

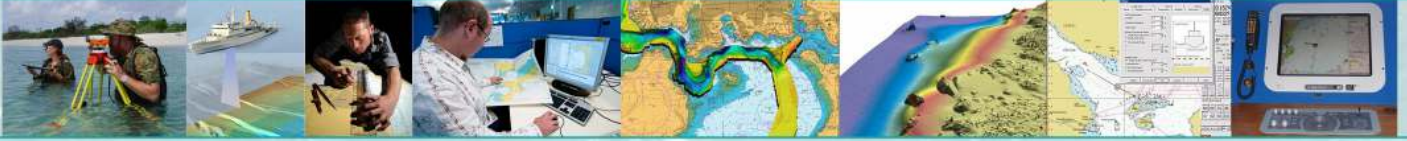
12TH MEETING OF THE MARINE SPATIAL DATA INFRASTRUCTURES WORKING GROUP (MSDIWG), VTC 17-18 MARCH AND WEBINAR SERIES ON INTEGRATED MARINE GEOSPATIAL INFORMATION MANAGEMENT, 26 - 29 OCTOBER 2021

Contribution to the IHO Work Programme 2021	
Task 3.7.1	Organize, prepare and report annual meetings of the Marine Spatial Data Infrastructures Working Group (MSDIWG).
Task 3.7.4	Coordinate relevant activities with the Open Geospatial Consortium (OGC) Marine Domain Working Group (Marine DWG)
Task 1.1.12.1	Maintain relationship with the United Nations (UN) organizations including the Committee of Experts on Global Geospatial Information Management (UN-GGIM) and the WG on Marine Geospatial Information (WG-MGI)

The 12th meeting of the Marine Spatial Data Infrastructures Working Group (MSDIWG12) took place by VTC from 17 to 18 March 2021. The meeting was chaired by Mr Jens Peter Weiss Hartmann (Denmark). Director Luigi Sinapi and Assistant Director Leonel Manteigas represented the IHO Secretariat. The Meeting was planned to be a MSDIWG intersessional meeting with the annual meeting planned to be in October in Singapore in the same week of the meetings of the OGC Marine Domain Working Group (Marine DWG) and the Working Group on Marine Geospatial Information (WG-MGI) of the UN Committee of Experts on Global Geospatial Information Management (UN-GGIM). However, due to the COVID pandemic, it was decided to turn the intersessional into the annual Meeting and organize a webinar series in October associated with the inauguration of the IHO-Singapore Innovation and Technology Laboratory.



Some Participants of the MSDIWG12



The meeting was opened by the Chair of the MSDIWG, Mr Jens Peter Hartmann, who welcomed the participants and expressed his satisfaction for the great participation. He explained the need to convene the meeting to prepare a new Draft Work Plan for 2021-2024 to be presented at the next IRCC13 and enhanced the need to focus on the most important items having in consideration the expectation for a face-to-face meeting in Singapore, in October.

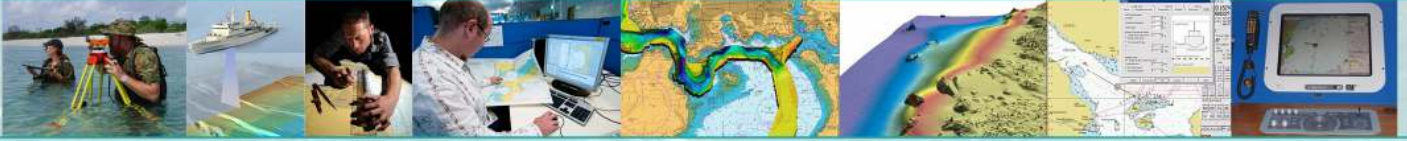
IHO Director Sinapi welcomed the participants and mentioned the importance of maintaining these virtual meetings but hoping that the face-to-face meetings can restart soon, enhancing that the IHO Strategic Plan, GOAL 2, and specifically Target 2.3, refers to how important it is for MSDIs to share the UN guiding principles for geospatial information management in order to ensure interoperability and combination with other marine-related data.

