

8th Arctic Regional Hydrographic Commission Conference **11-13 September 2018, Longyearbyen, Svalbard**

Status report of the IHO Marine Spatial Data Information Working Group (IHO-MSDIWG)

This report contains the current status and planned actions of the IHO MSDIWG.

IHO MSDIWG

Meetings Held During Reporting Period

The MSDIWG9 meeting of IHO Marine Spatial Data Infrastructures Working Group (MSDIWG) took place in Niteroi (Rio de Janeiro), 30 January – 1 February 2018. The outcome of the meeting is available from the IRCC section of the IHO Website under the MSDIWG. The MSDIWG meeting was preceded firstly on 29 January by a MSDI Open Forum and after the MSDIWG9 meeting on the 2 February 2018 an OGC Marine Domain WG was arranged.



Figure 1. The participants at the MSDI Open Forum.

The aim of the MSDIWG9 meeting was to focus on MSDI and to propose ways to progress MSDI implementation within the Organisation and its Member States.



Figure 2. The IHO MSDIWG members attending the MSDIWG 9 meeting.

Next Planned Meeting:

The IHO/MSDIWG will hold a day-long MSDI Open Forum, an OGC Marine Domain WG meeting and the MSDIWG 10 meeting in 2019 in Busan, Republic of Korea, on 4 to 8 March 2019. Logistics and meeting details will be available at:

https://www.iho.int/srv1/index.php?option=com_content&view=article&id=483&Itemid=370&lang=en

The IHO/MSDIWG will continue to facilitate a MSDI Open Forum which would allow non-MSDIWG stakeholders (e.g. RHC MS, government, academia, industry, funding bodies and NGOs) to attend to see what the MSDIWG and the commercial partners can offer. Attendees at the Open Forum would then be encouraged to stay on for the MSDIWG10 meeting. This approach is being developed in consultation with the hosts.

The Open Forum meeting will be followed by a three day-long MSDIWG10 meeting at the same venue and the meeting will include WG Work Plan task group break-out sessions. The MSDIWG10 meeting will also be arranged as a back-to-back meeting with the OGC Marine Domain WG meeting. The IHO/MSDIWG will further investigate the possibility to arrange a back-to-back meeting with the newly established UN-GGIM WG on Marine Geospatial Information

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

Terms of Reference of MSDIWG:

The MSDIWG Terms of Reference remain unchanged from 2015 and can be found on the IRCC section of the IHO Website under the MSDIWG.

Work Programme

Work Plan 2018–2021. The Work Programme was redeveloped at MSDIWG9 based on recent changes and change in focus on MSDI from a regional and national perspective. In order to deliver this Work Programme eight MSDI Tasks were established. The work programme can be found on the IRCC section of the IHO Website under the MSDIWG.

Progress on IRCC Action Items

IRCC9/18. RHC Chairs to encourage Member States in the region to nominate RHC MSDI Ambassadors to promote MSDI and to help Member States to prepare the national reports with respect to the status of MSDI. A vital element of this work would be to collect and collate responses from Member State on MSDI prior to each RHC meeting. It is becoming more important to consider taking MSDI as a RHC agenda item, therefore we hope to see a National MSDI report prepared by each Member State for submission to every RHC. The report should incorporate the status of MSDI, plans for involvement in MSDI and challenges facing the HO.

IRCC9/40. MSDIWG Chair to coordinate matters related to the UN-GGIM to ensure that actions are aligned and maximized while avoiding duplications. The MSDIWG chair is now member of the UN-GGIM Working Group on Marine Geospatial Information and has provided input to the Work Plan 2018/2019.

IRCC9/19. Coordinator USA and IHO Secretariat to consider the OGC proposal and seek for funding and report back to the IRCC (7)

The proposal to launch an IHO Concept Development Initiative was presented at the IRCC9 meeting. At the MSDIWG meeting in Vancouver 2017, the MS discussed the possibility to create an OGC study that could establish the framework for future development of MSDI. After the MSDIWG meeting OGC has developed a proposal for a concept development study for MSDI, with the ultimate intent after completion to propose to IHO a full pilot timed for 2018, to be funded by NGA. The initiative will emphasize the rapid evolution of technologies and methodologies for generating non-navigational, location-based information of value to a broad range of users.

