64th NHC online meeting
20 - 21 April

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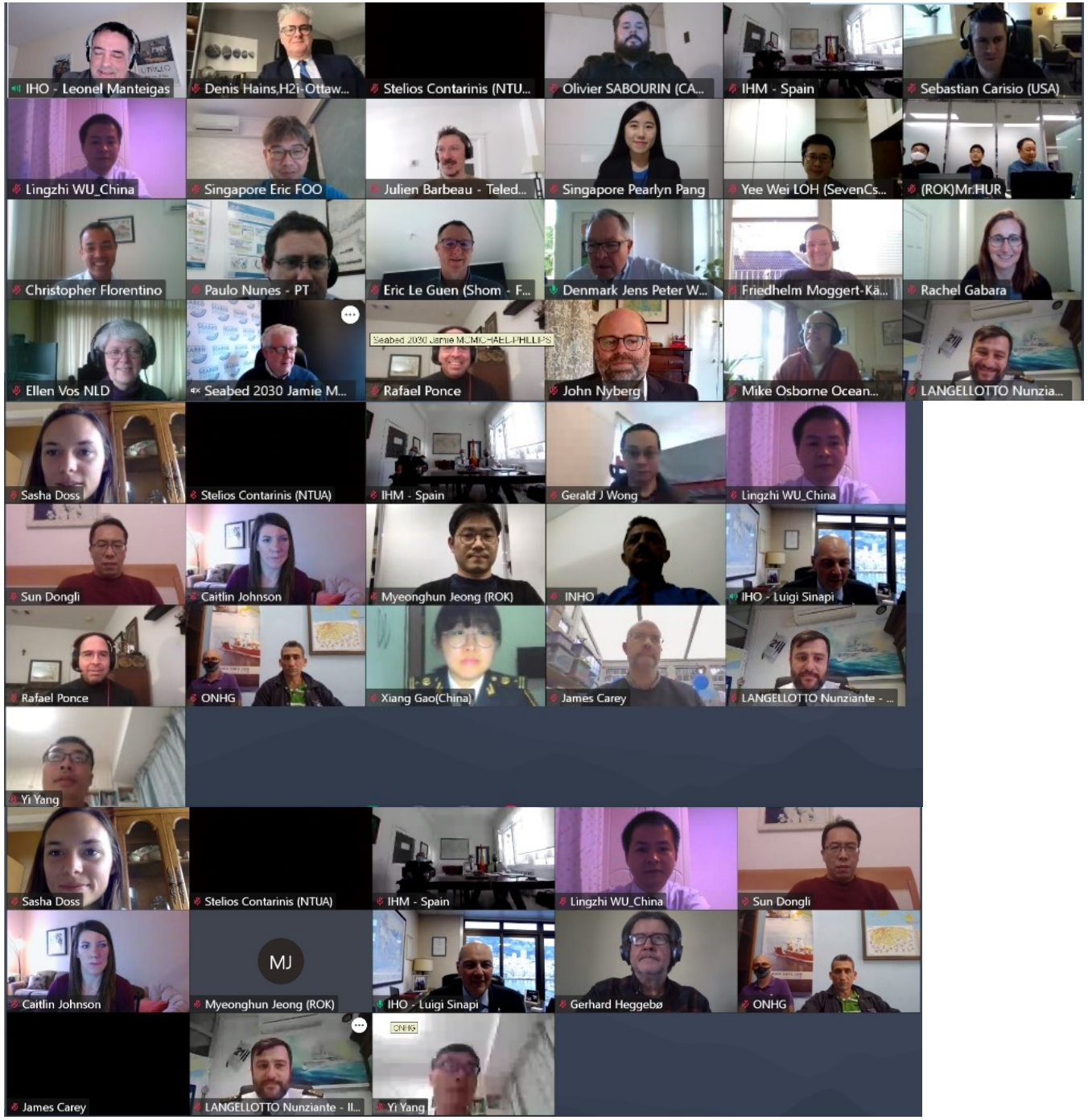
IHO Marine Spatial Data Infrastructures Working Group



IHO International Hydrographic Organization

The agenda for the IHO Marine Spatial Data Infrastructures Working Group online meeting

