

IHO Publication C-17: Spatial Data Infrastructures: "The marine dimension"

Presentation to the MSDIWG



Overview

- Section 3.3 Enhancing an MSDI
- Chapter 4: IGIF 9 Pathways from the HO Perspective
- Chapters 4.1 Governance and 4.3 People co-led by Canada and UKHO
- 4.1 Governance
 - 4.1.1 Governance and Institutions
 - 4.1.2 Policy and Legal
 - 4.1.3 Financial Contributor: Germany, Canada
- 4.3 People
 - 4.3.1 Partnerships
 - 4.3.2 Capacity and Education
 - 4.3.3 Communication and Engagements



Section 3.3: Enhancing an MSDI

- Chapter 4 lead by Oceanwise with UKHO as a contributor with others.
- Contributed content highlighting that the UN-GGIM IGIF principles and IHO MSDI model can synergise together, instead of being duplicative or treated separately.
- The MSDI Four Pillars is still a useful concept as a stepping-stone to the full IGIF ecosystem, as roughly the "middle Technology layer" of the IGIF Nine Pathways (*helpful simplification*).
- For some hydrographic offices, the MSDI Four Pillars is an effective starting point to consider transformation efforts in a more manageable and HO-specific context.
- In a nutshell, an effective "IGIF-aligned MSDI implementation" should ideally seek to ...
 - ✓ "Drive Technology, don't be Driven by Technology"
 - ✓ "Make the Data Count, don't just Count the Data"

- These are two engaging catchphrases to frame the attention of decision-makers and officials.
- ✓ The top and bottom layers of the IGIF Nine Pathways (*Governance & People*) are crucial for these two outcomes



Chapter 4.1 Governance

➤ Marine Spatial Data Governance

- Marine Spatial Data Governance consists in an effective framework of leadership, policies, laws, directives, regulations, agreements, partnerships, processes and procedures focussing on marine data. The aim is to oversee and ensure the continuity of good decision-making prioritized based on scientific evidence and authoritative data in order to facilitate sustainable social, economic, environmental protection and scientific human activities in marine space.
- ➤ inspired from the work of Sutherland and Nichols, 2006, Edwards and Evans, 2017

 Sutherlands, Michael and Sue Nichols.- Issues in the Governance of Marine

 Spaces; International Federation of Surveyors (FIG), Article of the month,

 September 2006



Chapter 4.1 Governance

- ➤ Marine Spatial Data Governance
 - > Delimit how and where HOs are involved and the scope of their MSDI mandate.
 - > Adaptability to local, national, regional and international priorities and institutions
 - ➤ Organisation of an ecosystem of systems requiring consultation and coordination with marine domain stakeholders to answer non-navigational users' needs.
 - Ensuring MSDI continuity: Telling the story to secure the value and funding
- ➤ Levels of Governance over Marine Spatial Data
 - ➤ Foundational data, Hydrographic and legal survey, Administrative and ocean activities, Environment and Climate Change monitoring, Marine Spatial Plans, Bridging land and sea, Adoption of MSDI themes, production of decision-ready data

Repurposing the UN-GGIM IGIF Governance and Institutions Arrangements Pathway for a MSDI:

Mapping Chapter 3's steps necessary to establish an MSDI to IGIF governance actions

Forming the Leadership



Governing Body Geospatial Coordination Unit(s) Specialist Working Groups

Define HO people roles

Identify: MSDI Champion at highest leadership levels Define engagement at Senior Management Level

Appropriate IHO Regional Hydrographic Commission(s) IHO MSDI WG

Establishing Accountability



Governance Model

National and regional levels Senior Management level HO level

Decision-makers, Policies level Data providers, stakeholders arrangements Approvals for involvement, mandates

Tracking Success



Monitoring and Evaluation Success Indicators

Communicate progress and milestone achievements to stakeholders and senior management levels

Tell the story by demonstrating the value achieved through success

Track opportunities for change and improvement

ACTIONS

Defining Value

Strategic Alignment Study Value Proposition Statement

Define the HO's MSDI role to fulfill stakeholder requirements Identify complementary value from other data providers to the MSDI: what data, best way to interact, best way to share the data

