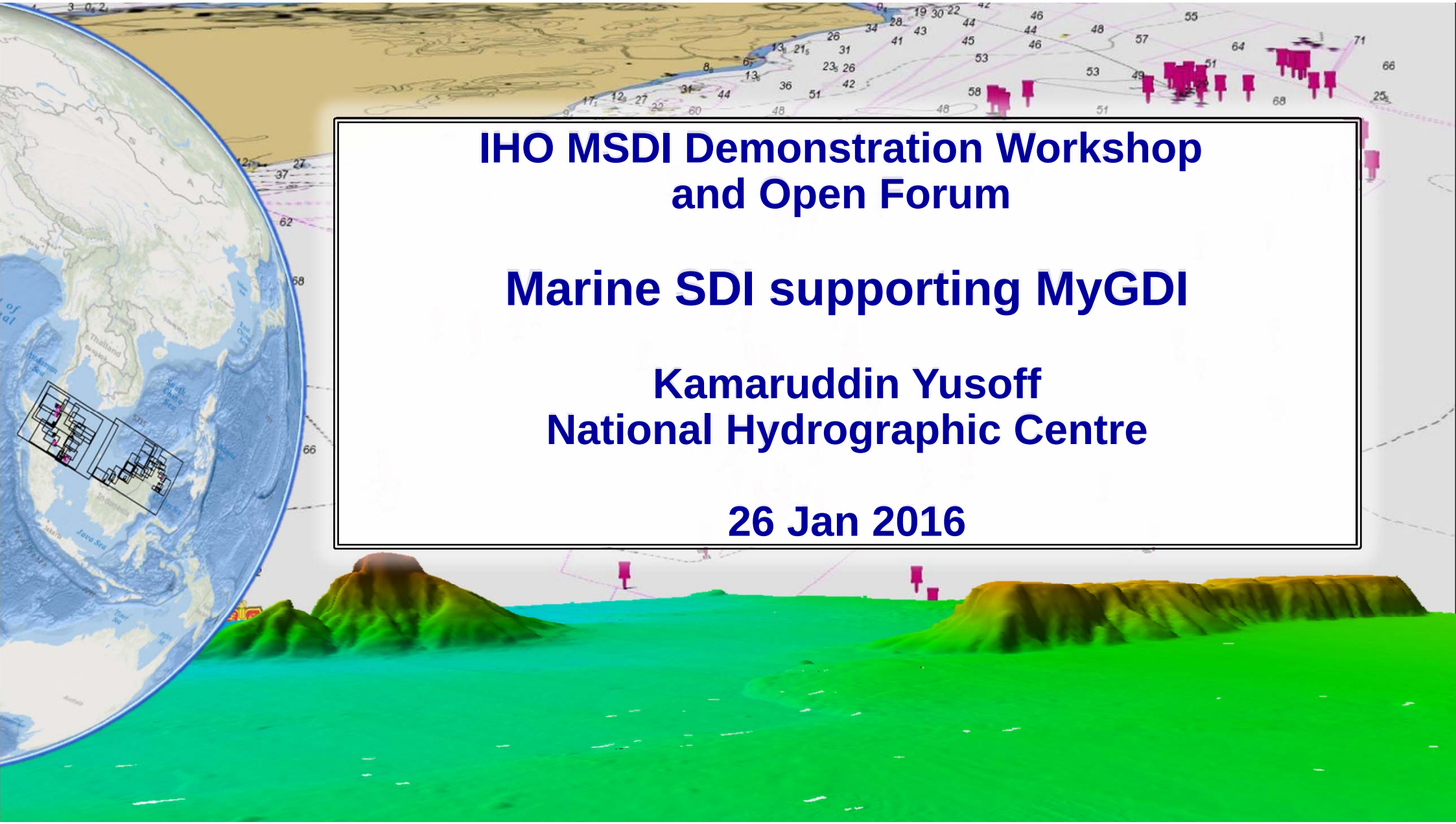


IHO MSDI Demonstration Workshop and Open Forum

Marine SDI supporting MyGDI

Kamaruddin Yusoff
National Hydrographic Centre

26 Jan 2016

(Clockwise from top: Mr Haji Julaihi bin Haji Lamat, Mr Park Bong Seok, Lt Kamonchai Pragobjinda, Lt Kamaruddin bin Yusoff, Mr Lim Kar Wooi, Mr Indragiri Yani Wardhono, Mr Chen Lei, Mr Muhammad Akbar bin Paimin, Mr Haji Asrahwi bin Haji Ahmad Bujang, Ms Kermaine Sia, Mr Wu Lingzhi, Ms Nguyen Thi Quoc Anh, Mr Wang Yukai, Mr Lee Brinton, Dr Mike Osborne, Mr Jamie Chen, Mr John Pepper, Mr Yosuke Niimura, Mr Jonathan Pason and Mr Lee Ho Jeong.)

EAHC Capacity Building Programme - MSDI and Database Management

Bangkok, Thailand (20 - 24 Jun 2011)
- Hosted by the Hydrographic Department of the Royal Thai Navy (NDRTN)
- 20 students from China, Indonesia, Japan, Malaysia, Philippines, Korea, Singapore, Vietnam and Thailand

Singapore (7 – 11 Oct 2013)
- Hosted by the Maritime and Port Authority of Singapore (MPA)
- 16 students from China, Indonesia, Japan, Malaysia, Republic of Korea, Philippines, Singapore and Thailand. including participants from Brunei Darussalam and Vietnam

Incheon, Republic of Korea (5-9 November 2012)
- Hosted by the Korea Hydrographic and Oceanographic Administration (KHOA)
- 15 students from Hong Kong, Indonesia, Japan, Korea, Malaysia, Philippines and Thailand

Shanghai, China (18 – 22 Jan 2016)
- Hosted by the China Maritime Safety Administration (MSA)
- 21 students from China, Indonesia, Japan, Malaysia, Republic of Korea, Philippines, Singapore and Thailand. including participants from Vietnam

72 person

Malaysia Geospatial Data Infrastructure (MyGDI)

- MyGDI as a National Spatial Data Infrastructure (NSDI)
- Malaysian Center for Geospatial Data Infrastructure(MaCGDI) is a center under Ministry of Natural Resources and Environment (NRE)
- MaCGDI was formed in 2002 to promote the development and implementation of MyGDI
- MaCGDI plays crucial roles to spearhead the geospatial industry in Malaysia.

WHY MyGDI ?

1. Increase efficiency, reduce duplication of effort and support decision making of government and business
2. Recognition of Geospatial Information as “Infrastructure”
3. Fundamental datasets underpin Business Information