Day One: March 17 2021

Theme	Time (UTC+1, CET).	Subject	Responsible
Welcome	**1400 - 1430**	Welcome, introduction of participants and practical information. Approval of agenda.	Chair
Status		Introduction to the IHO MSDI Online meeting 2021 - Aim of the meeting - Expected achievements - Status of Action list and Work program	Chair
		Status on the MSDI work of IHO (MSDIWG) (Review of the papers circulated and responses to it)	Chair Vice Chair
National presentations. Presentations and discussions	**1430 - 1630**	National presentation from members on the status of MSDI related to: - The national SDI and MSDI cooperation - National MSP Presentations to include: what is the key successes and challenges within the four pillars (ref. C-17, 2.1. Policy and Governance, Technical standards, Information systems and Geographic content). Discussion on how the IHO MSDIWG can support MS.	All IHO MSDIWG MS All
Brake	**1630 - 1645**		
External stakeholders. Presentations and discussions	**1645 –1745** 1645-1700 1700-1715 1715-1730 1730-1745 1745 - 1755	Presentation from external stakeholders: - Hydrospatial - Arctic SDI - Arctic MSDI and Arctic Voyage Planning Guide Seabed 2030 and how the MSDIWG can support Seabed 2030 in the future? Discussion on the how to proceed in a forward-looking perspective.	 Denis Hains Simon Riopel Vice Chair J. McMichael-Phillips All
Evaluation and preparation	**1755 - 1800**	Evaluation and preparations for Day Two	Chair

Day Two: March 18, 2021

Theme	Time (UTC+1, CET).	Subject	Responsible
Welcome	**1400 - 1430**	Welcome and the conclusions from Day One	Host/chair
Status		IHO MSDIWG Draft Work plan 2021 - 2024 and Action list - What are the outputs for each task?	Chair
		Action list - working on the tasks defined in the Action list.	Chair/All
Presentations and discussion	**1430 – 1630** 1430-1455 1455-1525 1525-1555 1555-1620 1620-1630	Status from: OGC MDWG UN-GGIM WG-MGI/ UN-GGIM IGIF Water The use of S-100 with relation to MSDI/MSP UN-GGIM IGIF updates IHO-Singapore Innovation and Technology Laboratory Discussion on the how to proceed in a forward-looking perspective.	 Trevor T. John N Johnathan P. Pearlyn Pang Pearlyn Pang All
Brake	**1630 - 1640**		
Presentations and discussion	1640 - 1710	OGC Federated MSDI Pilot, status and how to proceed – MSDI training material – The need for update. Update of C-17 – New update, possible alignment with UN-GGIM IGIF Water. Discussion on the how to proceed in a forward-looking perspective.	Trevor T. Johnathan P. Chair All
Work plan	1710 - 1730	Update of work plan and action list	All
	1730 - 1750	Any other business Election of Chair and Vice Chair. Next meeting. IHO MSDIWG 12 physical meeting – week 43 (25-29 OCT) 2021 in Singapore	All
Closing	1750 - 1800	Closing of the online meeting	Chair

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Aim of the online meeting and expected achievements.

The online meeting to focus on:

- Status and presentations from Internal and External stakeholders
- IHO MSDIWG Draft Work plan 2021 - 2024 and Action list
- Presentations from OGC MDWG, OGC pilot, UN-GGIM MWG and UN-GGIM IGIF
- Information about IHO-Singapore Innovation and Technology Laboratory
- Presentation about the use of S-100 with relation to MSDI/MSP
- Election of new Chair and Vice Chair

Status on the MSDI work of IHO (MSDIWG) - (Review of the papers circulated and responses to it)

DECISIONS OF THE 2nd SESSION OF THE IHO ASSEMBLY

19 The Assembly approved the revised Strategic Plan.

20 The Assembly tasked the Council to monitor closely the appropriateness and applicability of the proposed Strategic Performance Indicators and amend them if deemed necessary

IHO Strategic Plan 2021-2026

Goal 2: Increasing the use of hydrographic data for the benefit of society

2.1 Build a portal to support and promote regional and international cooperation in marine spatial data infrastructures (MSDI)

2.3 Apply UN shared guiding principles for geospatial information management in order to ensure interoperability and extended use of hydrographic data in combination with other marine-related data.

Goal 3: Participating actively in international initiatives related to the knowledge and the sustainable use of the Ocean

3.1 Collaborate with other bodies who deliver capacity building and training to improve effectiveness of capacity building activities and programmes

4th MEETING OF THE IHO COUNCIL IHO C-4

Decision and Action C4/06: The Council agreed to include a standing agenda item in future Council meetings on **the joint IHO-Singapore Innovation and Technology Laboratory** (deadline C-5). The Governing Board of the Laboratory to report on an annual basis. Council to advise the Lab on themes and projects to be considered. Possible topics for consideration of the Governing Board: - “Dual Fuel” Concept - Conversion of S-57 to S-101 and vice-versa.

