

# SWPHC 19

## Marine Spatial Data Infrastructures Working Group

### MSDIWG

SWPHC 19

VTC, 23-25 Feb 2022

By Pearlyn Pang  
MSDIWG Vice-Chair



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SPWHC19-6.5

## MSDIWG meeting

The 12th Meeting of the IHO Marine Spatial Data Infrastructures Working Group (MSDIWG) took place via VTC from 17 to 18 of March 2021.

### Focus areas of the online MSDI meeting March 2021:

- Status and presentations from Internal and External stakeholders
- IHO MSDIWG 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 and how the MSDI community could be involved in the IHO - Singapore Innovation and Technology Laboratory and provide some ideas
- Presentation about the use of S-100 with relation to MSDI/MSP,
- Election of new Chair and Vice Chair



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# Conclusions/ reflections from the MSDIWG online meeting 17 to 18 of March 2021

## 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. Singapore GeoSpace-Sea and Norway Geospatial Strategy
- Focus on different user needs => Type of data => Future needs

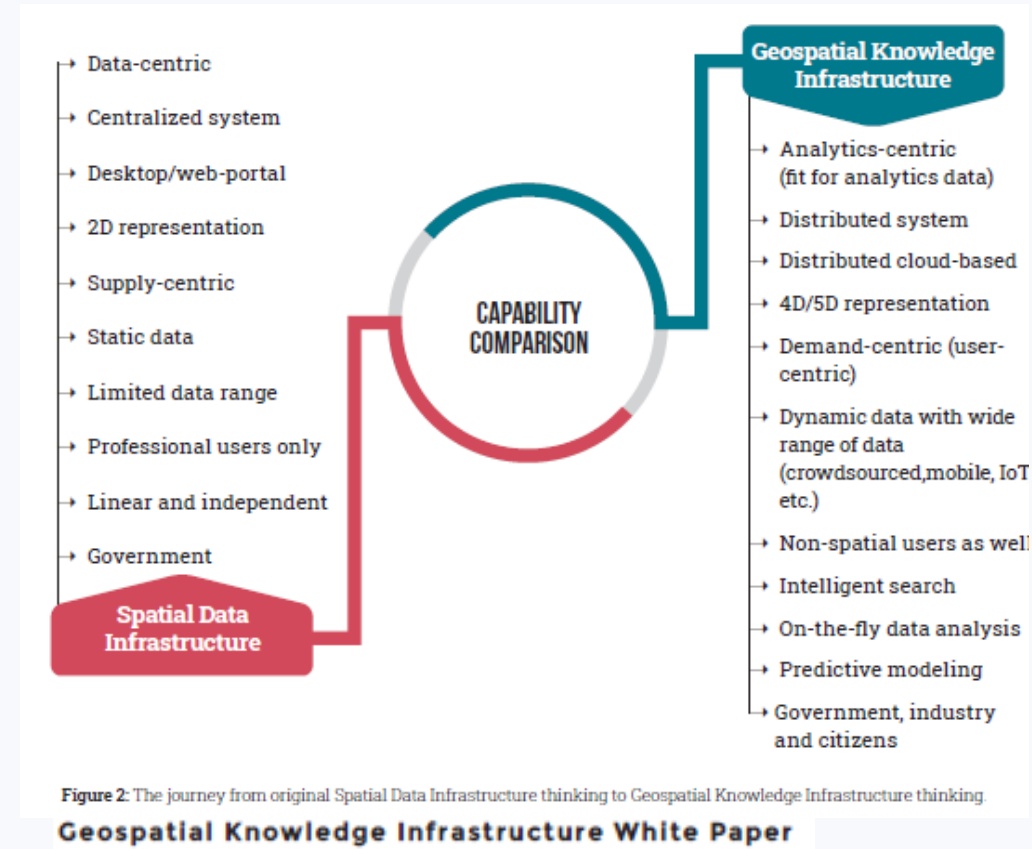
## Arctic SDI:

- 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.

## MSDI ver. 2.0



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## S-100 from a MSDI perspective

S-100 is defined as the Universal Hydrographic Model. Although MSDI is not a single use case in itself, but is a bridge to broader, cross-thematic uses and other communities. But to be truly universal S-100 should be able to model, encode and interchange data equally for these other use cases.

Examples of MSDI use cases are:

- Marine Spatial Planning,
- Coastal Zone Management
- Environmental protection and
- Search and Rescue.

Data to support these use cases are often predicated on data elements such as:

- administrative areas,
- marine protected areas,
- named sea areas and regions,
- dense bathymetry,
- coastline and many others are already defined and bound in existing product specifications.