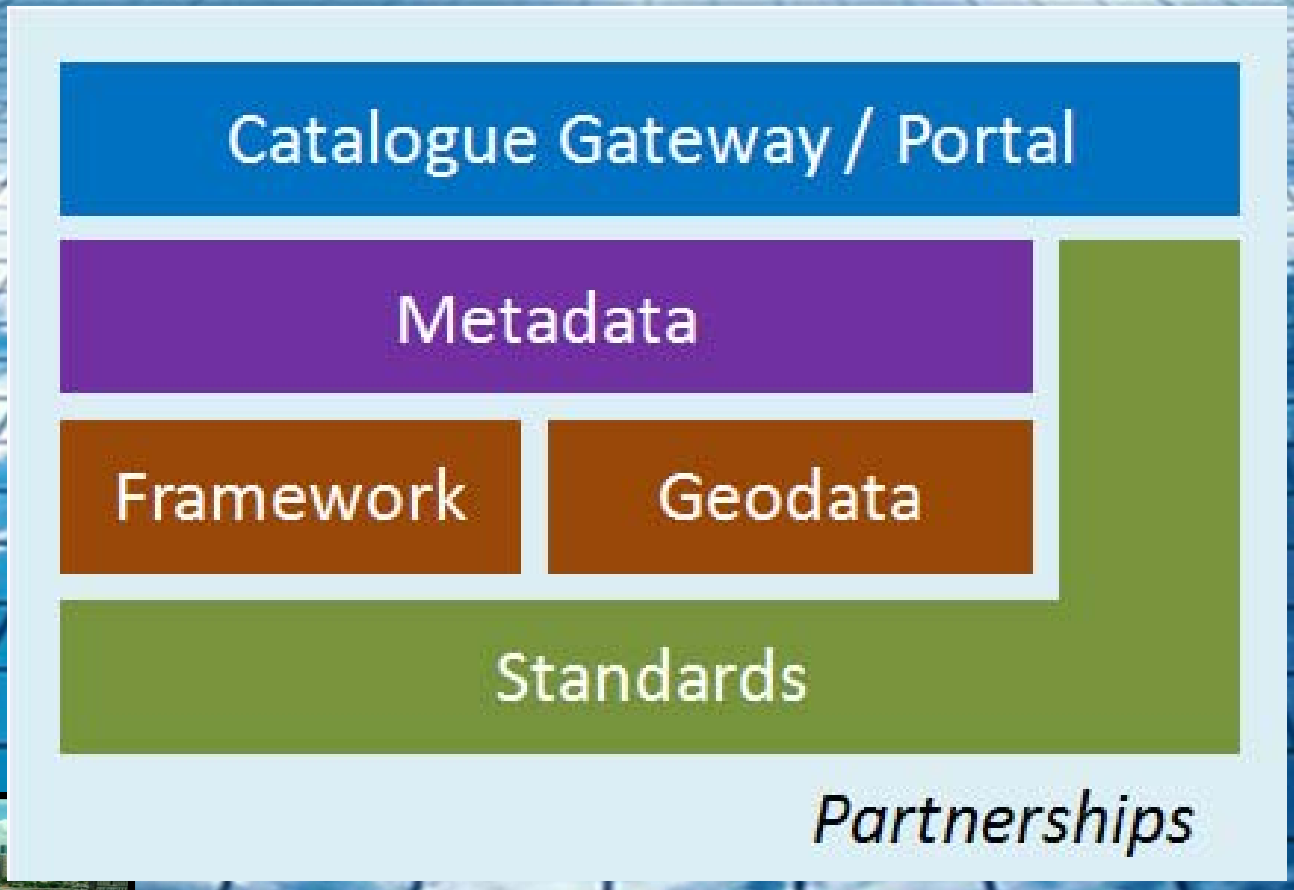
MyGDI Objectives

- To provide mechanism/infrastructure to facilitate the utilisation and sharing of geospatial data among the agencies that use and supply the data;
- To assist in the sharing of geospatial information between agencies by providing the latest state-of-the-art information technology hence allowing the dissemination of current and accurate information;
- To prevent redundancies of effort in collecting, processing, maintaining, preparing and distributing of geospatial information among related agencies;
- To encourage wider use of geospatial data at the state and national levels;
- To stimulate and enhancing the awareness about the value of geospatial data and the relevant technology; and
- To contribute towards strenghtening the development of national geospatial data through collaboration.

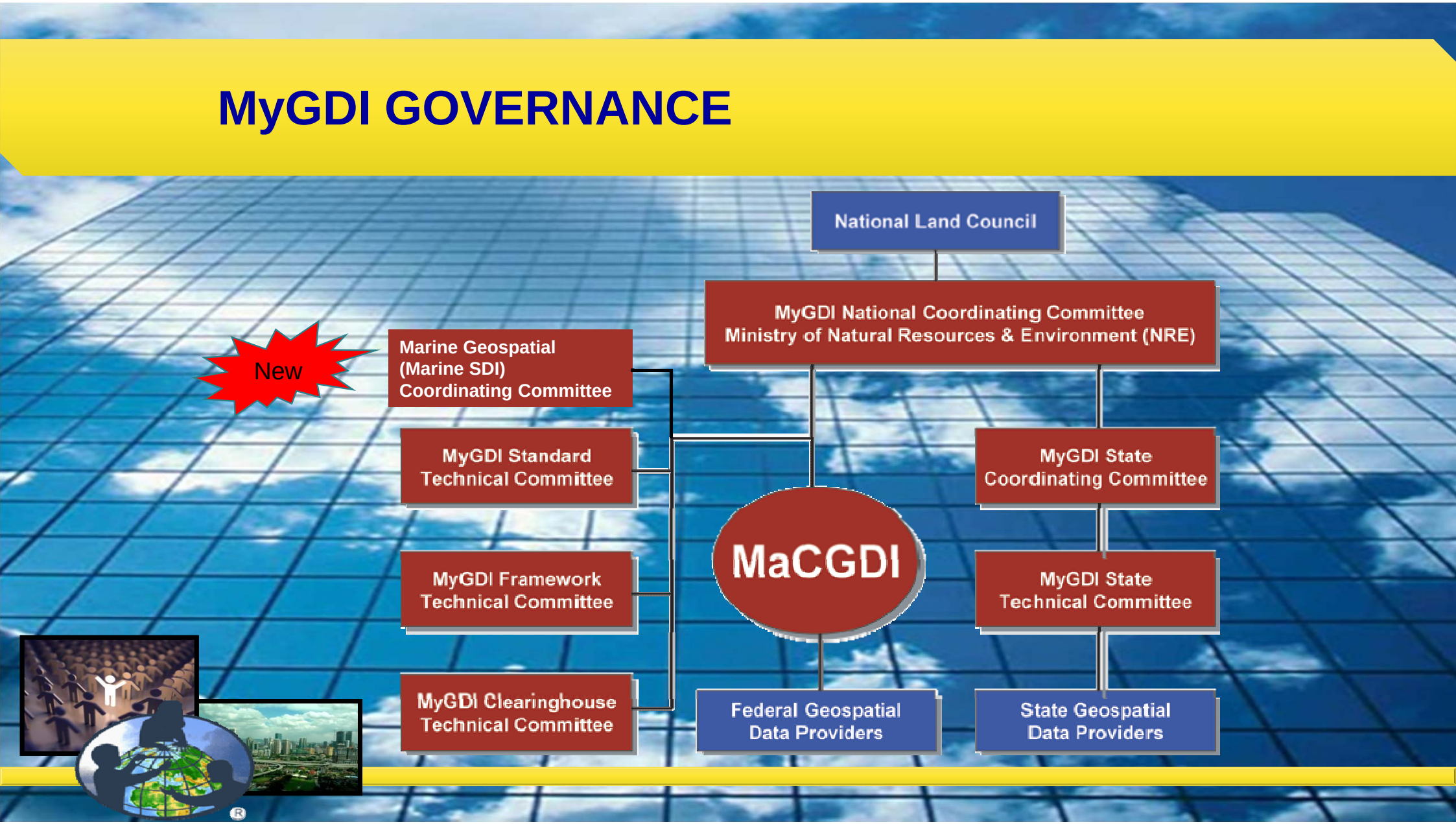
MyGDI Benefits

- Avoiding duplication of efforts in the collection and production of **geospatial data**;
- Providing consistency in the usage of geospatial data through formulation of **policies** and **standards**;
- Enhancing the levels of utilization and awareness of geospatial data besides increasing the varieties of value added products;
- Expediting the implementation of electronic government
- Propagating the local geospatial data industry; and
- Strengthening institutional capacity to produce knowledge workers through human resource development programme.