Most of the work items of the former List of Actions and the Work Programme 2018-2021 were achieved but some needed to be discussed. The Chair mentioned the importance of the approved IHO Strategic Plan 2021-2026 and the three Strategic Performance Indicators for the MSDIWG, namely 2.1 and 2.3 of Goal 2 and 3.1 of Goal 3. In relation to the SPI 3.1, the need was mentioned to start discussions with UN GGIM and OGC and also to have a focus on the E-learning materials. The meeting stated the need to decide how the WG can collaborate with the joint IHO-Singapore Innovation and Technology Laboratory as well as the IHO E-learning Center. It was informed on the new documents available on the Body of Knowledge (BoK) and the intention to make a section for Case Studies.

The Meeting received National and Regional presentations from Brazil, Canada, Denmark, Netherlands, New Zealand, Norway, Republic of Korea, Singapore, Spain, USA and the Baltic and North Sea on the status of the respective MSDI.

Some presentations from external stakeholders were also provided. D. Hains (H2i) presented on the Hydrospatial Terminology and S. Riopel (Arctic SDI - Canada) with P. Pouplier (Arctic SDI - Denmark) on the Arctic Spatial Data Infrastructure, a collaborative effort of the National Mapping Agencies of the Arctic. The documents of this Arctic SDI are available and can be used as a Governance Model for Regional SDI's. S. Carisio (NGA-US) provided a presentation on the challenges in the Arctic MSDI and the Arctic Voyage Planning Guide as a strategic voyage planning tool with a compilation of data and services relevant to mariners preparing to travel to the Arctic. Actually, this tool has 7 themes and 24 datasets in those themes with 5 datasets strongly supported. On the GEBCO SEABED 2030 project, J. McMichael-Philips, Director Seabed2030 provided an overview and updated information on the project.

The Meeting proceeded with the presentation of the Draft MSDI Work Plan 2021-24 to allow the members to provide comments and then with several other presentations. J. Pritchard (IIC) presented the Open Geospatial Consortium updates mentioning that the main focus now is the MSDI Pilot. OGC is also involved in the revision of the Guide to Geospatial Standards. J. Nyberg (NOAA-US) presented on the UN GGIM WG in Marine Geospatial Information and the main objectives of the WG. The white paper on readily Available and Accessible (Open) Marine Geospatial Information was one of the biggest achievements. It



contains information on the highest challenges and includes several case studies. IGIF W (water), a guide to assist IGIF with the aspects on the water domain, was also introduced.

J. Pritchard presented on the S-100 Rollout, the proposition, the possibility to use and promote S-100 to encourage better interoperability between the MSDI stakeholders and the main opportunities. He concluded that S-100 now tends to be navigation focused, but it does not have to be that way since S-100 is a neutral framework. Director Sinapi concurred that the S-100 data is central and the S-100 framework is not limited to data for the Hydrographic products only. P. Pang provided a presentation on the UN-GGIM IGIF updates and the IHO MSDI WG participation in the revision of the UN-GGIM role of Standards Guide. The background of the work was described, and it was mentioned that the Standards Guide and Companion Document were last revised in 2018. The Meeting also received a presentation on the IHO-Singapore Innovation and Technology Laboratory provided by P. Pang (MPA-Singapore), starting with the objectives of the Laboratory that was launched in October. IHO Members were invited to submit projects and the MSDI WG was invited to participate in the project and in the work of the Laboratory.

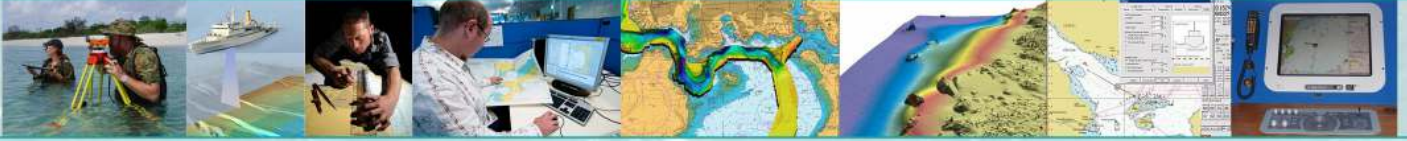
The meeting was informed on the OGC Federated MSDI Pilot by J. Pritchard, highlighting that OGC is a multi-country, Federated Marine Spatial Data Infrastructure (SDI) under land/sea interface use-cases, on the respective goals and expected outcomes.

Singapore offered to host the next MSDI WG Meeting from 25-29 October 2021 and the Meeting elected Pearlyn Pang (MPA-Singapore) as new Vice-Chair of the MSDI WG replacing Mr S. Carisio.

