



International Hydrographic Organization

## IHO MSDI Forum

30 January 2013

The IHO perspective - Is there a new role for  
national HO and IHO?

Michel Huet

IHB

## XVIIIth IHC, Monaco, Apr. 2012

- “The main aim for the next Work Programme period is to improve the quality and utility of MSDI-related guidance for the benefit of Member States.” (HSSC Chair, about MSDIWG)
- “Instead of simply providing support for mariners, it now also provided bathymetric data for non-navigational purposes.” (Norway Hydrographer, about NHS)
- “At present, that Committee was focussing only on terrestrial matters, but the Directing Committee had successfully lobbied for the maritime domain to be included in the GGIM terms of reference, so that there would be an opportunity in future for the Committee to discuss MSDI issues.” (R. Ward, about UN-GGIM)
- “Although IHO focused on the use of data for safe navigation, hydrography itself also had economic and environmental aspects.” (UK Hydrographer)

...



# XVIIIth IHC, Monaco, Apr. 2012

- “MSDI is a very powerful tool for both Member States and IHO, and work on it could benefit other IHO Working Groups and programmes.” (French Hydrographer)
- “IHO would continue to have an important role to play with regard to MSDI in future.... MSDI should be a regular agenda item, in order to raise its profile and encourage Member States and Regional Hydrographic Commissions to step up their activities in that area... He urged Member States and the HSSC to focus more on MSDI. (A. Maratos)”
- “... a key message of the President of the ICA opening address had been that Hydrographic Offices must be made aware of the importance of MSDI. The benefits of MSDI WG’s work might not yet be apparent, but it was preparing the way for meeting future needs. (Singapore Hydrographer)”



# External Pressure - Worldwide: UN-GGIM

(GGIM: Global Spatial Information Management <http://ggim.un.org/>)

- “The aim of the UN-GGIM is to advance international cooperation in geospatial information management by making accurate and authoritative geospatial information readily available, particularly in support of advancing sustainable development.”
- “The work of the UN-GGIM is of relevance to the IHO, particularly in relation to the continuing development of spatial data infrastructures around the world, and the role that IHO Member States can play in the provision of fundamental data and information covering the maritime domain.”
- “As a result of input from the IHO at GGIM-2, the status of charting and surveying will now be added to the Committee’s on-going study of the status of mapping in the world.”



R. Ward,  
2<sup>nd</sup> UN-GGIM  
Meeting, Aug. 2012

*Ref: IHO circular letters 66/2011 and 82 & 88/2012*





# External Pressure – Regional: EU Projects

## (EU: European Union <http://europa.eu>)

- Integrated Maritime Policy <http://ec.europa.eu/maritimeaffairs/policy/> :  
to provide a more coherent approach to maritime issues, with increased coordination between different policy areas.
  - Issues that do not fall under a single sector-based policy e.g. "blue growth"
  - Issues that require the coordination of different sectors and actors e.g. marine knowledge.
- EMODnet: to create pilots to migrate fragmented and inaccessible marine data into interoperable, continuous and publicly available data streams for complete maritime basins. The results will help to define processes, best technology and approximate costs of a final operational European Marine Observation and Data Network.
  - EMODnet – Hydrography <http://www.emodnet-hydrography.eu/> : will provide hydrographic data collated for a number of sea regions in Europe, through GIS layers (water depths, coastlines, etc.)



# External Pressure – Regional: EU Projects

(EU: European Union <http://europa.eu>)

- INSPIRE - Infrastructure for Spatial Information in the European Community <http://inspire.jrc.ec.europa.eu/>: EU **directive** aiming to create a European Union (EU) spatial data infrastructure. This will enable the sharing of environmental spatial information among public sector organisations and better facilitate public access to spatial information across Europe. Full implementation required by 2019.
- BLAST - Bringing Land and Sea Together <http://www.blast-project.eu/> : Regional project for better integration of information across the coastal margin in the North Sea region. Started in 2009 and completed in 2012. Several European HOs participated.



# External Pressure – National Projects

## *Examples*

- ASDI - Australian Spatial Data Infrastructure:  
[www.ga.gov.au/nmd/asdi/](http://www.ga.gov.au/nmd/asdi/)
- GeoConnections, Canada:  
[www.geoconnections.org/Welcome.do](http://www.geoconnections.org/Welcome.do)
- Norway Digital - the national geographical infrastructure:  
[www.statkart.no/Norge\\_digitalt/Engelsk/About\\_Norway\\_Digital/](http://www.statkart.no/Norge_digitalt/Engelsk/About_Norway_Digital/)
- IDDE - Spatial Data Infrastructure of Spain: [www.idee.es](http://www.idee.es)
- MEDIN - Marine Environmental Data and Information Network, UK [www.oceannet.org/mdip/index.html](http://www.oceannet.org/mdip/index.html)
- [Etc...](#)



# Hydrography - underpinning the Blue Economy

- Theme of the 2013 World Hydrographic Day
- Blue Economy: the sum of all economic activity associated with the oceans, seas, harbours, ports, and coastal zones ([www.themaritimealliance.org](http://www.themaritimealliance.org))
- Core activities: maritime trade, fishing, passenger ships
- Blue Economy also includes: aquaculture, boats & shipbuilding, cables & pipelines, defence & security, marine recreation, ocean energy & minerals, ocean science and observation, ports operations, weather and climate science, ...
- The role of the IHO, as the competent international authority for hydrography, nautical charting and associated matters, is to foster the worldwide provision of adequate and timely hydrographic data, products and services in support of the Blue Economy.