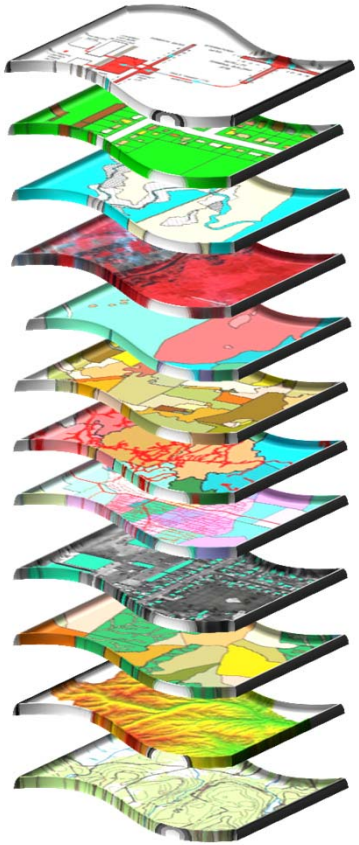
MyGDI COMPONENTS



MyGDI GOVERNANCE

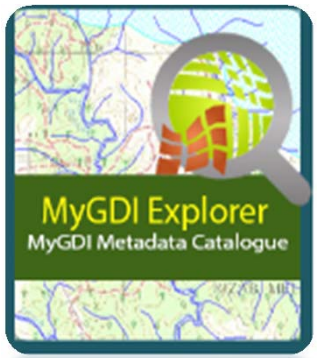


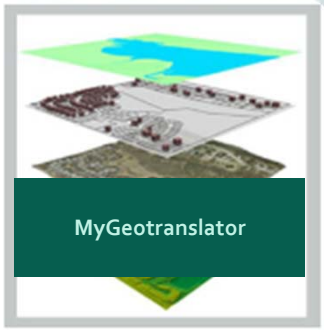
Framework Data Categories

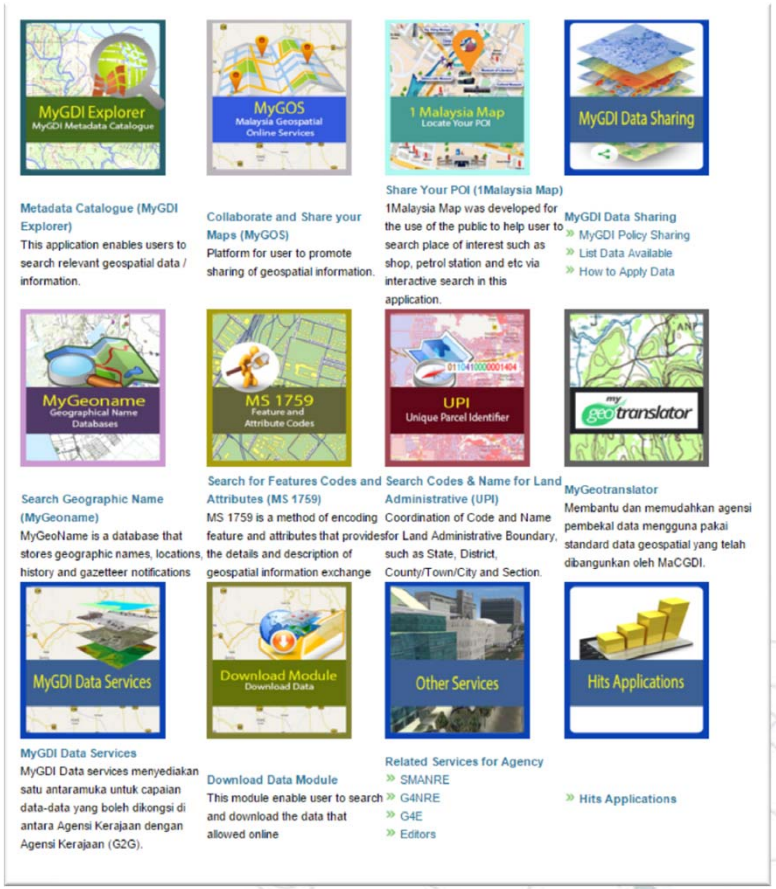


CATEGORIES	LEAD AGENCIES
Aeronautical	DCA
Built Environment	JUPEM
Demarcation	JUPEM
Geology	JMG
Hydrography	NHC
Hypsography	JUPEM
Soil	DOA
Transportation	JKR
Utility	JUPEM
Vegetation	DOA
Special Use	JUPEM
General	JUPEM

MyGDI Applications







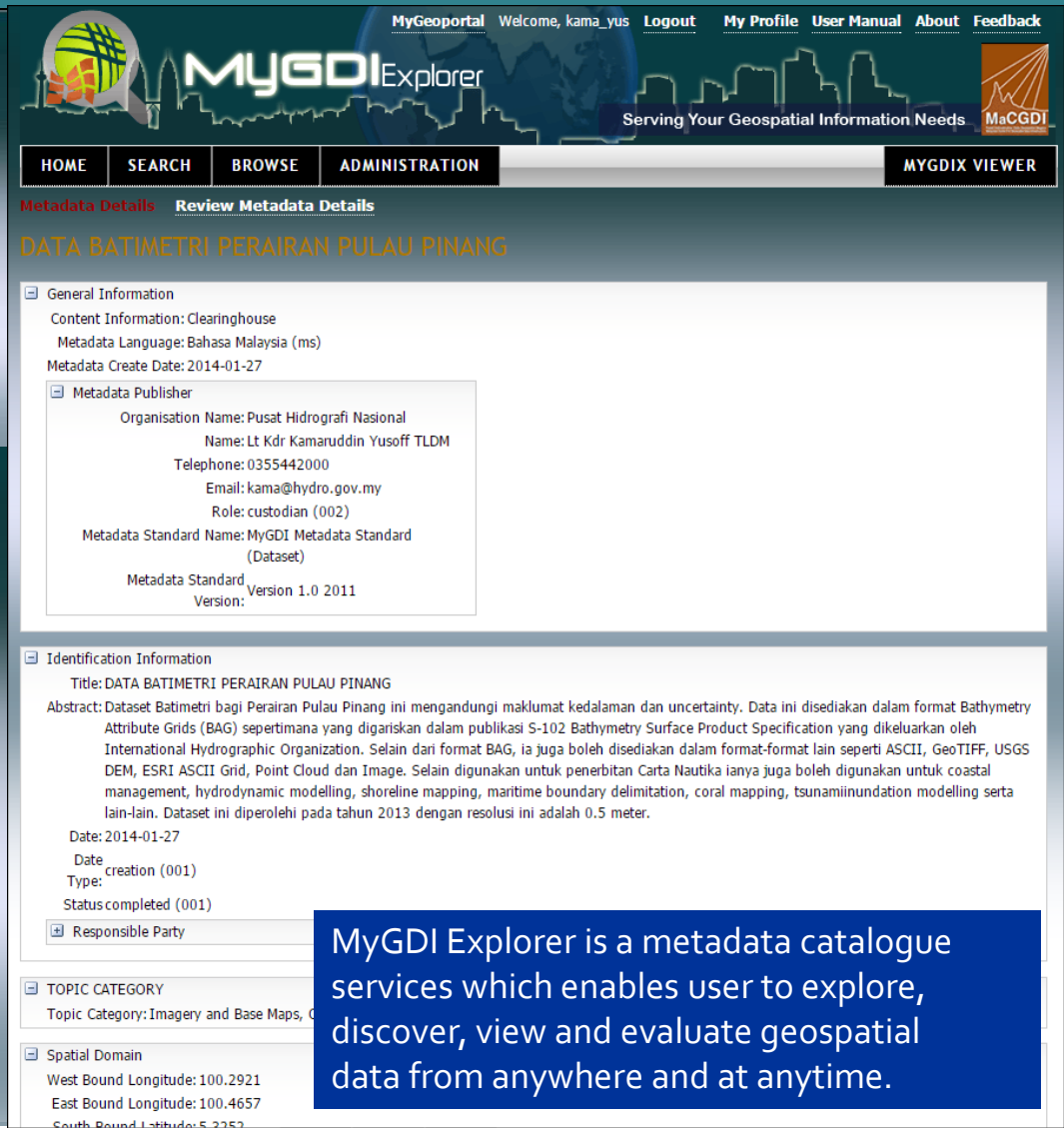
http://www.mygeoportal.gov.my/data-services

MyGEOPORTAL

- Malaysia Geoportal is the visible front-end to MyGDI, the gateways through which users access the geospatial information services
- Access and distribution of geospatial information is at the heart of MyGDI project.
- The success of MyGDI Data Explorer is the ease of use which it allows users to locate and access geospatial resources.

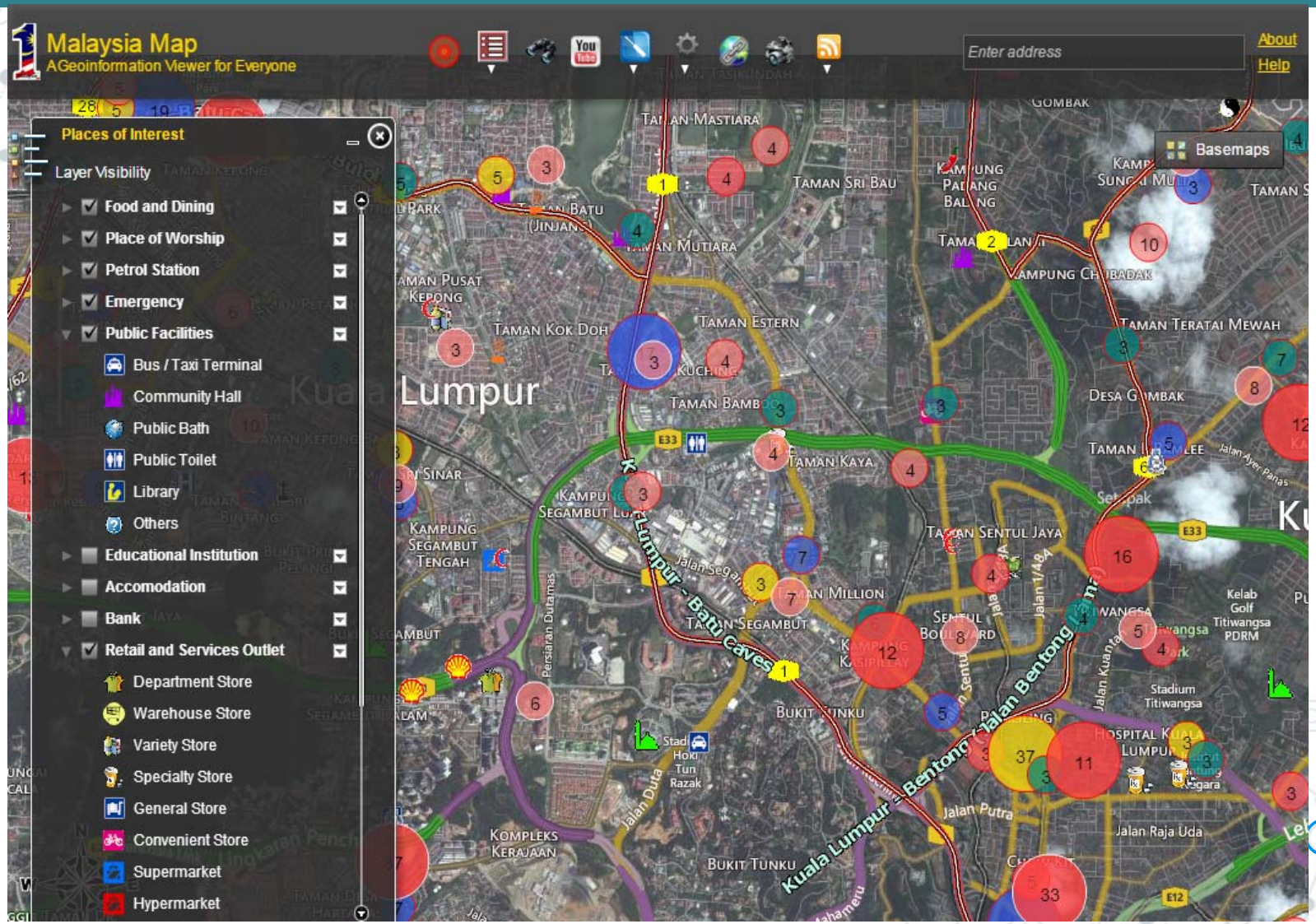
This portal allows Users to explore, view and access the implementation of MyGDI, initiatives and its related applications.

