected among national data centers (except for some parts of costal area), collected data are well opened via the NEAR-GOOS web in each country
SEA-GOOS (South Eastern Asian GOOS)	Data are <u>not</u> available to public Pilot Study phase under IOC/WESTPAC, and data is only shared among participants
IO-GOOS (Indian Ocean GOOS)	India's data are available at INCOIS (Indian National Center for Ocean Information Service) web site, but data from other participating countries are <u>not</u> available
PI-GOOS (Pacific Island GOOS)	Data from Island tide and weather are available by BoM of Australia (South Pacific Sea Level and Climate Monitoring Project), but other data are <u>not</u> available

Data availability of Regional GOOSa is yet insufficient for “Blue Planet”.

Reasons of insufficient data access:

- 1) Ocean data in each jurisdictional waters have great concerns with each national security.
- 2) In some Asia-Pacific counties, their national ocean data center (NODC) have not established yet.

# GEOSS-AP Ocean Data Networking System developed since 2014

## Data site of Asia Pacific countries:

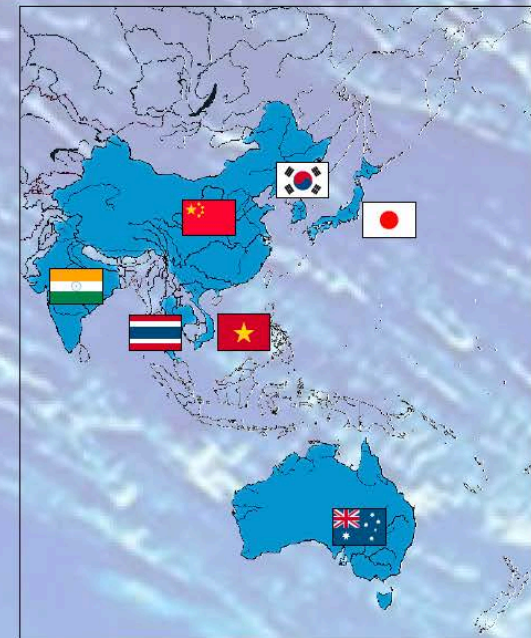
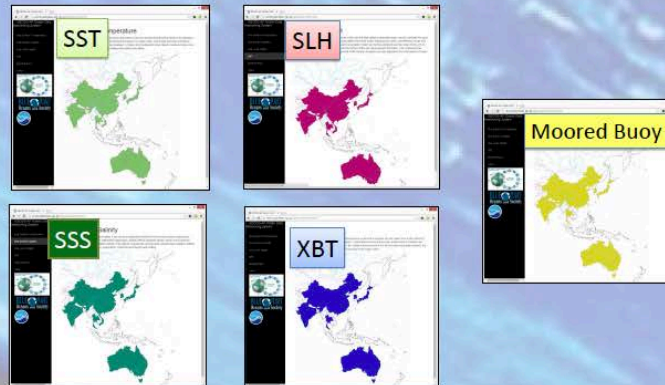
- |   |  |   |  |
|---|--|---|--|
|  <b>Japan</b>     | <ul style="list-style-type: none"><li>• NEAR-GOOS Regional Real Time Data Base</li><li>• NEAR-GOOS Regional Deleyed Mode Data Base</li></ul>       |  <b>India</b>    | <ul style="list-style-type: none"><li>• Indian National Centre for Ocean Information Services</li></ul>  |
|  <b>Australia</b> | <ul style="list-style-type: none"><li>• Coastal Data Portal</li><li>• Coastal Research</li></ul>   |  <b>Thailand</b> | <ul style="list-style-type: none"><li>• Central Database System and Data Standard for Marine and Coastal Resources</li></ul>                               |
|  <b>China</b>     | <ul style="list-style-type: none"><li>• NEAR-GOOS Real Time Data Base</li><li>• China Deleyed Mode Database for NEAR-GOOS</li></ul>                |  <b>Vietnam</b>  | <ul style="list-style-type: none"><li>• Not yet have Data site. Inquire by E-mail.</li><li>• Vietnam's META-data is published in this web portal</li></ul> |
|  <b>Korea</b>     | <ul style="list-style-type: none"><li>• Korea Real Time Database for NEAR-GOOS</li><li>• NEAR-GOOS Korea National Deleyed Mode Data Base</li></ul> |   |  |

## GEOSS-AP Ocean Data Networking System Web Portal:

Web data portal build via core framework(GYRE-System).

To encourage ocean research activities by searching the oceanographic data easily and speedily.