# e-Navigation and Marine Spatial Planning

Implementation of the following concepts rely on MSDI:

- E-Navigation: IMO concept defined as *“The harmonized collection, integration, exchange, presentation and analysis of marine information on-board and ashore by electronic means to enhance berth to berth navigation and related services for safety and security at sea and protection of the marine environment.”*
- Marine Spatial Planning: UNESCO-IOC concept defined as *“a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process.”*

→ Need for IHO and HOs to “think outside the box”



Easy access to high precision /  
density bathymetry is a joint  
requirement emerging for both  
navigational and non-navigational  
applications



# MSDI in IHO Work Programme 2013

- 1.1.4: Cooperate with European Union Initiatives
- 1.1.10: Cooperate with ICA, e.g. ICA Commission on Geoinformation Infrastructures and Standards
- 1.1.18.2: Cooperate with UN-GGIM
- 1.2.2: Develop an IHO GIS and web server / web mapping services...
- 2.1.1: Conduct annual meeting of HSSC
- 2.2.2.2; 2.4.2.3; 2.5.2.2: Maintain and extend S-100 IHO Universal Hydrographic Data Model
- 2.2.4: Maintain and extend S-100 registry
- 2.9.1: Conduct MSDIWG meetings
- 2.9.2; 2.9.2.1: Maintain C-17
- 3.3.1.4: Contribute to the development of MSDI (Capacity Building)



# MSDI in IHO Work Programme 2013

## *Current Status and Perspectives*

- 1.1.4: Cooperate with European Union Initiatives
  - IHO-EU Memorandum of Understanding signed in 2012 (IHC-XVIII)
  - IHB: contact point for EU, with assistance of French HO (SHOM)
  - IHO-EU meeting in Brussels, Oct. 2012
  - Next meeting alongside World Hydrography Day 2013 (June 2013)
  - Ref: IHO CLs 87 & 97/2012
- 1.1.10: Cooperate with ICA, e.g. ICA Commission on Geoinformation Infrastructures and Standards
  - IHO Participation in ICC 2013 and Map Exhibition, Dresden, Aug. 2013
  - IHB attendance to 2013 meeting of ICA Commission on Geoinformation Infrastructures and Standards, Dresden, Aug. 2013
  - Ref: IHO CL 106/2012





# MSDI in IHO Work Programme 2013

## *Current Status and Perspectives*

- 1.1.18.2: Cooperate with UN-GGIM
  - IHB attendance to 2<sup>nd</sup> Committee of Experts of UN-GGIM meeting, New York, Aug. 2012
  - IHB attendance to 2<sup>nd</sup> High Level Forum of UN-GGIM, Doha, Feb. 2013
  - Ref: IHO CLs 66/2011 and 82 & 88/2012
- 1.2.2: Develop an IHO GIS and web server / web mapping services...
  - In progress at the IHB
  - Completion of GIS & database for 1) IHO Member States and 2) Antarctica, planned for mid-2013
  - Ref: IHO CL 32/2012
- 2.1.1: Conduct annual meeting of HSSC
  - 4<sup>th</sup> HSSC meeting in Taunton, Sep. 2012
  - 5<sup>th</sup> HSSC meeting planned in Shanghai, Nov. 2013
  - Ref: 59 & 102/2012



# MSDI in IHO Work Programme 2013

## *Current Status and Perspectives*

- 2.2.2.2; 2.4.2.3; 2.5.2.2: Maintain and extend S-100 IHO Universal Hydrographic Data Model
  - HSSC-TSMAD (Transfer Standard) work item A.4 *Investigate a suitable grid referencing system for S-100*: ongoing
  - HSSC-TSMAD work item A.8 *Develop S-100 Portrayal Component* and HSSC-DIPWG work item F.2 *Maintain S-100 Portrayal*: both ongoing. Development of a Portrayal Catalogue Builder to be contracted out by the IHB in 2013.
  - HSSC-DPSWG (Data Protection) task C *Maintain and extend data protection and authentication related elements of S-100*: to be implemented in the DPSWG work programme.
  - HSSC-DQWG (Data Quality) task G *Maintain and extend data quality related elements of S-100*: to be implemented in the DQWG work programme.
- 2.2.4: Maintain and extend S-100 registry
  - HSSC-TSMAD task I *Maintain and extend S-100 registry*: to be implemented in the TSMAD work programme.



# MSDI in IHO Work Programme 2013

## *Current Status and Perspectives*

- 2.9.1: Conduct MSDIWG meetings
  - MSDI Forum and 4<sup>th</sup> MSDIWG meeting, Copenhagen, Jan./Feb. 2013
  - Ref: IHO CL 104/2012
- 2.9.2; 2.9.2.1: Maintain C-17
  - HSSC-MSDIWG task D *Maintain and extend Publication C-17*: to be implemented in the MSDIWG work programme.
- 3.3.1.4: Contribute to the development of MSDI (Capacity Building)
  - MSDI workshop for North Indian Ocean Hydrographic Commission (NIOHC) in Colombo, Mar. 2012
  - MSDI workshop for Southwest Atlantic Hydrographic Commission (SWAtHC), South East Pacific HC (SEPHC) and Meso American & Caribbean Sea HC (MACHC), in Niteroi, Nov. 2012
  - MSDI workshop for East Asia Hydrographic Commission (EAHC) in Incheon, Nov. 2012



# International Hydrographic Organization



**International Hydrographic Bureau**

**4b, Quai Antoine 1<sup>er</sup>**

**BP 445**

**MC 98011 MONACO CEDEX**

**Principauté de Monaco**

**Telephone: +377 93 10 81 00**

**Fax: +377 93 10 81 40**

**e-mail: [info@iho.int](mailto:info@iho.int)**

**Web Site: <http://www.iho.int>**