MyGDI EXPLORER



MyGDI Explorer is a metadata catalogue services which enables user to explore, discover, view and evaluate geospatial data from anywhere and at anytime.

GIS4CITIZEN - 1MALAYSIA MAP

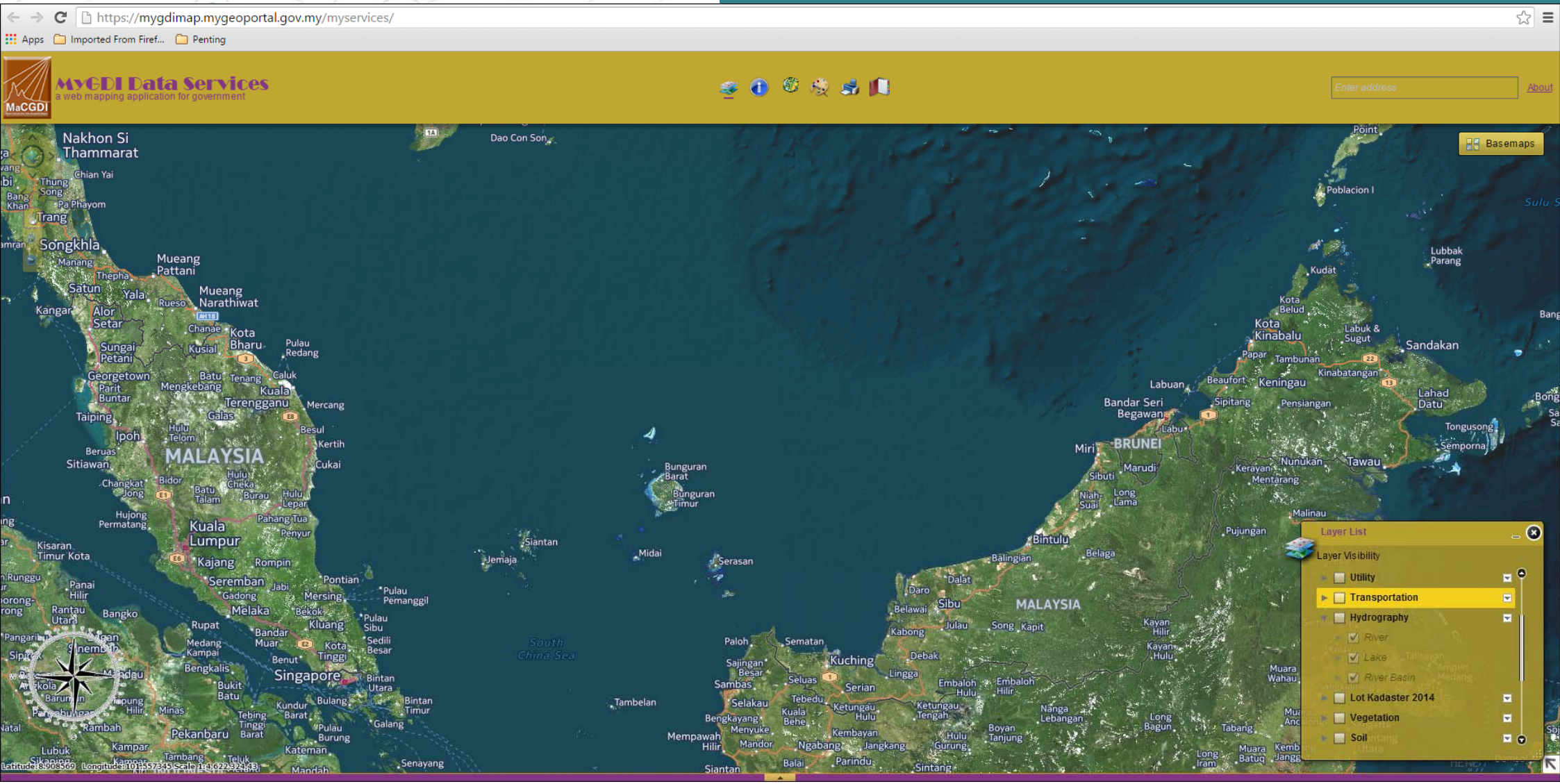


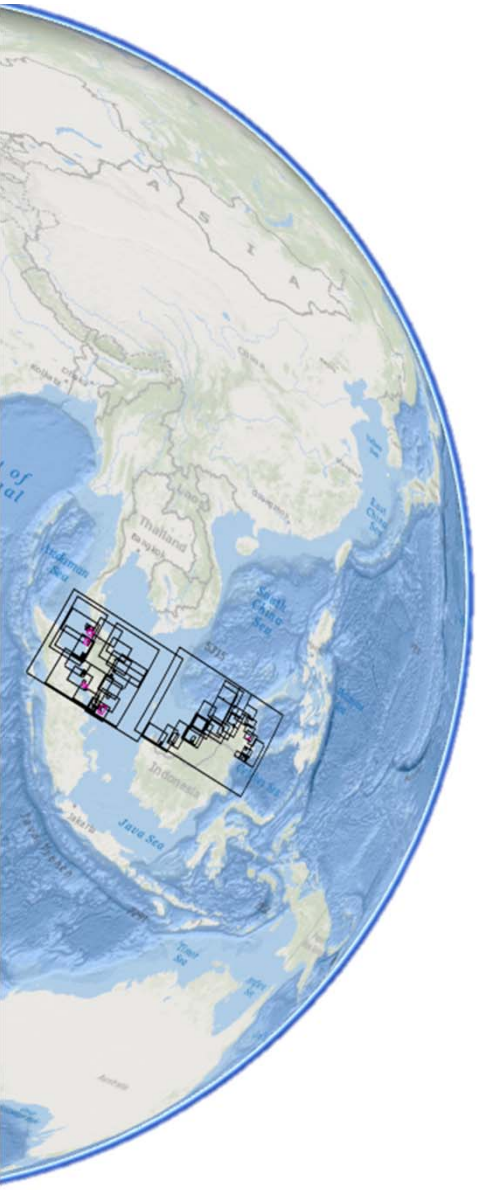
Malaysia Geospatial Online Services (MyGOS)

Malaysia Geospatial Online Services (MyGOS) A platform for user to promote sharing of geospatial information. It enables you to turn your data into web-enabled services that your whole organization members can use.

- **Online mapping platform**
- **Content management platform**
- **Collaborative and sharing platform**

MyGDI Data Services



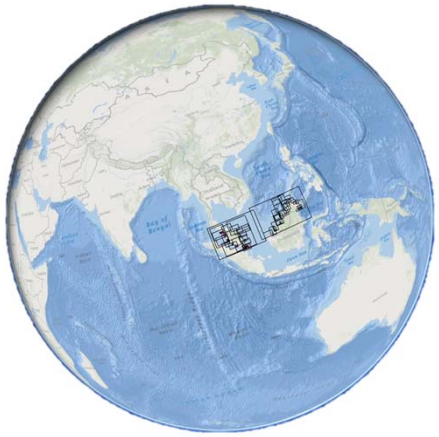


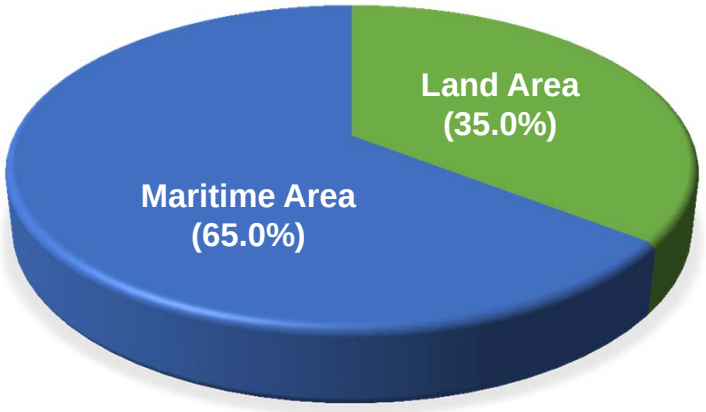
What Malaysia is the maritime nations?