National white paper development Define internal HO benefits

Define benefits, opportunities to be derived for all non HO stakeholders

Creating a Plan of Action



Country-level Action Plan

Plan engagement with stakeholders and all other data providers and work to get stakeholder support Establish HO's MSDI data content, MSDI people skills and knowledge

Communications plan:

promote the benefits and opportunities to be derived from MSDI to all non-HO stakeholders + communications with stakeholders

Gain necessary HO approvals for involvement Plan the HO's involvement in the MSDI development

Setting Direction



Change Strategy

Geospatial Information Management Strategy

Define success indicators

Invite other relevant satekholders and all dother data providers to engage with HO Setup and participate in MSDI stakeholder groups

Identify national or regional intitiatives/legislation which might support MSDI and establish the governance

Prepare and define the HO policy for MSDI

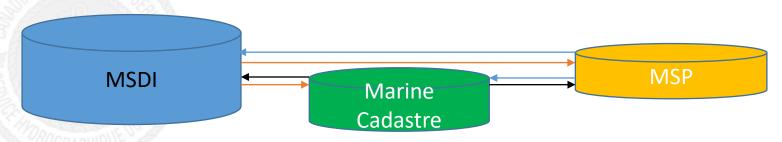
4.1.1 Systems supporting marine spatial data governance

- 1. Marine Spatial Planning (MSP): Planning of concurrent marine activities
- 2. Marine Cadastre: Geospatial depiction of Marine Regulatory Framework/Georegulations
- 3. Marine Spatial Data Infrastructure (MSDI): Infrastructure

These systems and their data governance are interdependent and complementary.

The Marine Cadastre is often the missing piece outside of the HOs mandate

MSDI supports, enables and facilitates the other two systems



Section 4.1.2 Policy & Legal

- ➤ Alignment with IGIF-H Policy and Legal Pathway not completed
- ➤ Compliance with the national marine and data policy, administrative and legal framework must be maintained at all times.
- ➤ Legislative and administrative gaps as well as marine domain mandates to be examined carefully to assess whether domestic marine laws are sufficient to enable, maintain and sustain the MSDI capacity building
- Open Data policies open opportunities for encouraging scientific and economic force multiplier
- ➤ Marine Cadastre is needed to visualise spatial extents of Rights, Restrictions and Responsibilities according to Georegulations and clarify jurisdictions.
- ➤ Several examples of enabling policy and legislation are available



Section 4.1.3 Financial

➤ Nippon-Foundation –GEBCO Seabed 2030 project is given as a use case for an international project delivering results through a funding model

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Chapter 4.3: People

- > Chapter 4.3 joint lead with Canada UKHO contributed on the (*Governance of*) People
- Contributed content highlighting the value of common and standardized MSDI (Data)
 Governance role (sub)titles to promote interoperability within and between organisations.
- An effective MSDI will require organisational interoperability between decision-makers <u>across</u> institutional boundaries, as much as transactional data interoperability, sharing, and exchange.
- People-centric interoperability will enable more agile and responsive decision-making with "faster time to consumer" of new or updated data in a changing Technological environment.
- ➤ 4.3.1 Partnerships: Diplomatic-style multilateral MSDI Governance, Steering, and Working Groups to ensure inclusive <u>and</u> equitable participation of <u>all</u> agencies needed for an MSDI.
- ➤ 4.3.3 Engagement: The need for coordinated communication to build trust and awareness of assured, authoritative data in an era of misinformation, disinformation, and mal-information.

Chapter 4.3 People

- ➤ New roles for HOs and their stakeholders:
 - > HO people's roles must integrate in a whole of government approach
 - ➤ MSDI Champion, Information asset owner, Data custodian, Data Steward, ...
 - > Some of these new roles are discussed in the Hydrographic Review Volume 28's paper: "The Hydrographer of the Future – Reflections on an International Virtual Workshop" by CHS (Foroutan, Bathia, Béchard, November 2022). (new material to be included)
- For HOs, supporting MSDI literacy as part of their training is recommended.
- > Includes discussion about all involved people from data producers to users.