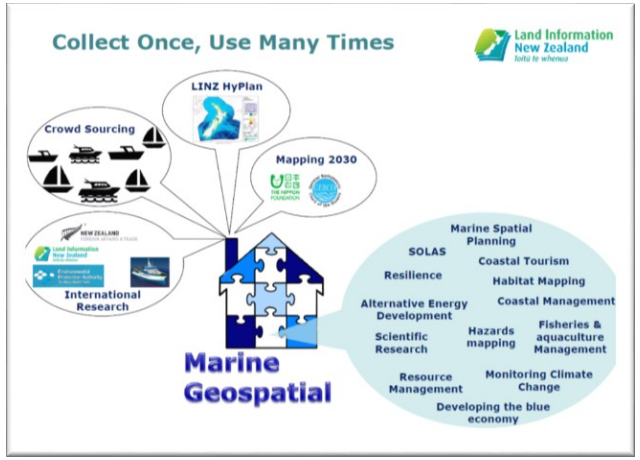
Decision and Action C4/14: Council to monitor the progress made by IRCC **to establish an IHO eLearning Center** based on proposal A-2 PRO-3.34 and the related recommendations of IRCC/CBSC. (deadline C-5).

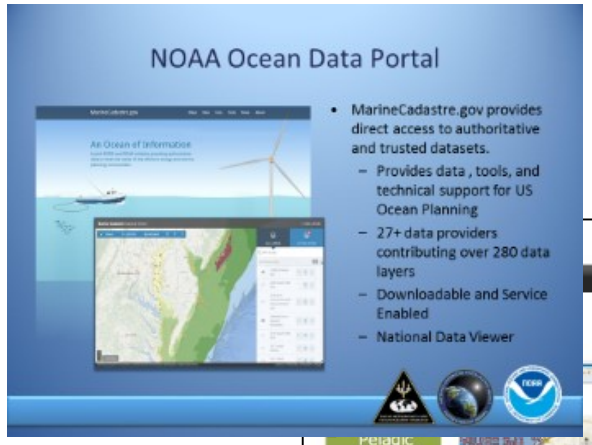
Decision C4/15: The Council thanked the ROK for their generous offer made to Member States to establish the IHO e-Learning platform.

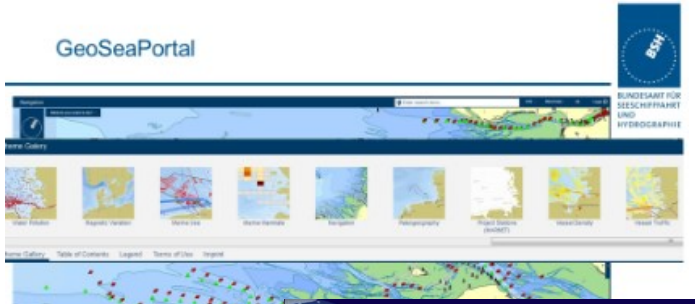
Decision and Action C4/36: Following the adoption of the **Revised Strategic Plan** by A-2, the Council noted that the effective implementation of the Strategic Plan 2021-2026 is to be considered as the main theme of supervision and control of the C. until A-3, keeping in mind to apply the principles of ISO 9001 (deadline A-3).

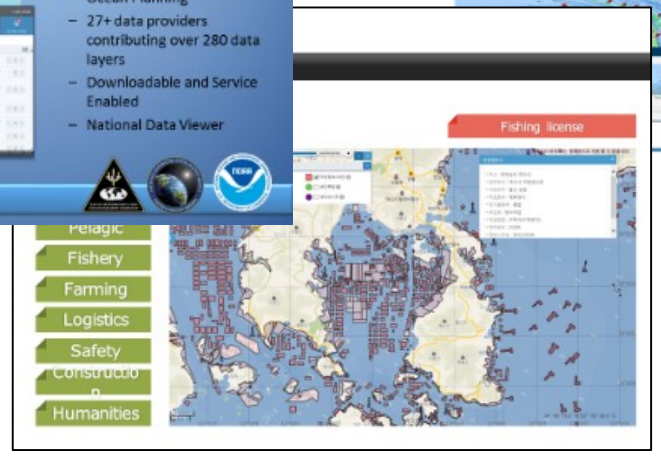
National presentation from members on the status of MSDI related to:

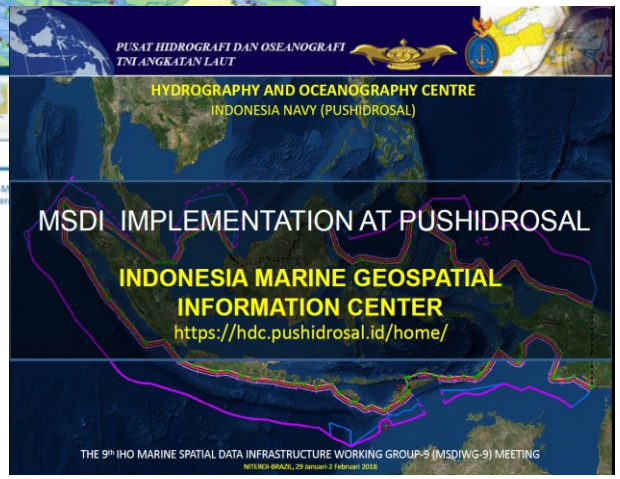
- The national SDI and MSDI cooperation
- National MSP

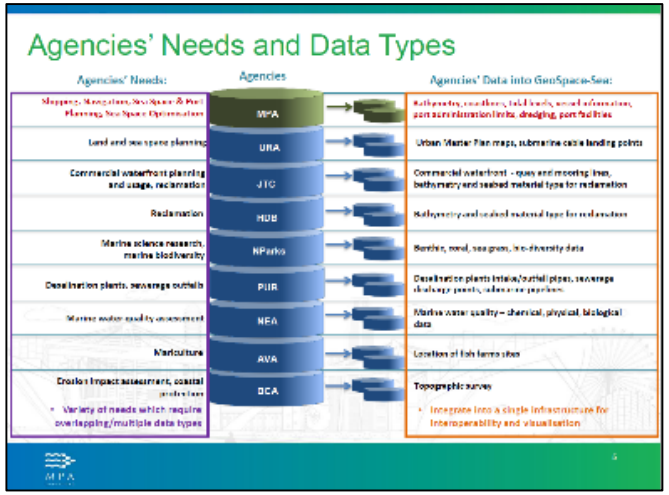












Conclusions/ reflections from day one

Sharing knowledge:

- Preparing for S-100
- Discoverability of data e.g. metadata

- MSDI Business Case
- Legally binding digital plans/maps
- Joining Land and Sea
- FAIR principles, (Findable, Accessible, Interoperable and Reusable)

- Strategic direction/looking ahead e.g. Geo Space Sea and Norway Geospatial Strategy
- Focus on different user needs => Type of data => Future needs

Arctic SDI:

- Arctic SDI Governances model, as a role model for RHC MSDI cooperation in the future?
- Arctic SDI Strategic plan
- Automated Harvesting prototype

National reports:

Status of national MSDI implementation in the national reports, should we use the NZ matrix as a new starting point?

IHO MSDIWG Draft Work plan 2021 – 2024

https://iho.int/en/msdiwg-online-2021

IHO Marine Spatial Data Infrastructures Working Group (MSDIWG)
DRAFT WORK PLAN 2021–2024