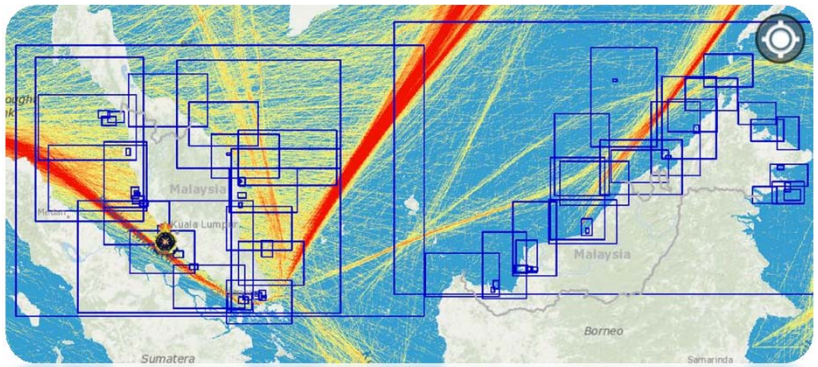
`The Making Of Malaysia As A Maritime Nation' is appropriate and relevant as it highlights Malaysia's aspiration to be a maritime nation in the true sense…..

Because of our history and the close proximity of many Malaysians to the sea we are inclined to regard Malaysia as a maritime nation. We are situated on the trade routes between India and China, between Europe and the East and naturally served as a port of call between monsoons for supplies and crew for all ships plying this route.

Tun Dr. Mahathir, 1997 (Malaysia‘s First International Maritime Conference**)**

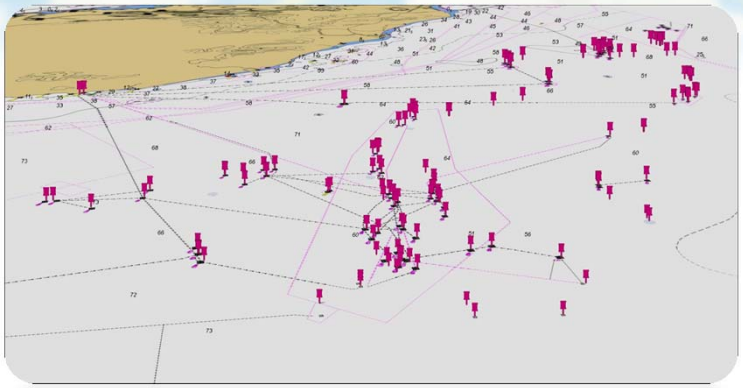






Internal Waters	94, 132 km square
Territorial Waters	65, 035 km square
EEZ	379, 820 km square
Continental Shelf	439, 373 km square

Total	598, 540 km square



Malaysia as a Maritime Country → Marine SDI

Marine Governance

PRIME MINISTER DEPT
- National Security Council
- Economic Planning Unit
- Maritime Enforcement Agency

MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION
- National Oceanography Directorate
- Meteorological Dept
- Remote Sensing Agency

MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT
- Centre for Geospatial Data Infrastructure
- Dept of Environment
- Dept of Marine Park

MINISTRY OF TRANSPORT
- Marine Dept
- Port Authority
- Maritime Institute of Malaysia (MIMA)

MINISTRY OF AGRICULTURE AND AGRO-BASED INDUSTRY
- Dept of Fisheries
- Fisheries Development Authority

MINISTRY OF DEFENCE
- Royal Malaysian Navy
- National Hydrographic Centre

MINISTRY OF FOREIGN AFFAIRS
- Multilateral Economic and Environment Division

MINISTRY OF HOUSING AND LOCAL GOVERNMENT
- Town and Country Planning Dept

MINISTRY OF INFORMATION, COMMUNICATION AND CULTURE
- Department of Natural Heritage

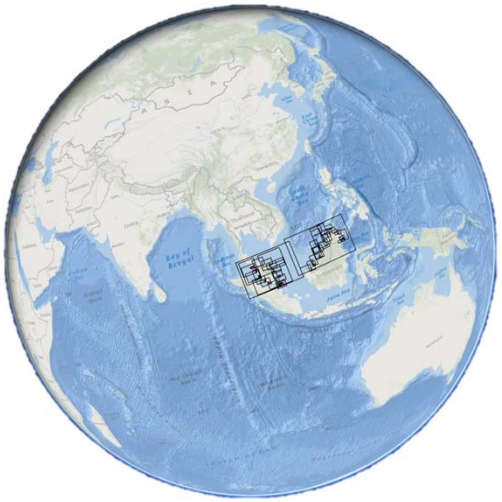
MINISTRY OF RURAL AND REGIONAL DEVELOPMENT
- Sustainable Islands and Island Communities

MINISTRY OF TOURISM
- Coastal and Marine Tourism

MINISTRY OF ENERGY, GREEN TECHNOLOGY AND WATER
- Ocean Renewable Energy

Situational Analysis

Marine Data Management-Knowledge Management



Marine is Complex

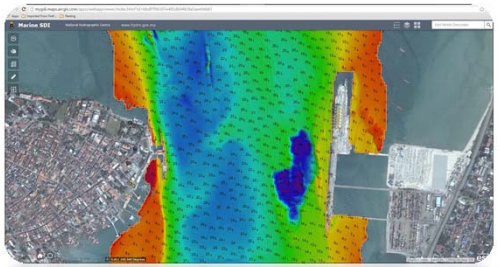
Different jurisdictions under various agencies/ministries

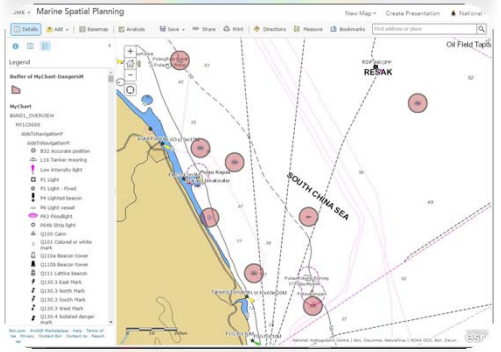
- Heterogeneous
- Distributed
- Autonomous