S-100 defines a powerful mechanism for creating cross-thematic data products within a rigorous framework by reusing these features in multiple product specifications, creating the capacity for reuse within the data producer's own infrastructure.

### OGC – IHO FEDERATED MARINE SPATIAL DATA INFRASTRUCTURE PILOT

Sample of MSDI data that would possibly be required for the MSDI scenario:

- Maritime Limits and Boundaries
- Bathymetry Data (Crowdsourced, Multibeam, Single-beam, Etc.)
- Historic Marine Environment Data
- Coastline Data
- Continental Shelf Boundary
- Digital Elevation Models
- Seafloor and Water Column Backscatter Data
- Marine Meteorological Data
- Ocean Current Data
- Sea State Observation Data
- Sea State Forecast Data
- Sea Level Data
- Tide Forecast Data
- Marine Ecosystems
- Fisheries Data
- Geographical Regions (Marine Names / Gazetteer)
- Aids to Navigation
- Pipelines
- Ports and Harbour Facilities
- Shoreline Constructions (e.g., Tide Gauges, Jetties)

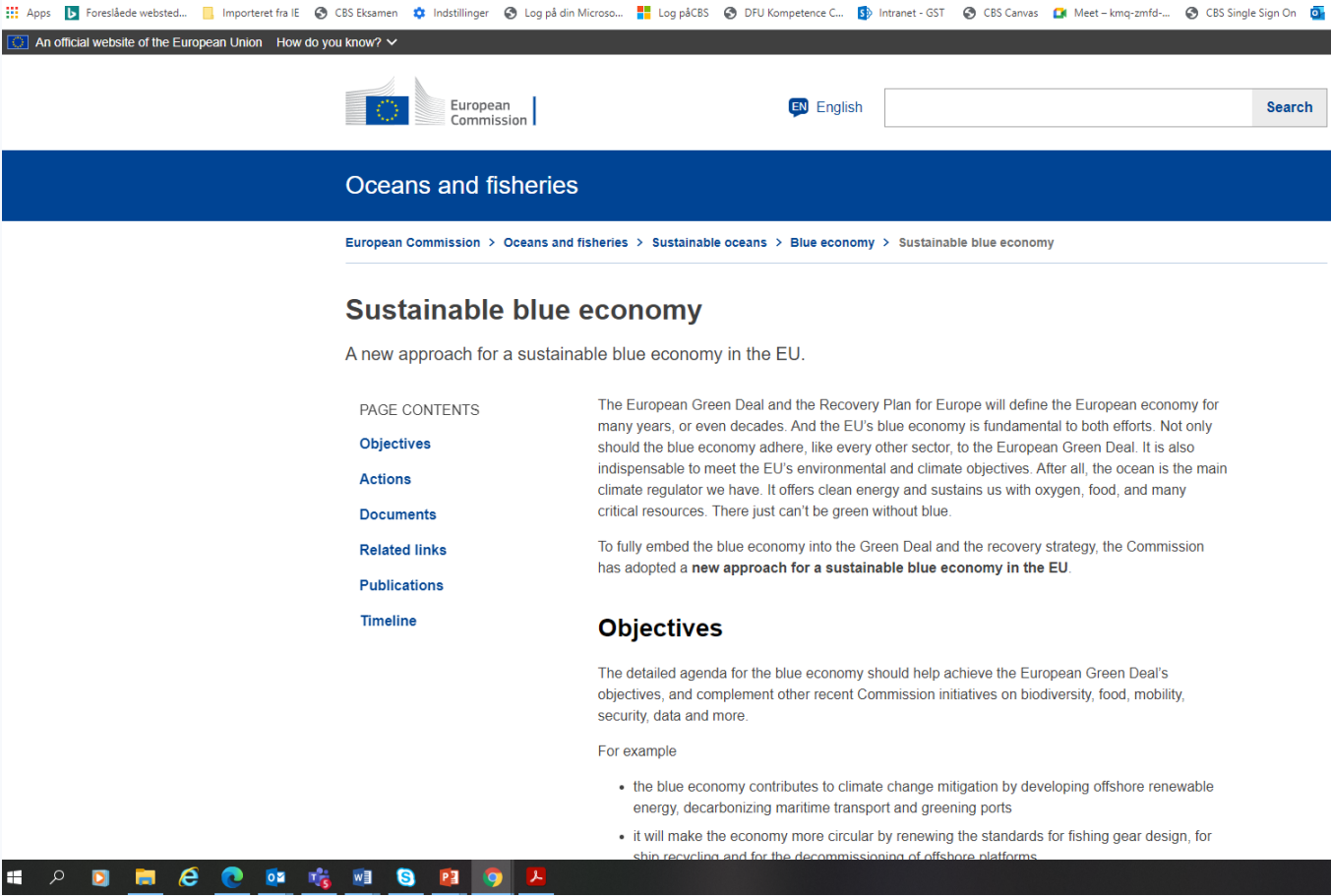


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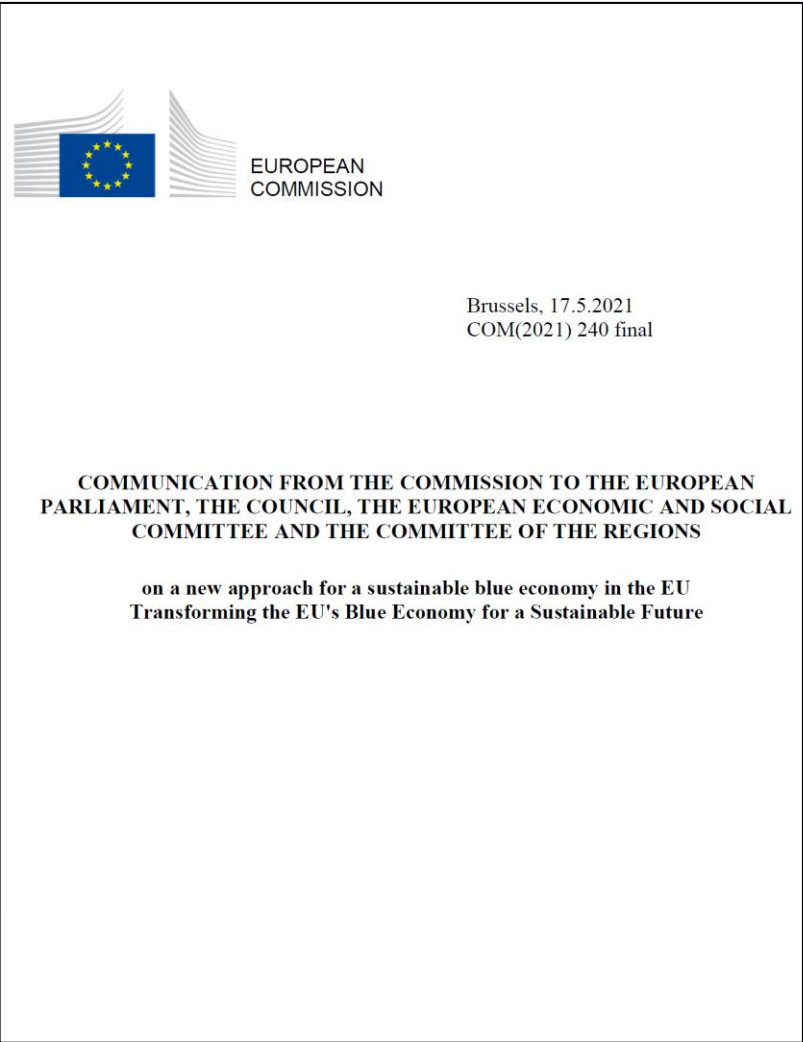


