MSDSIWG5–14

5th Marine Spatial Data Infrastructure Working Group Meeting (MSDIWG)

Silver Spring, Maryland, United States, February 5-7, 2014

An approach to MSDI in relation to RHC meetings

Submitted by:	Chair MSDIWG, Denmark
Executive Summary:	This paper is a discussion about how the MSDIWG can contribute to RHCs with information about MSDI. The paper also includes a copy of the MSDIWG report forwarded to ARHC4.
Related Documents:	C-17 Spatial Data Infrastructures: "The Marine Dimension" - Guidance for Hydrographic Offices,
Related Projects:	-

Analysis/Discussion

There is a need to introduce a maritime approach to MSDI to RHCs.
In order to have MSDI on the agenda for RHC meetings, it is important that members of the MSDIWG take an active role in facilitating MSDI at RHC meetings. A copy of the MSDIWG report that was forwarded to the ARHC4 meeting is attached. This paper is an example on how RHC can be inform about the MSDIWG with a focus on how MS can benefit from a regional approach.

Some of the challengers for IHOMS in relation to RHC andMSDI are seen as:

- Ensure that regional HO have the possibility to contribute to the development of the MSDI in their region
- Ensure the use of data/information provided by HO in MSDI
- Ensure that the HO have the possibility to contribute in creation of an MSDI reference Model - A reference model that represents the component parts of any consistent idea, from business functions to system components:
    - Rules and rights in relation to the use of vector data between countries
    - How to establish a structure to support the regional MSDI
    - The continuous update of relevant data
    - The financial aspects.

As seen from a HO perspective, the MS have a direct possibility to actively participate in the development of a well-functioning MSDI within the hydrographic domain and its surroundings with the possibility to benefit from a national and a regional approach and in that way take the lead in addressing MSDIMSDI matters for the marine/maritime sphere.

Arctic Regional Hydrographic Commission (ARHC)
Portsmouth, New Hampshire, United States, October 30-31, 2013

Report of the Marine Spatial Data Infrastructure Working Group (MSDIWG)

Submitted by: Chair of MSDIWG,Denmark

Executive Summary: This report reviews the work group's findings, status and the planned next steps.

Related Documents: C-17 - Spatial Data Infrastructures: The Marine Dimension - Guidance for Hydrographic Offices

Related Projects: Arctic SDI, Baltic Sea Marine Spatial Data Working Group, (BSMSDIWG), Maritime Economical Information Programme (MEIP)

Introduction / Background

The 18th International Hydrographic Conference confirmed the importance of marine spatial data infrastructure (MSDI) activities for the IHO and its Member States.

From a HO perspective, it is important that the IHO takes the lead in addressing MSDI matters for the maritime sphere through its MS. With IHO´s definition of hydrography in place, MSDI delivers the instruments for the enhanced scope of hydrographic information users. MSDI is to create the framework for the future provision of this information beyond the classic field of surface navigation. The MSDIWG is seen as an appropriate WG to deal with these challenges.

Meetings Held During Reporting Period

The 4th meeting of the IHO Marine Spatial Data Infrastructure Working Group (MSDIWG) took place on 31 January and 1 February 2013 in Copenhagen, Denmark. It was preceded on 30 January by an MSDI Open Forum. Both events were held at the Danish Geodata Agency (GST). The aim was to reactivate IHO consideration of MSDI and to propose ways to facilitate MSDI in IHO and its Member States.

MSDI addresses, for the maritime domain, "the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve utilization of geospatial data".

The key interest for the IHO is that MSDI provides a framework for the provision of hydrographic information beyond the traditional field of surface navigation.

Next meetings planned by IHO Marine Spatial Data Infrastructure Working Group (MSDIWG)

4 February 2014: MSDIWG Open Forum: MSDI:
More Than Hydrography, Better Decisions From Better Data

5 – 7 February 2014: MSDIWG 5th Meeting

Both events will be held at 1 Veterans Plaza, Silver Spring, Maryland, USA. The WG meeting will include WG Work Plan task group break-out sessions.

All documents referred to above, including a revised draft agenda for MSDIWG-5 and a new Work Plan 2014-15 for the WG, have been posted on the IHO website. See http://www.iho.int/mtg_docs/com_wg/MSDIWG/MSDIWG5/MSDIWG5.htm.