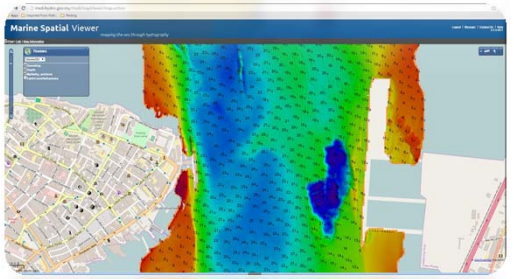
Need mechanism for sharing

Seamless Solution

Marine SDI



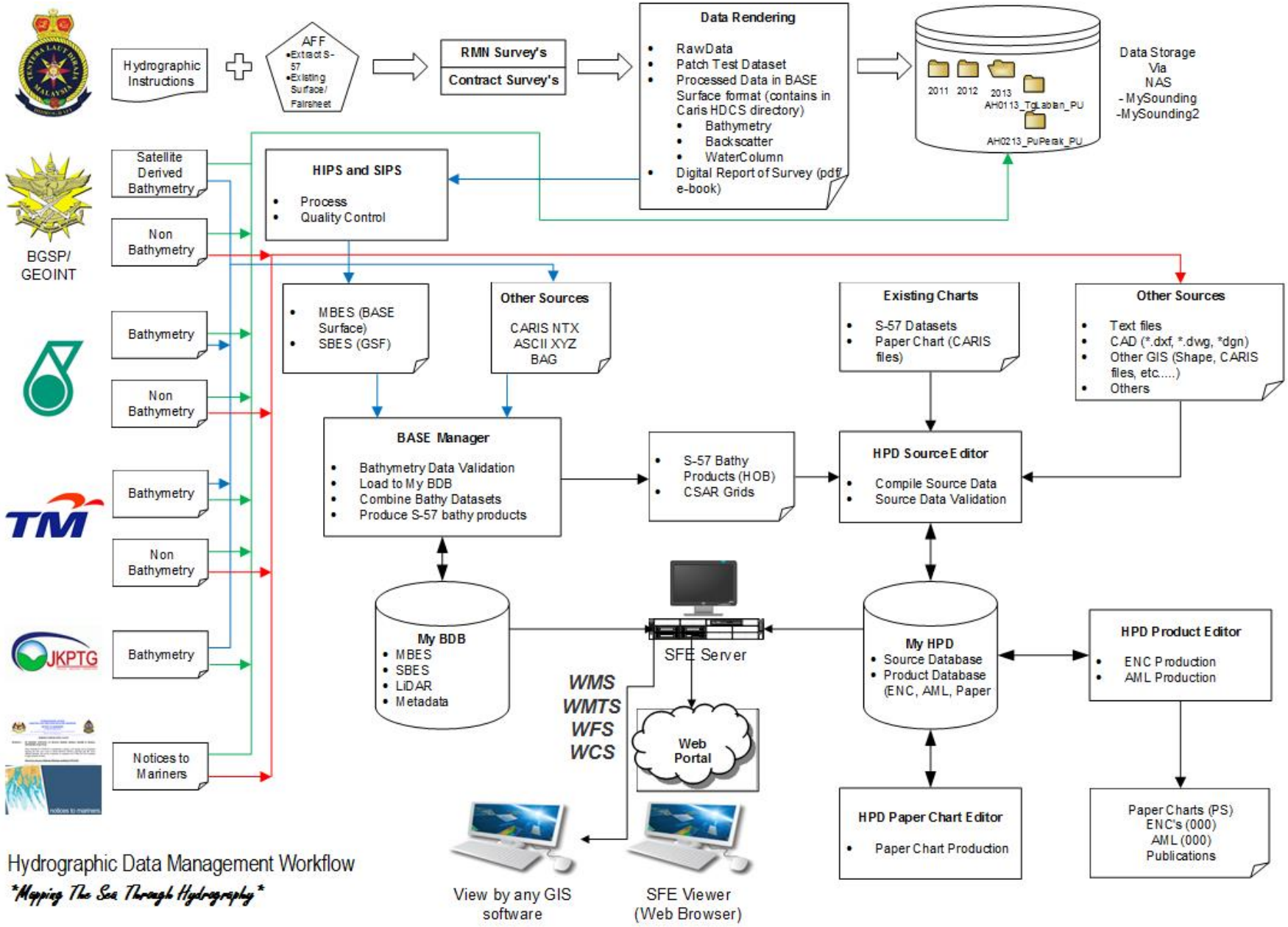




National Hydrographic Committee

- The Malaysian National Hydrographic Committee was established on 11 September 2002 by the Malaysian Cabinet
- Director General of the National Hydrographic Centre Malaysia, Chairs.
- Members consisting of representatives from the federal agencies, higher institution