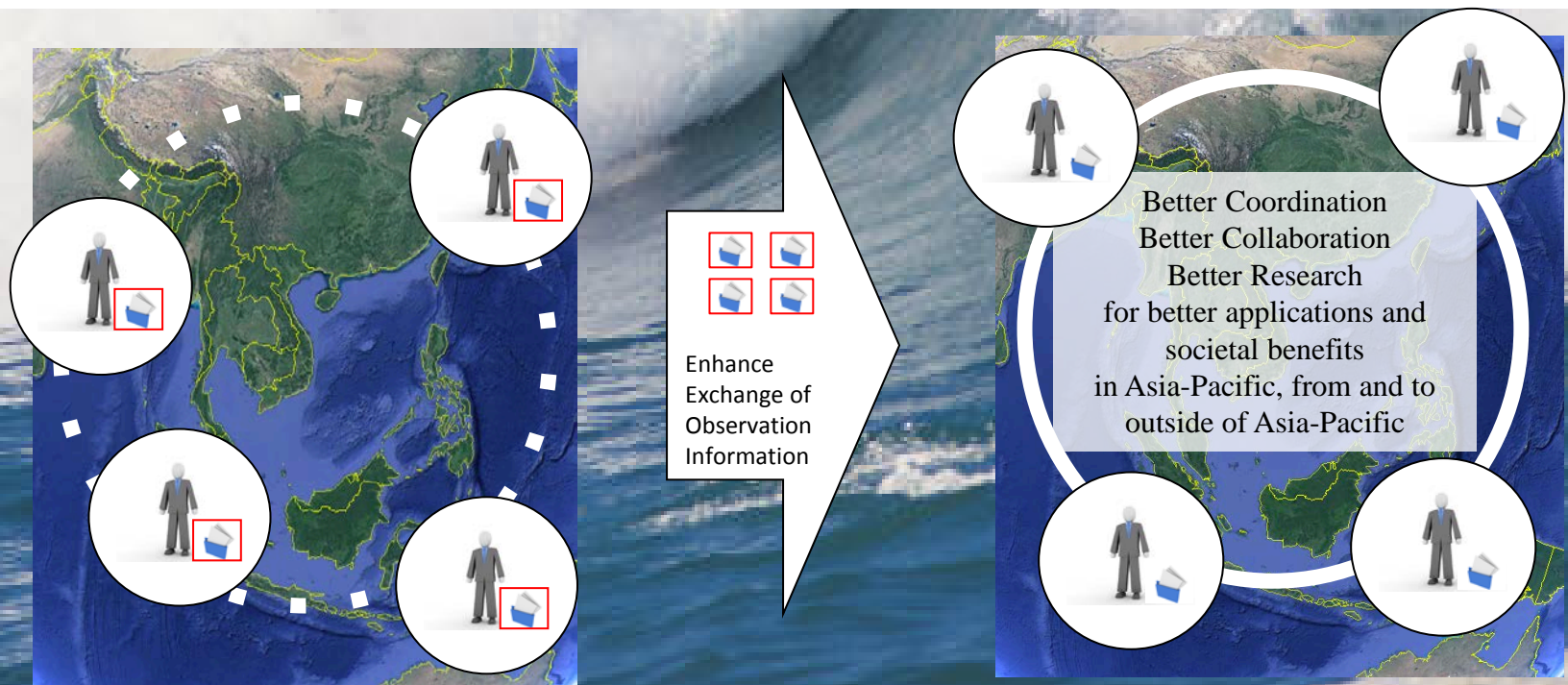
To give opportunities the countries which don't have the public data base site to disclose their meta information about their oceanographic data.



# One goal of the WG 4

## Extension of GEOSS-AP Ocean Data Networking System

Goal: **Extension of the current Ocean Data Networking**, which will ensure national security and help efforts of individual observation projects for data exchanges through collaborative works.



# Agenda in this morning

## 2. Expand ocean data inventory system in GEO (10:00-11:50)

10:00-10:10 Current status of Ocean Data Networking System (Ken Ando)

10:10-10:25 SEA-GOOS (Somkiat Khokiattiwong)

10:25-10:40 Ocean data management in Malaysia

(Aidy Ohamed Shawal Bin M Muslim)

10:40-10:55 Ocean data management in Indonesia (Bayu Prayudha)

10:55-11:10 Ocean data management in Philippine (Cesar Villanoy)

11:10-11:20 Future Cooperation with IOC/WESTPAC (Somkiat Khokiattiwong)

11:20-11:50 Discussion: Evolution of the current system

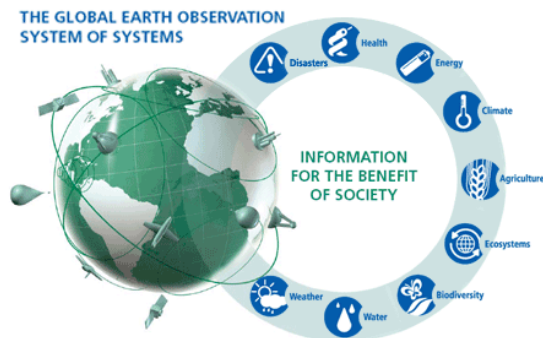
# GEOSS-AP Ocean Data Networking System

This site has been established based on [TOKYO STATEMENT](#) adopted in 7th GEOSS-AP Symposium.