Education and Learning.

The way Capacity Building plans are defined at present means that the focus on data and information management resides somewhere between Phases 2 and 3. MSDIWG suggests that it should take place earlier in the cycle of basic hydrographic understanding and involve elementary "data management best practice" training sessions. The MSDIWG therefore suggest that CBSC should consider this in the light of the experience MSDIWG members and expert contributors have witnessed when delivering Capacity Building Training in MSDI.

Any Other Items of Note

Cooperation with the OGC Marine Domain Working Group (DWG)

The MSDIWG are now cooperating with the OGC DWG on a regular basis.



Figure 3. The participants at the OGCMDWG meeting.

The IHO MSDIWG and OGC was invited to participate at the session on Review of the White Paper on Operational Domain Standards for Land Administration on Monday, March 19th at the World Bank in Washington DC. The session took place just before the opening of the 19th edition of the World Bank Land and Poverty Conference. The OGCDWG and the MSDIWG provided a joint input Information Paper: LADM from a Marine Domain Perspective. A MSDIWG member from NOAA gave a brief of the information paper that had been submitted on behalf of the International Hydrographic Organization's Marine Spatial Data Infrastructure Working Group and the Open Geospatial Consortium Marine Domain Working Group. The idea of the paper and presentation was to provide a look at Land Administration from a Marine Domain Perspective.

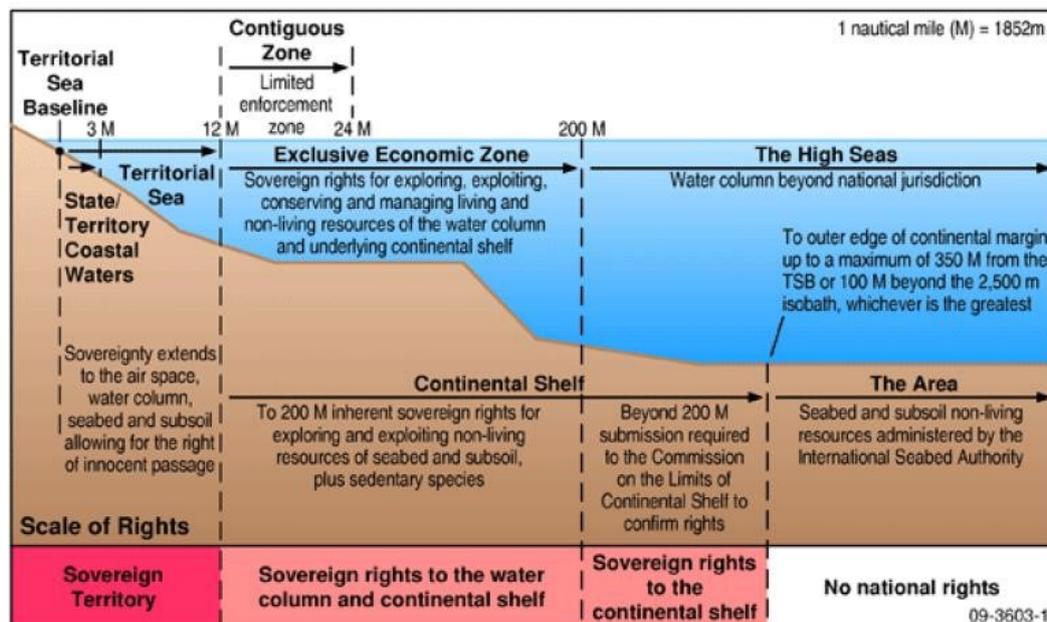


Figure 4. Slide from the presentation. Marine Domain Perspective.

Data Centric Operations and Workflows

Data is the second most important asset in an organization after the people. Data therefore needs to be treated as an enterprise-wide, national and even global asset with tremendous intrinsic value, not only to the organization that captures and/or manages it, but to other potential users as well. In the maritime sector we have been promoting the term "collect once, use many times" for many years in respect of the wider value and utility of, for example, bathymetry data. However, there is other important data held by the HO that has additional or residual value once it has been used to support the business of charting. The terms "data centric" and "With a data centric approach" define operations and workflows that are managed as close to "source" as possible rather than as products. Enabling efficient data sharing, exchange and re-use across government, academia, and commerce thereby stimulates economic and socio-economic benefits, not only to the nation, but potentially across borders with neighboring HOs.