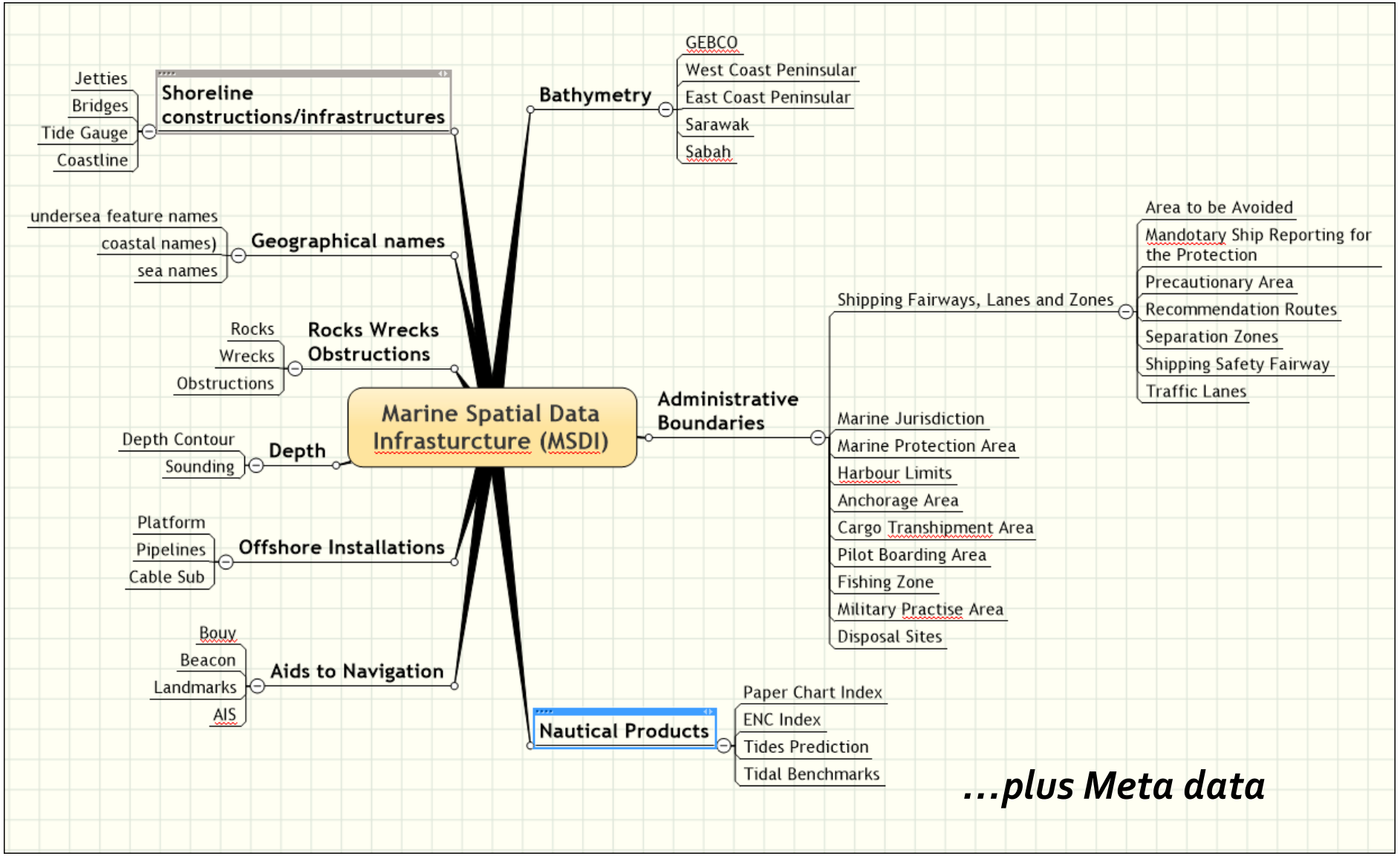
Hydrographic Data Management Workflow



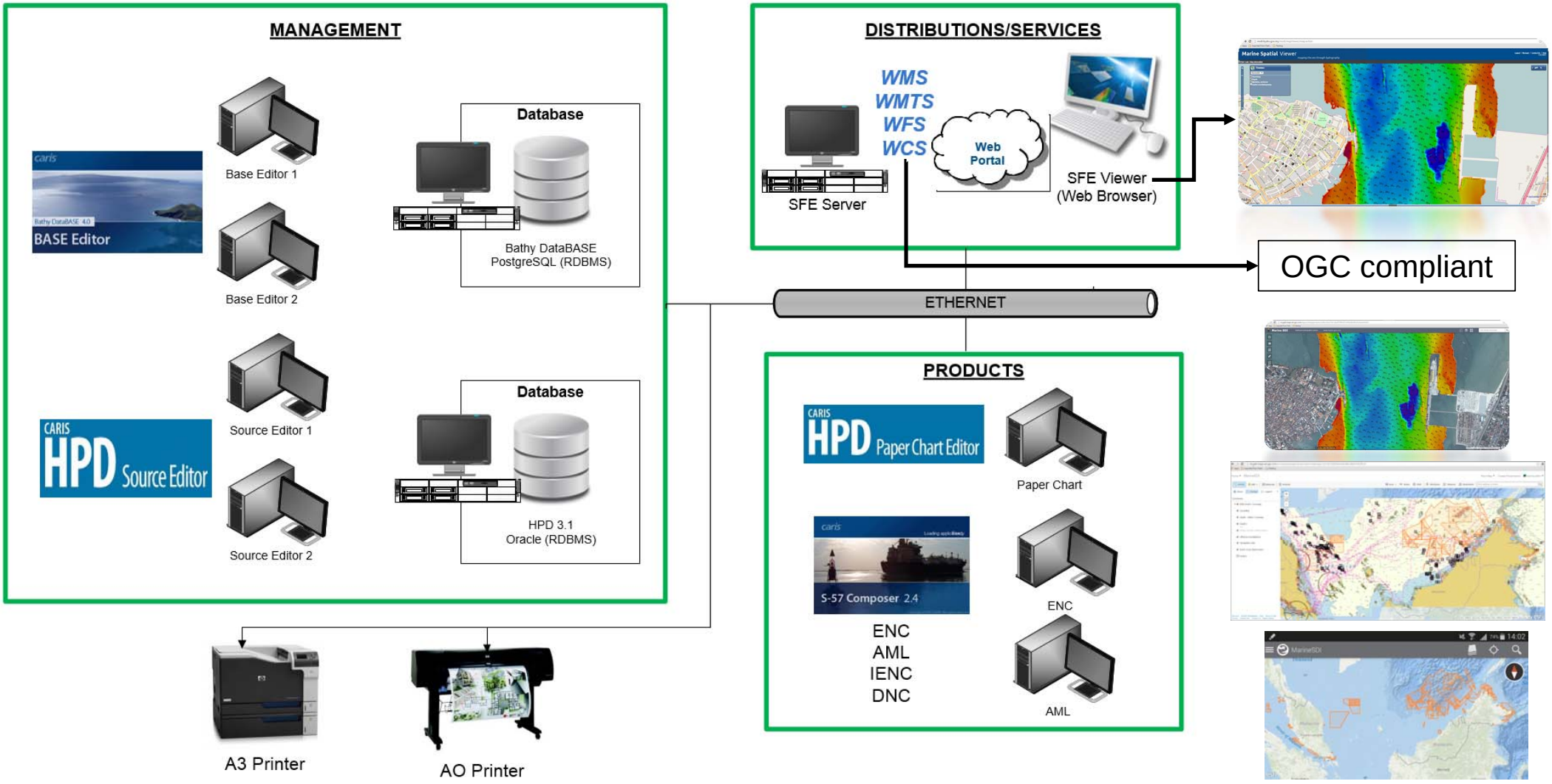
Hydrographic Data Management Workflow

Mapping The Sea Through Hydrography

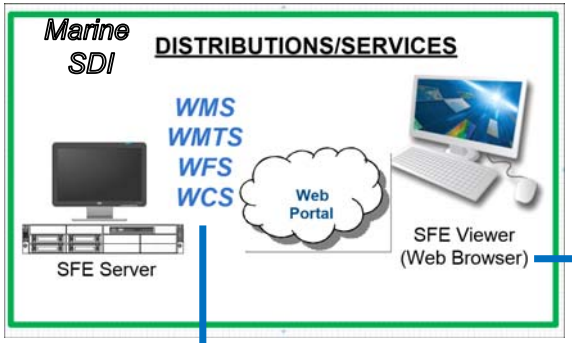
Geographic Content (Data)

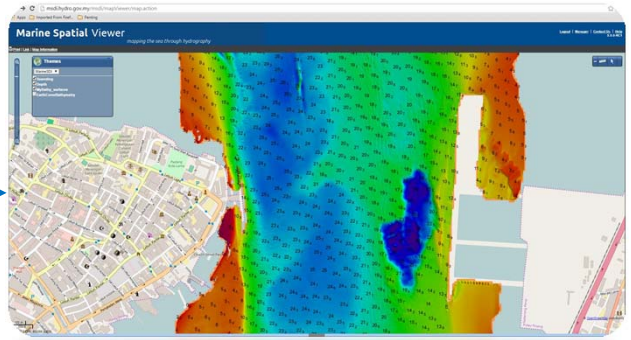


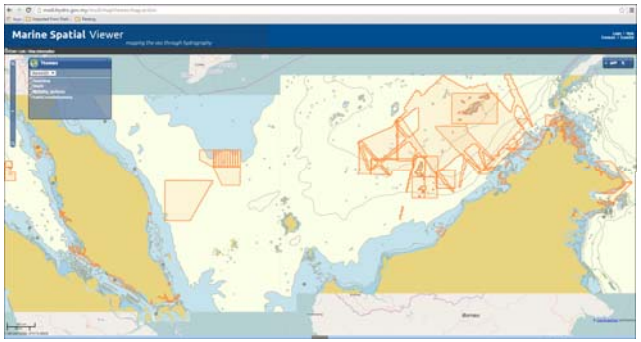
My Bathy Database (MyBDB) & My Hydrographic Production Database (MyHPD)