Webinar Series on Integrated Marine Geospatial Information Management, 26 - 29 October 2021

Since the COVID Pandemic did not allow for a face-to-face meeting with the three organizations in Singapore, a Webinar Series on Integrated Marine Geospatial Information Management was organized with the programme below.

DATE & TIME	PROGRAMME
26 October 10:00 UTC – 11:45 UTC	Joint IHO-Singapore Innovation and Technology Laboratory Launch Session 01: Technology and Innovation for Integrated Marine Geospatial Information Management
27 October 10:00 UTC – 11:15 UTC	Session 02: An Operational Framework for Integrated Marine Geospatial Information Management
28 October 10:00 UTC – 11:15 UTC	Session 03: Integrated Marine Geospatial Information Management Practices
29 October 10:00 UTC – 11:15 UTC	Session 04: Standards for Findable, Accessible, Interoperable and Reusable Marine Geospatial Information; The Future of Marine Geospatial Information



THE JOINT IHO-SINGAPORE INNOVATION & TECHNOLOGY LABORATORY LAUNCH & WEBINAR SERIES ON INTEGRATED MARINE GEOSPATIAL INFORMATION MANAGEMENT

MPA SINGAPORE IHO OGC

WELCOME & KEYNOTE ADDRESS

HYDROGRAPHY is CRITICAL to the MARITIME INDUSTRY!

- KNOWING the DEPTH, SHAPE & HEIGHT of the SEA
- BENEFITS to MAPPING the SEA ACCURATELY

IHO ESTABLISHED IN 1921

- ENSURE NAVIGABLE WATERS ARE SURVEYED & CHARTED
- 100th ANNIVERSARY IS SIGNIFICANT!
- 95 MEMBER STATES WORKING TO INCREASE COLLECTIVE KNOWLEDGE

THERE'S A GROWING DEMAND for HYDROGRAPHIC DATA as COUNTRIES BUILD NEW PORTS & CHART NEW SEA ROUTES

PROUD to ANNOUNCE

LAUNCH of JOINT IHO-SINGAPORE INNOVATION & TECHNOLOGY LAB!

- MISSION: to DEVELOP EMERGING HYDROGRAPHIC RELATED TECHNOLOGIES
- THERE IS AN INCREASING DEMAND for DATA USED BEYOND NAVIGATIONAL PURPOSES
- SINGAPORE WILL CONTRIBUTE FUNDING, WORKSPACE & MANPOWER for the FIRST 5 YEARS of the LAB'S OPERATIONS!

CONSOLIDATE EXPERTISE to KEEP UP with CHANGE

IHO LAB is an OPPORTUNITY for MEMBER STATES to WORK TOGETHER to UNLOCK the POTENTIAL of HYDROGRAPHIC DATA & TECHNOLOGY

MR CHEE HONG TAT
SENIOR MINISTER OF STATE,
MINISTRY OF TRANSPORT

2021 IS A SPECIAL YEAR for IHO:

- HIGHLIGHT our ACHIEVEMENTS of HYDROGRAPHY
- OUR STRENGTH LIES in OCEAN-MAPPING

SINGAPORE

- AN IDEAL HUB of ITS INNOVATIVE in MARINE OPERATIONS
- IDEAL PLAYGROUND for SOLUTIONS TRANSITIONING to the NEW STANDARDS

THE **IHO LAB** SHOULD BECOME a LIVING PLATFORM

- TO FILL THE GAP BETWEEN CONCEPT & IMPLEMENTATION of IHO PROVISIONS

DR MATHIAS JONAS
SECRETARY GENERAL INTERNATIONAL HYDROGRAPHIC ORGANIZATION

STANDARDISATION: THOSE WHO DRAFT THEM & THOSE WHO APPLY THEM

IMPLEMENTATION of S100: TO ACCELERATE PROCESS, FIELD EXPERIMENTATION PARALLEL to STANDARD DRAFTING PHASE

DATA PROVISION BASED on the NEW S100 COMPLIANT DATA PRODUCT STANDARDS: REQUIRED of the FIRST STEP

OFFERS NEW OPTIONS in EFFICIENT RESOURCE SAVING: SHIP OPERATIONS

Infographic of the Welcome and Keynote Address

To resume the interventions on the different sessions, the organization issued several infographics like the one above. The presentations of the sessions as well as the infographics can be consulted and downloaded in: https://ggim.un.org/meetings/2021/WG-MGI_webinar/