# MSP/MSDI - EU's New Blue Economy for a Sustainable Future



[https://ec.europa.eu/oceans-and-fisheries/ocean/blue-economy/sustainable-blue-economy\\_en](https://ec.europa.eu/oceans-and-fisheries/ocean/blue-economy/sustainable-blue-economy_en)

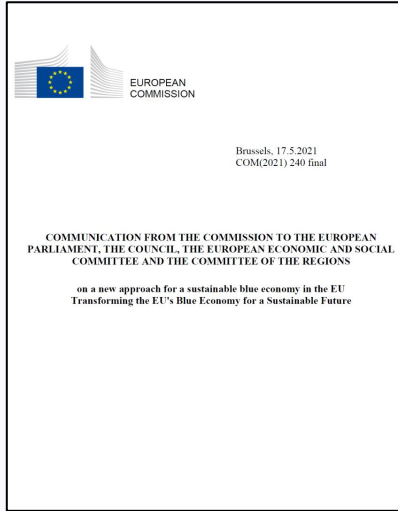
## A new approach for a sustainable blue economy in the EU - Transforming the EU's Blue Economy for a Sustainable Future



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# MSP/MSDI - EU's New Blue Economy for a Sustainable Future



The European Green Deal calls for a 90% reduction in greenhouse gas emissions from all modes of transport, and this includes **maritime transport**. Our **sea lanes** are a key link to the global trading system.

**Increasing the uptake of short-sea shipping** instead of using more polluting modes;

Support Member States, through the reinforced Union Civil Protection Mechanism and anti-pollution measures of the European Maritime Safety Agency, to **prepare for and respond to marine pollution accidents**.