WEB - Services

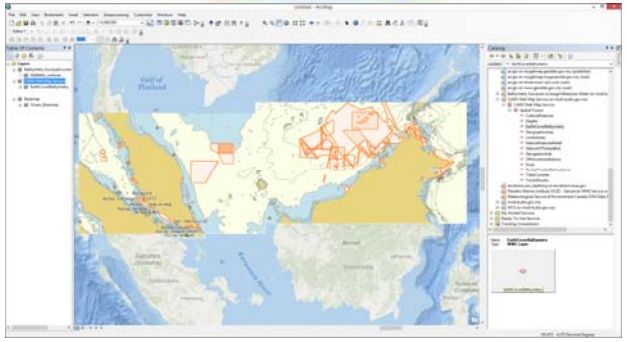




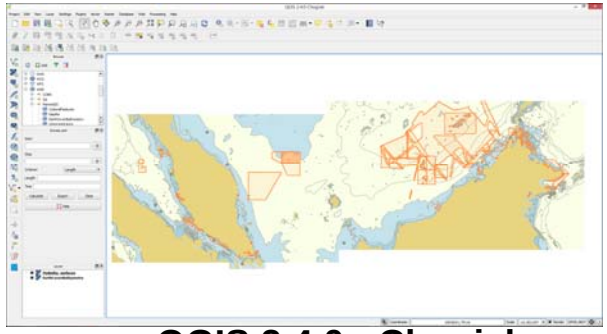


Caris Spatial Fusion Enterprise 5.9 Viewer

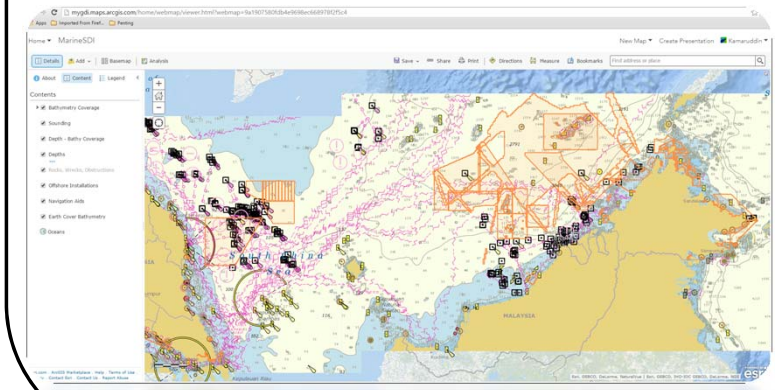
OGC compliant



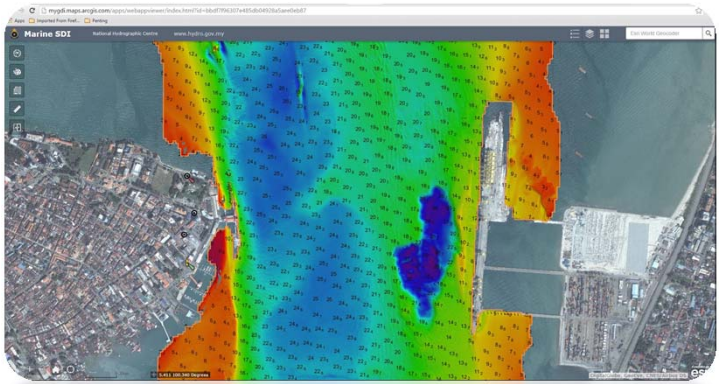
ArcGIS 10.2 for Desktop



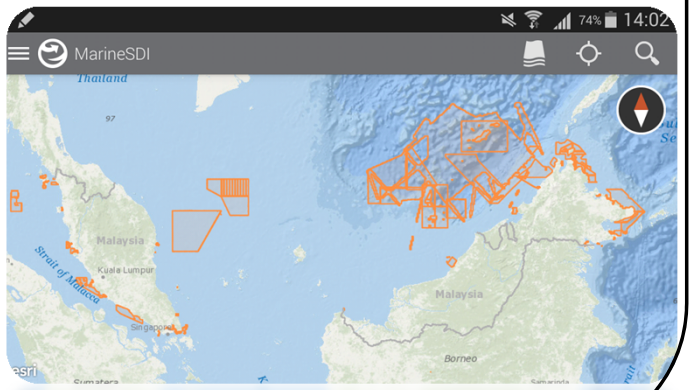
QGIS 2.4.0 - Chugiak



ArcGIS Online –Web Map



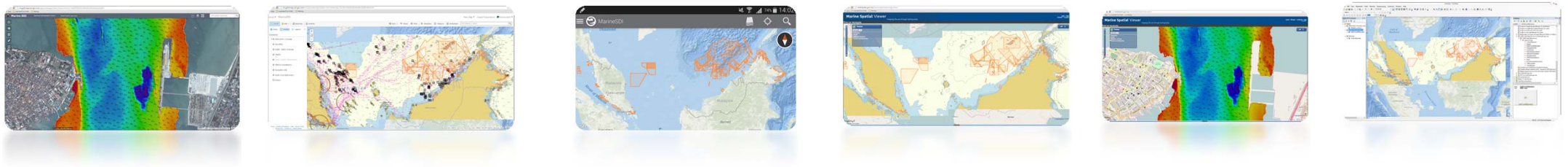
Web App

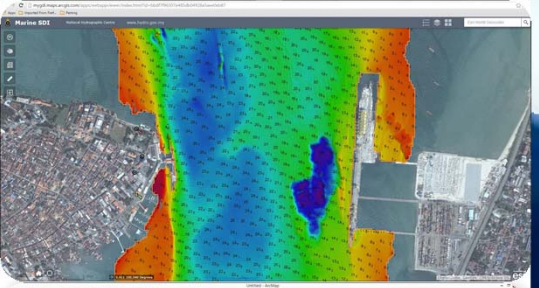


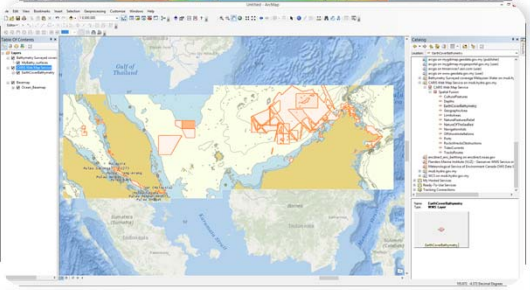
Explorer for Android

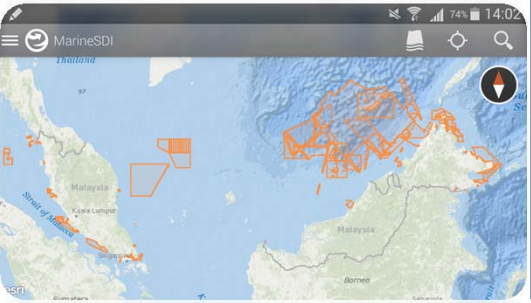
CONCLUSION

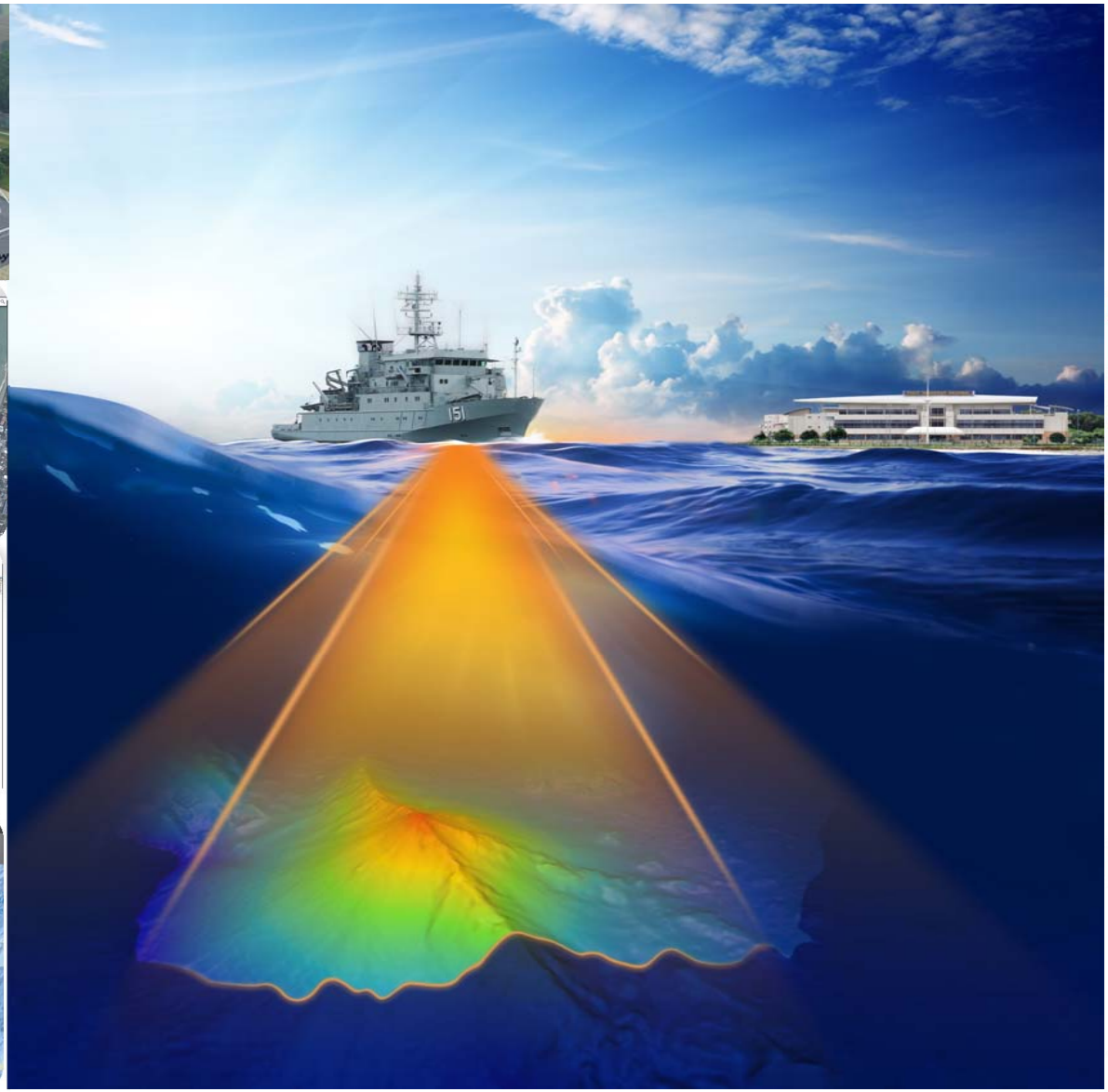
- National Hydrograhic Centre – the absolute agency to develop Marine SDI
  - Hydrography data - provides the fundamental backdrop
  - The IHO standards are aligned with ISO and OGC standards
  - ICT ready
  - Good governance through National Hydrographic Committee
- By end 2017 – Marine SDI ready!

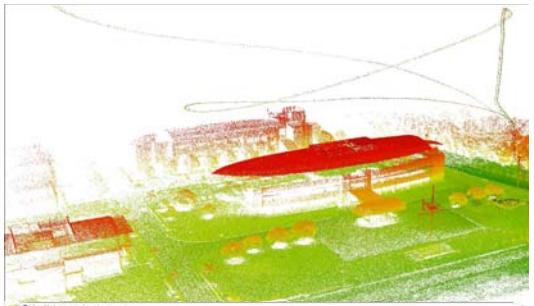


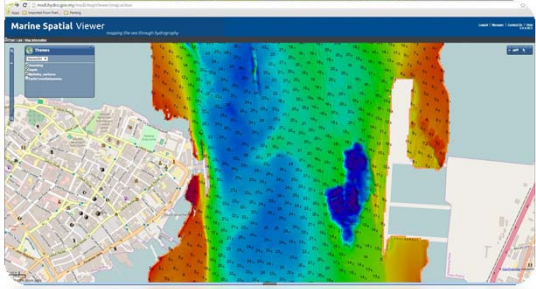


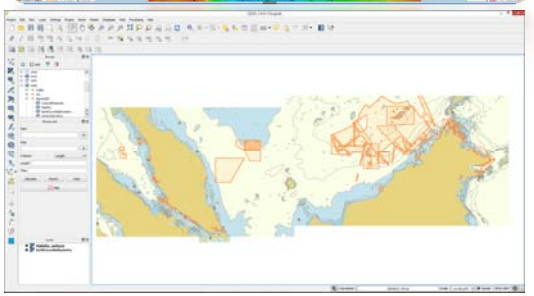


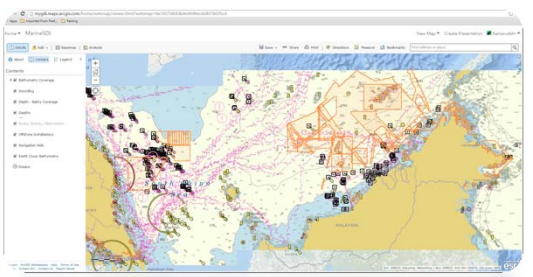












Thank you for your attention