UN-GGIM WORKING GROUP ON MARINE GEOSPATIAL INFORMATION

The principal purpose of the UN-GGIM is to play a leading role in setting the agenda for the development of global geospatial information management and to promote the use of geospatial information in addressing key global challenges, particularly taking into account the role of geospatial data in monitoring and achieving the Sustainable Development goals agreed under the UN 2030 Agenda for Sustainable Development. The UN-GGIM reports to the UN General Assembly via the UN Economic and Social Council (ECOSOC).

At the seventh Session of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) that took place at the UN Headquarters in New York, USA from 31 July to 4 August 2017 it was decided to establish an UN-GGIM Working Group on Marine Geospatial Information

(MGIWG). The MGIWG will provide input to the Committee to support its Member States in developing national policy, strategic priorities, decision-making and the monitoring of global developments in relation to their spatial data infrastructures and marine geospatial information management. It should be noted that although the IHO has been recognised as having a fundamental role in marine geospatial information, the terms of reference of the WG indicate a scope well beyond hydrography. The WG is expected to play a leading role at the policy level by raising political awareness and highlighting the importance of reliable, timely and fit-for-purpose marine geospatial information to support the administration, management and governance of the marine environment. It is anticipated that the WG will consider the full range of maritime geospatial information, including met-ocean data.

The UN-GGIM Secretariat has identified the co-Chairs and participation to the UN-GGIM: MGIWG. The first on-line meeting took place on 26 March 2018.

Draft Guidance for Data Licensing

It is widely recognised that significant creative and economic potential may lie dormant in data locked up and not released on terms allowing re-use. The concepts behind MSDI recognise the potential held in data. However, if data is to be re-used by third parties it needs to be licensed.

The Hydrographic Data Policy Best Practise Guidelines for Hydrographic Offices white paper states ‘fit for purpose hydrographic data and information is essential in underpinning evidence based decision making and asset management enabling governments and the commercial sector to deliver their policy objectives for the marine environment and coastal zone’. The paper points out the ‘use of this data outside of navigational products has been limited, but the requirement is growing very swiftly across the world’.

A data license provides users with legal clarity on how data can be used as well as defining user obligations. In most jurisdictions there are intellectual property rights that prevent third parties from using, reusing and redistributing data without explicit permission. Even if data is publically available, without a license a user may not have permission to access, use, or share it due to copyright laws. By applying an open license, you enable users the freedom to use your data to experiment, explore and innovate. Attached in Annex E there is a first Draft of Guidance for Data Licensing. The intension is to finalize the draft version at then next MSDIWG10 meeting in 2019.

1. Conclusions and Recommended Actions

A well-functioning 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 MSDI perspective it is important that the MS should be the “providers of choice” for authoritative foundational marine/maritime information through engagement and participation in MSDI in addition to their existing navigational role. It is actively strengthening its understanding and knowledge of the role of hydrography in MSDI through its outreach programmes with other SDI stakeholder groups (such as the European Commission, UN-GGIM, IOC-IODE), globally, and through the IHO MSDIWG across the HO community. The IHO is a great advocate of MSDI and the need for change stating, along with other stakeholders, that unless MS acts others will provide the authoritative data and in doing so potentially weaken the status of HOs.

From a more practical approach there is a need for the HO to focus on and strengthen the maritime approach to MSDI and to ensure that maritime information is included. Some of the challenges from an international and regional approach for IHO MS in relation to MSDI are seen as:

- Ensuring that MS participate in the MSDI work
- The creation of new regional MSDIWs will give the MS 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 regional MSDI matters for the countries in the region.
- Ensuring that regional MS HO have the possibility to contribute to the development of the regional MSDI
- Ensuring the use of data/information provided by HO is fit for purpose for wider dissemination
- Establishing access to Best Practises related to SDI/MSDI

Justification and Impacts

The work in the MSDIWG is well underway and a new Work Programme and a supporting Action Plan has been established. The new Work Programme will establish the framework for the WG, in order to cope with the challenges in a forward-looking perspective.

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Action required of ARHC8:

The ARHC8 is invited to:

- a. Note the report;
- b. Take any other action as appropriate.