Table a proposal for legally binding EU targets **to restore degraded ecosystems, in particular major fish spawning and nursery areas and areas with the greatest potential to capture and store carbon and to prevent and reduce natural disasters**;

**Stimulate cooperation between coastal regions** and islands sharing common needs in the same sea basin to develop adaptation strategies and joint approaches to **coastal zone management**, invest in sustainable coastal defences and adapt coastal economic activities;

**Ocean knowledge - Reliable, high-quality and harmonised ocean data** are the prerequisite for a sustainable transformation of the blue economy. Better knowledge of the ocean and its ecosystems, together with free access to data, will enable industry, public authorities and civil society to make informed decisions.



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## **A summary of suggested initiatives, with relation to S-100 from a MSDI perspective is:**

1. Investigate, in discussion with the S-100WG and IHO Registry Manager whether a proposal for a MSDI domain in the registry is required
2. Assess the potential for MSDI-specific products using S-100 addressing key use cases.
3. Prepare, through stakeholder input, proposals for revision of C-17 in respect of S-100 implementation.
4. Continue to re-orient C-17 and MSDIWG activities to reflect the respective approaches of the UN-GGIM/IGIF and IHO communities.



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# UN-GGIM-WG on Marine Geospatial Information

- Working closely with MSDIWG and the OGC
- Integrated Geospatial Information Framework (IGIF-H) Operational Framework for Integrated Marine Geospatial Information Management: Under development. Please be on the lookout for opportunity to review and contribute to the document's development.

United Nations » Department of Economic and Social Affairs » Statistics Division

Statistics Division

TOPICS ▾ DATA ▾ METHODOLOGY ▾ EVENTS ▾ PUBLICATIONS ABOUT ▾

 UN-GGIM



UN-GGIM > Working Group on Marine Geospatial Information

The Committee of Experts on Global Geospatial Information Management (UN-GGIM) at its 7th session, held in New York, 2-4 August 2017, endorsed the establishment of a Working Group on Marine Geospatial Information together with the Terms of Reference.

A key work program of UN-GGIM is to increase significantly the availability of high-quality, timely and reliable geospatial information including for the marine environment in support of national development priorities and the 2030 Agenda for Sustainable Development. Marine geospatial information will be needed to meet the demand for critical analysis when questions of governance, management and coordination pertaining to our inland waters, seas and oceans, and its resources arise. These include spaces for recreation, telecommunication, transportation and natural resources yielding food, medicine, energy and minerals, etc. In addition, this information will play a vital role in measuring, monitoring and mitigating climate risk in our inland waters, seas and oceans. While honoring technologically good practices and currently adopted standards and schemas, the Working Group will work to agree upon appropriate marine spatial data infrastructures and its integration with terrestrial spatial data infrastructures into a national geospatial information infrastructure that will also include standards for mapping the seas and oceans, and marine observations. The Working Group will also support the geospatial data management aspects of inland waters.

The Working Group will promote geospatial data interoperability - a key requirement for sustainable development in fields such as inland waters, seas and ocean use planning and administration, construction, water management and hazard assessment.

### A. Co-Chairs

	<b>Singapore</b> Ms. Pearlyn Pang Maritime and Port Authority		<b>United States of America</b> Mr. John Nyberg National Oceanic and Atmospheric Administration
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### B. Objectives

The objectives of the Working Group, as decided at the 7th Session of UN-GGIM, are to:

- ▶ play a leading role at the policy level by raising political awareness and highlighting the importance of reliable, timely and fit-for-purpose

### Annual sessions

- ▶ Eleventh session
- ▶ Tenth session
- ▶ Ninth session
- ▶ Past sessions


### Overview


- ▶ Mandates
- ▶ Aims and Objectives
- ▶ Bureau
- ▶ Regional Committees
- ▶ Functional Groups
- ▶ Thematic Groups

### Quick links

- ▶ UN-GGIM Events
- ▶ Past Events
- ▶ Group of Experts on Geographical Names
- ▶ Photo gallery