Analysis/Discussion
The IHO's MSDIWG has published *C-17 - Spatial Data Infrastructures: The Marine Dimension - Guidance for Hydrographic Offices*, which outlines the benefits of developing spatial data infrastructures (SDIs) to reinforce coordination among maritime authorities.

At a time when SDIs are being developed worldwide at the national, regional and local levels, this approach to coordinated access to, and management of, geographic information has become a standard for land based activities. However, as C-17 identifies, the integration of maritime data in SDIs has been limited at best, though there can be as many benefits to be gained by coordinated access to maritime information as to terrestrial data.

MSDIWG Work Programme
At the 5th HSSC MEETING in Shanghai 5-8 November 2013, the report of the Marine Spatial Data Infrastructure Working Group was presented.HSSC-5 approved the adjusted Terms of Reference and the MSDI Work Plan. 7 MSDIWG Tasks are now established. The work programme is attached as annex 1.

MSDIWG WORK PLAN 2014–15

MSDIWG Tasks:

A	Identify and promote national and regional best practices: - for land-sea integration - for cross-border integration
B	Review the appropriateness of existing standards for the provision of the maritime components of spatial data infrastructures
C	Develop content for an MSDI training course
D	Maintain MSDI reference documentation on the IHO website
E	Maintain and extend Publication IHO MSDI C-17 (IHO Task 2.9.2 refers)
F	Conduct annual meetings of MSDIWG, arranged back to back with 1-day MSDI Open Forum (IHO Task 2.9.1 refers)
G	Ensure that MSDI is a standing agenda item for RHCs' meetings (IHO Res 2/1997, as amended, refers)

Progress on HSSC Action Items
Action HSSC4/32 is for MSDIWG4" to consider, within its work plan, the development of content for an "introduction to MSDI" training course ".
This action is included in future work of the MSDIWG as stated in the work plan.

Arctic SDI

The Arctic SDI is a co-operation between the mapping agencies of Iceland, Norway, Sweden, Denmark, Finland, Russia, USA and Canada. In September 2013 the Steering Committee confirmed the importance of an Arctic Spatial Data Infrastructure (Arctic SDI) and its activities for its Member States and the Arctic Council.The vision of the Arctic SDI is to provide for access to spatially related reliable information over the Arctic to facilitate monitoring and decision making. The aim is to create a common infrastructure that includes the following capabilities:

- Reference data as Web Map Services to establish a common image and vector base for the Arctic context at nominally 1:250.000 scale
- A searchable metadata-catalogue of map-able data resources – base maps and other geo-referenced thematic data and services
- A Web portal as primary user interface to search the catalogue and enable visual analysis of multiple base maps, thematic maps and geographic data.

As coordinated Arctic spatial planning also gains increased focus at the level of the Arctic Council and its working groups,the needs for better integration of Arctic data are becoming increasingly evident. The flow of information among the Arctic authorities and stakeholders is a critical factor in ensuring the effective and efficient coordination of work.

A well-established Arctic SDI will ensure that relevant Arctic authorities are able to contribute with their spatial information and the necessary updates, and this information can easily be collated with other information into a current overall picture.

A well-established arctic SDI is expected to support Environmental protection, SAR, coastal zone management planning of energy production at sea, fishing, marine environmental protection and nature conservation, planning charts and maps, civil and military preparedness, tourism and future spatial planning.However, the integration of Arctic data has until now been limited.

GGIM/FIG Conference held in Cambridge, UK in July 2013

In the proceedings of the above event, the report entitled "Critical issues relating to the integration of land and marine geospatial information" tabled by IHO and FIG and the supporting background document, authored by FIG, raises some important points in that the global GI community needs to:

- build and use common standards and frameworks to ensure interoperability
- enhance institutional arrangements and stakeholder collaborations
- improve returns on investment through better coordination, use and reuse of data, information and systems and to enhance innovation and productivity
- develop a legal framework to provide the institutional structure for data sharing, discovery, and access;
- positioning infrastructure to enable and benefit from satellite based positioning possibilities and reference systems;

The document also mentions C-17 and the work of both the MSDIWG thus far and the developments attained in the BSHC. However, none of these statements are new.
An important question to consider would be if IHO should take the lead and commission an advanced practical study into this very important area of interest? IHO President has repeatedly stated that the role of HO's is now far more than just about charting. It has valuable data as its primary resource and must make that data available to a wider audience in order to drive "The Blue

Economy" and all it signifies, in terms of economic and socio-economic development. MSDI would facilitate much of what can be achieved in this area.