## About GEOSS

The Global Earth Observation System of Systems will provide decision-support tools to a wide variety of users. As with the Internet, GEOSS will be a global and flexible network of content providers allowing decision makers to access an extraordinary range of information at their desk.

This system of systems will proactively link together existing and planned observing systems around the world and support the development of new systems where gaps currently exist. It will promote common technical standards so that data from the thousands of different instruments can be combined into coherent data sets. The 'GEOSS Portal' offers a single Internet access point for users seeking data, imagery and analytical software packages relevant to all parts of the globe. It connects users to existing data bases and portals and provides reliable, up-to-date and user friendly information – vital for the work of decision makers, planners and emergency managers. For users with limited or no access to the Internet, similar information is available via the 'GEONETCast' network of telecommunication satellites.



Please visit at

<http://www.jamstec.go.jp/geossap/>

## What is Blue Planet?

"Oceans and Society: Blue Planet" is the over-arching Marine Task within the Group on Earth Observations (GEO). GEO is an intergovernmental body dedicated to the effective use of Earth observation (in situ or via remote sensing) for societal benefit. It is comprised of 90 member nations, the European Commission and 77 Participating Organizations, including POGO, GOOS and CEOS.

## Mission Statement

"Oceans and Society: Blue Planet" seeks, through the mobilisation of expert knowledge, to raise public awareness of the role of the oceans in the Earth system, of their impacts (good and bad) on humankind, and of the societal benefits of ocean observations; to coordinate the various marine initiatives within GEO and develop synergies between them; and to advocate and advance the establishment and maintenance of a global observing network for the oceans, which acknowledges the value of ocean observations and their contribution to helping alleviate societal issues in multiple areas.

## The Blue Planet within GEO

In 2012, GEO was restructured following a new Work Plan for 2012-2015. POGO submitted a proposal for a new Task on Oceans, with the aim to bring together all the ocean observing elements within GEO and enhance their visibility. The proposal was accepted, and "Oceans and Society: Blue Planet" was included in the "Societal Benefits" section of the Work Plan. The Task was officially launched during a Kick-Off Symposium in Brazil in November 2012.

The Global Earth Observation System of Systems (GEOSS) aims to supply decision support tools to a wide variety of users, by linking together existing and planned observing systems around the world and support the development of new ones where gaps currently exist. GEOSS addresses nine "societal benefit areas" (SBA) of critical importance to people and society. The ocean impacts on all of these. Blue Planet focuses particularly, but not exclusively, on Climate, Ecosystems, Agriculture and Biodiversity.



# Access to the inventory of Sea Surface Temperature

## GEOSS-AP Ocean Data Networking System

Sea Surface Temperature

Sea Surface Salinity

Sea Level Height

XBT

Moored Buoy

Links



## Sea Surface Temperature

One in the marine environment does a wide area observation of the sea surface temperature which is an important index. It's possible to catch a space-time distribution fluctuation whirlpool because the temperature difference can be visualized. A marine front whirlpool is also called a treasure house of an aquatic resource and is also employed as fishing information.





Access to the inventory of Sea Surface Salinity, then go to the inventory of Vietnam

GEOSS-AP Ocean Data  
Networking System

Sea Surface Temperature

Sea Surface Salinity

Sea Level Height

XBT

Moored Buoy

Links



## Sea Surface Salinity

The spatial distribution of sea surface salinity in the ocean is significantly different from the sea surface temperature. Global salinity patterns are linked to rainfall sustains the oceanic deep overturning circulation. Salinity variations are driven by precipitation, evaporation, runoff and ice freezing and melting.



Just put your cursor on map, then link is shown



ระบบฐานข้อมูลกลางและมาตรฐานข้อมูลทรัพยากรทางทะเลและชายฝั่ง  
Central Database System and Data Standard for Marine and Coastal Resources



กรมทรัพยากรทางทะเลและชายฝั่ง  
DEPARTMENT OF MARINE AND COASTAL RESOURCES



**KM**

Knowledge Management  
ฐานข้อมูลองค์ความรู้



**MIS**

Management Information Systems  
ฐานข้อมูลสารสนเทศ



**GIS**

Geographic Information Systems  
ระบบแผนที่ออนไลน์

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Last Updated	Owner Institution	Research Project	Location(s)	Researcher(s)
07/09/2015 - 14:36	MangroveWatch Ltd	<b>Mangrove Click! Australia. An app describing and locating Australian mangrove plants</b> <b>Aims:</b> Publish an app for smart devices that describes and helps identify all mangrove plants in Australia and its offshore territories... <a href="#">read more</a>	Australia and its Offshore Territories	Norman C Duke
07/09/2015 - 14:18	JCU James Cook University	<b>Mangroves of New Caledonia</b> <b>Aims:</b> Publish an authoritative book on the mangroves of New Caledonia <a href="#">read more</a>	New Caledonia	Norman C Duke, Sabrina Virly