MSDI Tasks

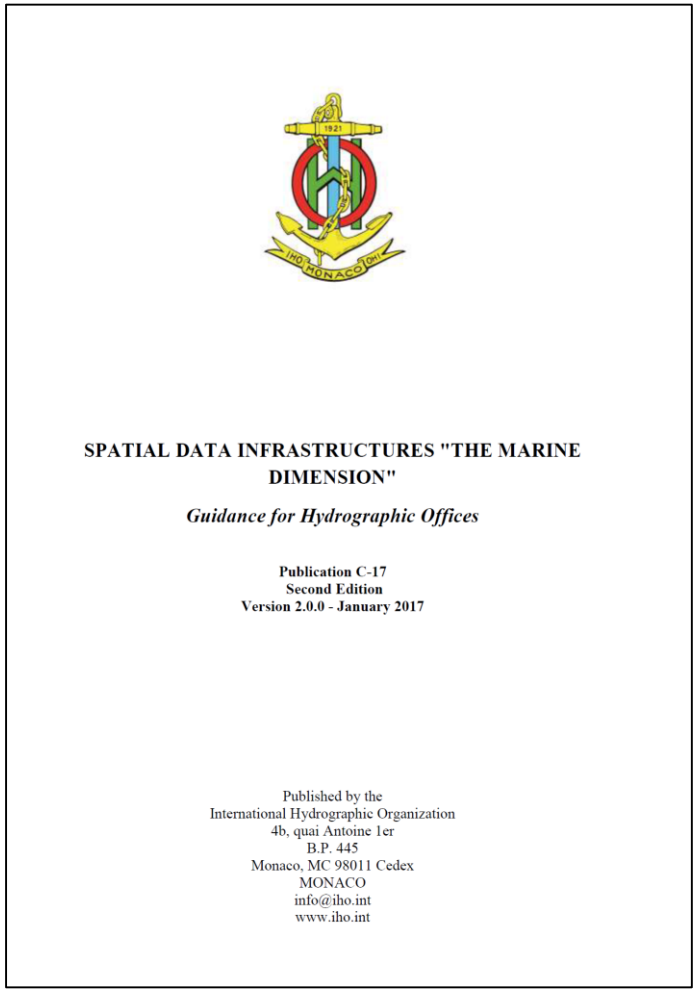
A	Communication and dissemination
B	Operational - Data sharing and management
C	Policies and governances – RHC. (Ensure that MSDI is a standing agenda item for RHCs' meetings (IHO Res 2/1997, as amended, refers))
D	Standards (OGC and HSSC)
E	Innovation – Future perspectives (2021 - 2030)
F	Training and education
G	Maintain and extend the publication IHO MSDI C-17 (IHO Task 3.9.2.1 refers)
H	Conduct annual meetings of MSDIWG, arranged back to back with 1-day MSDI Open Forum (IHO Task 3.9.1 refers)

No	Work item	Priority H-high M-med L-low	Milestones	Start Date	End Date	Status P-planned O-ongoing C-completed	Responsible / contact person(s)	Related Pubs / Standard	Remarks
A.1	Implement MSDI and MSP Maturity Assessments (national and regional) to enable consistent reporting from MS through RHC to IRCC.	H	1. Evaluate available template's 2. Decide on template. 3. Promote template to use.	2021	2022	P	USA (NGA)		
A.2 New	IHO Strategy Goal 2.1. Build a portal to support and promote regional and international cooperation in marine spatial data infrastructures (MSDI).		1. Investigate the different possibilities 2. Gather information and evaluate IHO MS user needs 3. Prepare a proposal for IRCC approval 4. Build a portal	2021	2024	P			
A.3	Develop and provide guidelines on MSDI implementation.	M	1. Guidelines in place based on outputs from tasks B1-3: C2	2017	2022	O	?		
A.4	Develop MS or RHC relevant Case Studies. Ref: C2	M	1. Arctic Region 2. Baltic Region 3. Brazil 4. East Asia Region	2017 2017 2018 2018	2022	P	USA Denmark Brazil Korea		Status? 1. Completed. Template available on MSDIWG

Update of C-17 – New update, possible alignment with UN-GGIM IGIF Water

Recommendations from MSDIWG 11

1. C-17 should be reviewed in depth but this is not urgent and should be aligned with other IHO communications
2. Review the content to reference other related (valuable) information e.g.
   - Training material
   - BoK
   - OGC Concept Study (e.g. Table A.1 Marine Data Themes)
   - IGIF
   - IHO Strategic Plan – C17 #9 role of an HO in MSDI???
3. Update outdated content or refer to OGC CDS (e.g. C17 #12 Challenges)
4. Use IGIF structure - relate the 9 Strategic Pathways to the Marine Domain
5. Review the format to make it easy to update/maintain e.g. wiki



SPATIAL DATA INFRASTRUCTURES "THE MARINE DIMENSION"