### Tweets by @UNGGIM

 UN-GGIM Retweeted

 UNGGRF

<https://ggim.un.org/UNGGIM-wg8/>

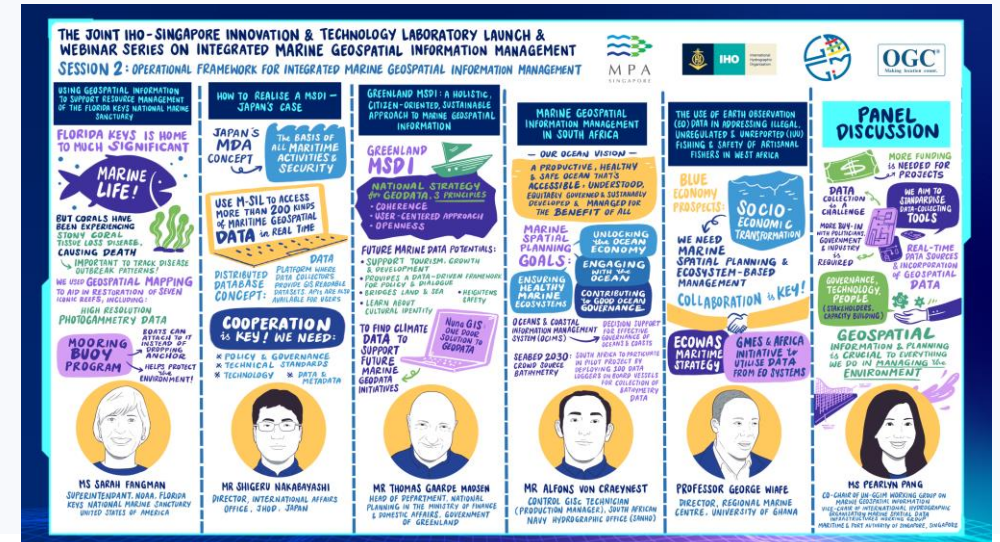
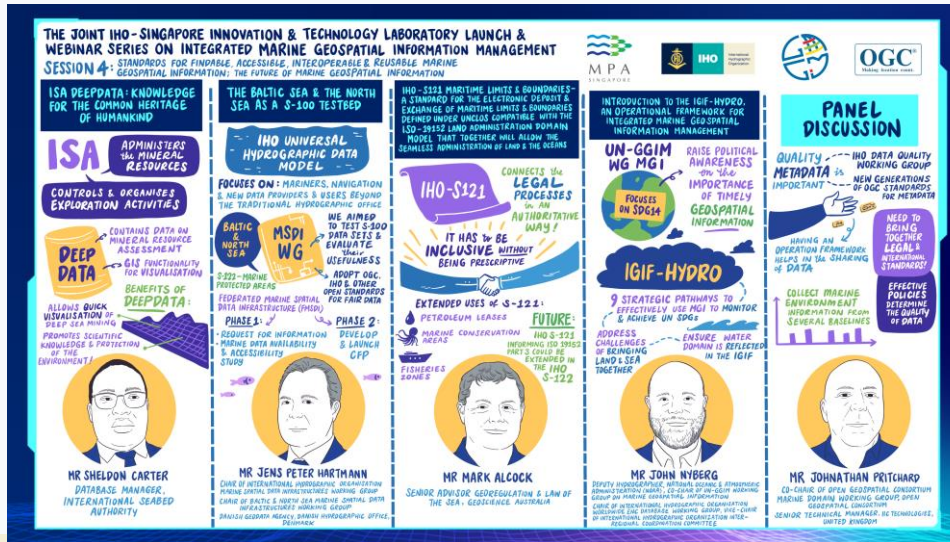


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# Webinar Series on Integrated Marine Geospatial Information Management

- Series of virtual webinars on marine geospatial information held in conjunction with the launch of the IHO-Singapore Innovation and Technology Laboratory (25 – 29 October 2021) was successfully held a lead up to the in-person international seminar in 2022, Singapore.
- The webinar series was an important opportunity to advance the marine geospatial information, marine spatial data infrastructures and FAIR (marine) data body of knowledge despite the challenges of our global situation. The presentations and summary infographics can be found here:  
[https://ggim.un.org/meetings/2021/WG-MGI\\_webinar/](https://ggim.un.org/meetings/2021/WG-MGI_webinar/)



## Dates and venue for next MSDIWG meeting

- The MSDIWG plans to arrange the next IHO MSDI WG 13 meeting back-to-back with the next UN-GGIM WG MGI and OGC Marine Domain WG meetings, and a jointly organized international seminar on marine geospatial information.
- Singapore (MPA) will host the next physical back-to-back meetings of the three working groups and an international seminar, 9 – 13 May 2022.



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## For SWPHC to note and consider:

- Upcoming MSDI questionnaire to determine user needs for a future IHO portal that can support and promote regional and international cooperation with regards to MSDI
- IHO MSDI Body of Knowledge (<https://iho.int/en/body-of-knowledge>)
  - MSDI Training Materials
- International Seminar on Marine Geospatial Information and next MSDI WG meeting, 9 – 13 May 2022, Singapore



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# Thank you



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