## NEAR-GOOS

# Regional Delayed Mode Data Base (RDMDB)

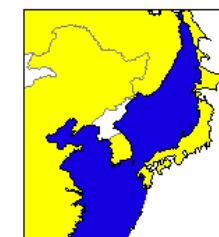


Japanese

Last updated: Dec. 21, 2016

As a regional pilot project of the Global Ocean Observing System ([GOOS](#)), the North-East Asian Regional GOOS ([NEAR-GOOS](#)) is being implemented by China, Japan, the Republic of Korea and the Russian Federation. NEAR-GOOS is intended to provide a regional framework for gathering and distributing oceanographic data in the North-East Asian region, in enabling participating countries to make better use of their investments in ocean observations and research towards the establishment of the Global Ocean Observing System. Oceanographic data and relevant products generated within NEAR-GOOS system will be open at free cost through electronic communications for various forms of marine uses.

The oceanographic/marine meteorological data in the NEAR-GOOS region are maintained at the Regional Delayed Mode Data Base (RDMDB) operated by the Japan Oceanographic Data Center (JODC), which is responsible for the Regional Data Center for WESTPAC. The Regional Delayed Mode Data Base receives the data from the Regional Real Time Data Base ([RRTDB](#)) 30 days after they are collected. The Regional Delayed Mode Data Base also collects the data/products from the National Delayed Mode Data Bases (NDMDB) except those collected through Regional Real Time Data Base. [\[Figure of NEAR-GOOS Data Flow\]](#)



■ NEAR-GOOS Area  
■ NEAR-GOOS Member



Access

### [RDMDB Data Retrieval System](#)

(Access to RDMDB, Online User Registration)



Help

### [Usage of RDMDB Data Retrieval System](#)

(Data Catalog, Acquisition of Data, User Registration)

### [News on RDMDB](#)

(Last update : Jan. 4, 2017)

### [Technical Manual for RDMDB](#)

(Retrievable data, Data processing and quality control, Maintenance of RDMDB, etc.)

### [List of Retrievable RDMDB Data](#)

# NEAR-GOOS China RTDB

North-East Asian Regional Global Ocean Observing System (NEAR-GOOS), China Real-Time Data Base, run by National Marine Environmental Forecasting Center (NMEFC)

- About NEAR-GOOS >
- First Phase Success >
- Objectives Basis >
- Activities >
- Scientific Basis >
- Principles >
- Data >

## The North-East Asian Regional Global Ocean Observing System

NEAR (North-East Asian Regional)-GOOS is a regional pilot project of GOOS in the North-East Asian Region, implemented by China, Japan, the Republic of Korea and the Russian Federation as one activity of IOC Sub-Commission for the Western Pacific (WESTPAC). NEAR-GOOS was conceived and initiated upon the formal adoption of the NEAR-GOOS Implementation Plan and Operational Manual the Intergovernmental Oceanographic Commission following a recommendation from the WESTPAC Regional Sub commission of IOC earlier in the year. It became one of the first regional pilot projects of GOOS.

The primary aim of NEAR-GOOS in its first phase was to facilitate the sharing of oceanographic data gathered by agencies of the partner countries using the internet to support the daily mapping of

### Goals

The goals of NEAR-GOOS in its second phase is to development of a basic integrated ocean observing and operational forecasting system in the NEAR-GOOS area adhering to the GOOS Principles and building on the data management and exchange mechanisms developed in the first phase through the inclusion of additional parameters, increased coverage in space and time, the generation of a generic suite of data products and adequate quality control and quality assurance procedures.

### Missions

The mission of NEAR-GOOS in its second phase is to develop a comprehensive and sustained ocean observing network in the North-East regional seas and coastal regions, especially focused on observations, monitoring and other activities that cannot be easily implemented by countries acting independently. This network will embrace a wide range of data types and will be accompanied by the participating members and as a contribution to the GOOS and other global observing initiatives.

### Area of NEAR-GOOS

The area of NEAR-GOOS is the North-East Asian Region, which is a part of the WESTPAC region, bounded by China, Republic of Korea, Democratic People's Republic of Korea and the Russian Federation along its western boundary, and by the Russian Federation and Japan along the eastern boundary.

NEAR-GOOS Members Countries:



# One goal of this session

## Extension of GEOSS-AP Ocean Data Networking System

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