Maritime spatial planning and integrated coastal management

EU has recently published a proposal for a directive of the European Parliament and of the Council dealing with establishing a framework for maritime spatial planning and integrated coastal management. A presentation about the directive is attached as annex 2.

The main purpose of the proposed directive is to promote the sustainable growth of maritime and coastal activities and the sustainable use of coastal and marine resources by establishing a framework for the effective implementation of maritime spatial planning in EU waters and integrated coastal management in the coastal areas of Member States.
The increasingly uncoordinated use of coastal and maritime areas results in competition for space and leads to the inefficient and unsustainable use of marine and coastal resources. Uncertainties and lack of predictability on appropriate access to the maritime space has created a suboptimal business climate for investors, with potential job losses.

The proposal establishes a framework for maritime spatial planning and integrated coastal management in the form of a systematic, coordinated, inclusive and trans-boundary approach to integrated maritime governance. It obliges Member States to carry out maritime spatial planning and integrated coastal management in accordance with national and international law. The aim of the action is for Member States to establish a process or processes that cover the full cycle of problem identification, information collection, planning, decision-making, management, monitoring of implementation, and stakeholder participation.

The maritime spatial plans and integrated coastal management strategies will not set new sectorial policy targets. They have the purpose to reflect, integrate and link the objectives defined by national or regional sectorial policies, to identify steps to prevent or alleviate conflicts between different sectors and to contribute to the achievement of the Union's objectives in marine and coastal related sectorial policies. Most importantly, the proposal requires Member States action to aim for coherence of management across sea basins, through trans-boundary cooperation in the same marine region or sub-region and related coastal zone and appropriate data collection and exchange.

Implementing acts will ensure consistent implementation of the Directive throughout the EU and facilitate reporting from the Member States to the Commission and, where relevant, the exchange of data between Member States and with the Commission. Article 10 in the proposed directive especially focuses on data collection and exchange of information. Article 12 and 13 describes co-operation with other Member States and third countries.
As seen from a HO perspective a MSDI could support such varied activities as coastal zone management planning and maritime spatial planning including the management of energy production at sea, fishing, marine environmental protection and nature conservation, planning charts, navigation, civil and military preparedness, tourism, and maritime spatial planning.

Conclusions

There are growing needs for better coordination of individual authorities' management of maritime information. While a national single window can aid in the reporting process among maritime stakeholders, information flow among the authorities is also a critical factor for ensuring the effective and efficient coordination of their work.

A MSDI ensures that relevant maritime authorities can contribute their spatial information and related updates, and that this information can easily be collected with other information to generate a current, overall picture. As a result, MSDI can support such varied activities as coastal zone management planning of energy production at sea, fishing, marine environmental protection and nature conservation, planning charts, navigation, civil and military preparedness, tourism, and maritime spatial planning.

From a more practical approach there is a need to introduce a maritime approach to Arctic SDI and to include maritime information. Some of the challengers for ARHC MS in relation to Arctic SDI are seen as:

- Ensure that Arctic HO have the possibility to contribute to the development of the Arctic SDI
- Ensure the use of data/information provided by Arctic HO
- Ensure that the Arctic HO have the possibility to contribute in creation of an Arctic SDI reference Model - A reference model that represents the component parts of any consistent idea, from business functions to system components:
    - Rules and rights in relation to the use of vector data between countries
    - How to establish a structure to support the Arctic SDI
    - The continuous update of relevant data
    - The financial aspects.

As seen from a HO perspective, the MS now have a direct possibility to actively participate in the development of a well-functioning MSDI within the hydrographic domain and its surroundings with the possibility to benefit from a national and a regional approach and in that way take the lead in addressing Arctic MSDI matters for the Arctic sphere.

Actions required from the ARHC 4th Conference:
The ARHC 4th Conference is invited to discuss the implications of MSDI from a HO perspective and how MS can benefit from a regional approach.
The ARHC 4thConference is requested to consider this report and to take appropriate actions.