Guidance for Hydrographic Offices

Publication C-17
Second Edition
Version 2.0.0 - January 2017

Published by the
International Hydrographic Organization
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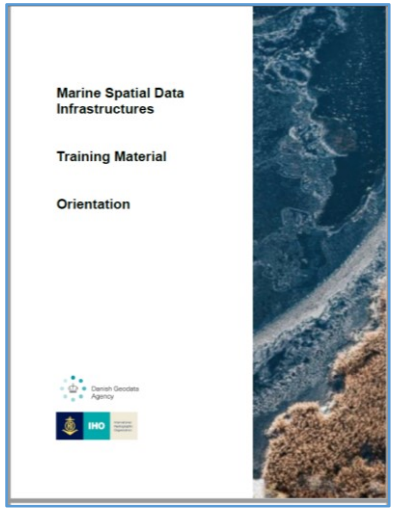
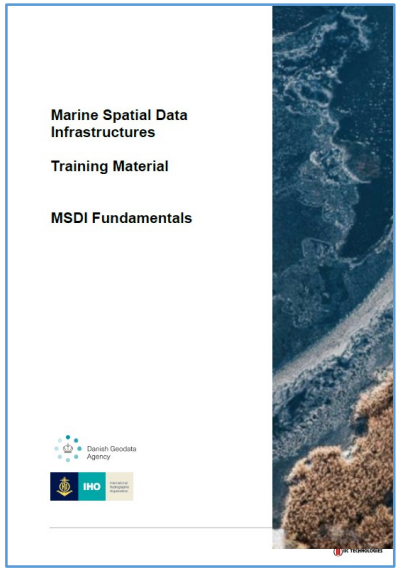
www.iho.int

MSDI Training material

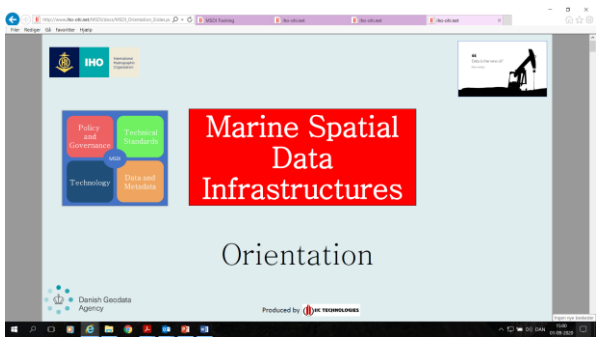
1. Download from the IHO website
2. Download via Dropbox
3. Use the interactive material in Youtube

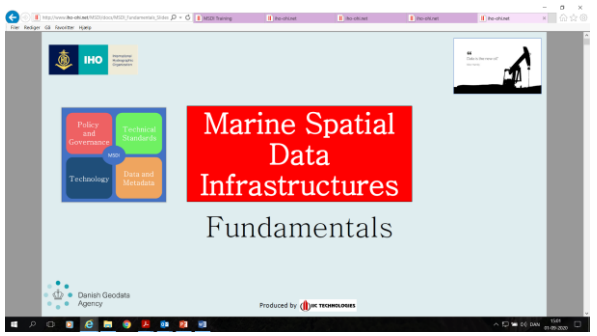
Training Booklet



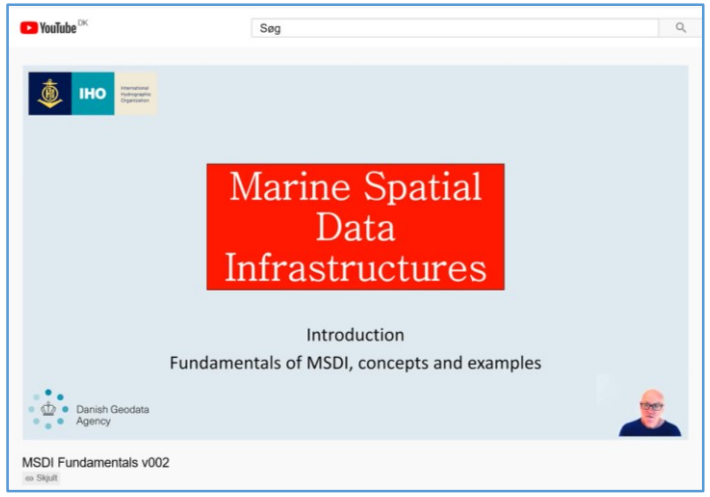


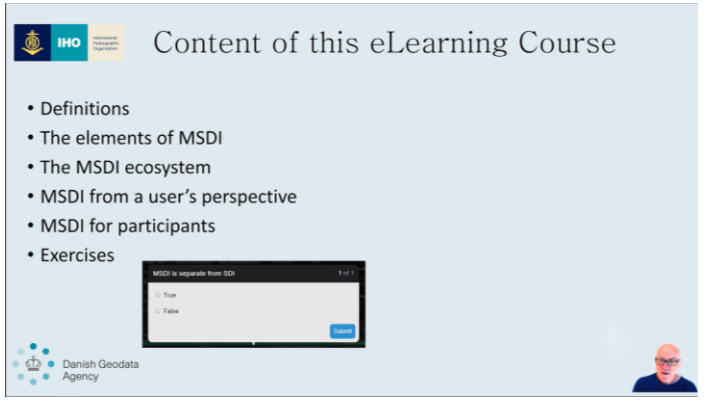
Presentation slides





MSDI Fundamentals interactive eLearning Course





Link https://iho.int/en/body-of-knowledge

IHO International Hydrographic Organization

OGC seeks sponsors for a cooperative OGC – IHO Federated Marine SDI Demonstration Pilot

New Pilot will demonstrate a multi-country, federated Marine Spatial Data Infrastructure for land/sea interface use-cases.

Responses are due by April 30, 2021.

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Support for a joint OGC/IHO Pilot.

As recommended by the successful OGC-IHO MSDI Concept Development Study (CDS), and as evidenced by the success of the OGC-IHO collaboration in the on-going OGC-IHO Maritime Limits and Boundaries pilot, we are seeking support to initiate a full-scale Pilot to demonstrate a multi-country, federated MSDI under a land/sea boundary use case.

This Pilot will show how the value of MSDI can unlock data and information for use beyond traditional providers and consumers of hydrographic data, across borders, and across domains inclusive of improved connections between the terrestrial and marine foundational communities.

1. **Demonstration** - The demonstration will show how using OGC, IHO and other open standards, enables the community's ability to find, obtain, utilize, share, interoperate and reuse data.
2. **Impact on OGC Standards** - Lessons learned, gaps, and the need for changes to the OGC standards baseline, will be summarized in an Engineering Report which informs the OGC standard program.
3. **Impact on IHO Standards** - Practical testing of relevant S-100 based IHO standards helps accelerate the process for adoption and implementation of IHO standards. The engineering report helps to inform the work of the IHO HSSCs Working Groups and will provide inputs to those groups to enhance the framework and its component standards.

Sponsorship. The rough order of magnitude for sponsorship is USD 400,000, shared across multiple supporting sponsors.

When Would the Pilot Start?
The current plan is for the kick-off of the pilot in the second quarter of 2021, with the full Pilot being completed in 2022, subject to change based on sponsor requirements.

Contact for more Information.
Trevor Taylor (ttaylor@ogc.org) or Scott Simmons (ssimmons@ogc.org)

OGC
Making location count.

OPEN GEOSPATIAL CONSORTIUM (OGC)

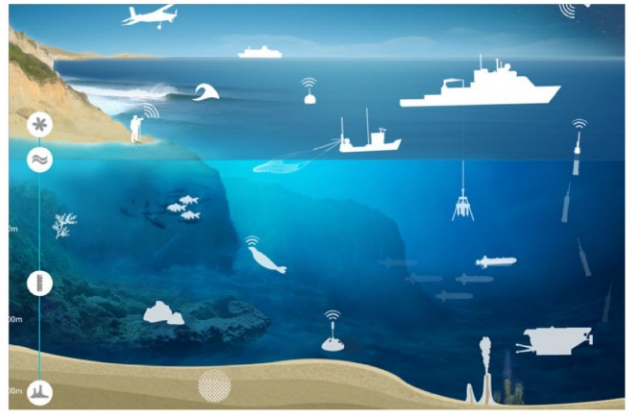
Proposed Partnership with

INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO)
Member States

OGC – IHO Federated Marine SDI Demonstration Pilot: FMSDI

Land/Sea Interface

Call for Support



Ocean Data Information and Services, - France

IHO International Hydrographic Organization

The Joint IHO-Singapore Innovation and Technology Laboratory

Maritime and Port Authority of Singapore
IHO MSDI WG Online Meeting
17 – 18 March 2021

IHO International Hydrographic Organization

MSDI-related Projects

- Submit proposals for projects:
  - IHO Member State user needs
  - Future trends affecting MSDI
  - Monitor and support UN SDG 14
- Collaborate with other organisations (UN-GGIM MGI WG, OGC)
- *Other IHO Lab Projects: S-100, Smart ENCs, Autonomous Shipping*

MSDI as source for (authoritative) data

- Provide data for R&D (regional and/or national MSDIs)
- Explore and share data partnership policies and exchange mechanisms for R&D.

Next meeting. IHO MSDIWG 12 physical meeting – week 43 (25-29 OCT) 2021 in Singapore