

Report of the MSDI Working Group to SAIHC 16

Outline of NHC

Membership

Chair: Jens Peter Weiss Hartmann, Denmark

Vice-Chair: Sebastian Cariso, USA

Secretary: Assistant Director Alberto Costa Neves, IHO Secretariat

Member States:

Argentina, Australia, Brazil, Canada, Cuba, Denmark, Estonia, Finland, **France**, Germany, Indonesia, Italy, Japan, Malaysia, Nigeria, Netherlands, New Zealand, **Norway**, Philippines, **Portugal**, Republic of Korea, Romania, Slovenia, Spain, Singapore, Thailand, Ukraine, **UK**, USA

Expert Contributors:

OGC; ICPC/EGS Group; Teledyne Caris; Esri; GSDI Association; OceanWise; YottaOcean Inc.; Geosciences Australia; IIC Technologies Inc.

Meetings since IRCC10 (June 2018)

Meetings:

The MSDIWG10 meeting of IHO Marine Spatial Data Infrastructures Working Group (MSDIWG) took place in Busan, Republic of Korea, 4 - 5 March 2019. The meeting was followed by the OGC Marine DWG Meeting, 6 March 2019 and the UN-GGIM Working Group on Marine Geospatial Information (WGMGI1) Meeting, 7 - 9 March 2019.

Dates and venue for next meeting:

The IHO/MSDIWG will arrange a MSDI Open Forum meeting, the MSDIWG11 meeting with an integrated OGC Marine Domain WG part in 2020 in Rostock, Germany 24-27 February.



Principal activities and achievements

- 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 - 2023)
- 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)

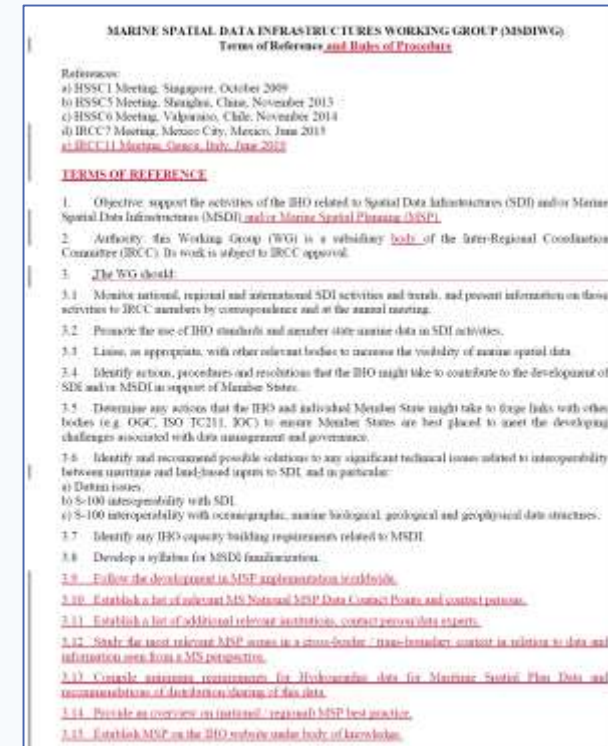
New Terms of Reference of MSDIWG.

The IRCC10 meeting agreed that the IHO MSDIWG should follow the development in MSP implementation worldwide and focus on the following topics:

- establish a list of relevant MS National MSP Data Contact Points and contact persons
- establish a list of additional relevant institutions, contact person/data experts
- study the most relevant MSP issues in a cross-border / trans-boundary context in relation to data and information seen from a MS perspective
- compile minimum requirements for Hydrographic data for MSP Data and recommendations of distribution/sharing of this data
- provide an overview on (national / regional) MSP best practice
- establish MSP on the IHO website under body of knowledge.

Consequently, the MSDIWG Terms of Reference and Rules of Procedures has been adjusted to address these topics.

The MSDIWG Terms of Reference and Rules of Procedures has also been adjusted to be aligned with the other IRCC WGs.



Members of Member States, Expert Contributors and Accredited NGO Observers, willingness to participate. *Membership is open to all Member States of the*

Members and Accredited NGO Observers may indicate their willingness to participate in the following manner: by a representative of a Member State. The election of the Chair and Vice-Chair shall be determined by vote of the Member States present and voting. If the Chair is unable to carry out the duties of the office, the Vice-Chair shall assume the Chair with the same powers and duties.

4. The Chair shall have a seat in the IRCC and shall report on the activities of the WG to the IRCC. The Chair shall also have a seat in the IRCC and shall report to each ordinary session of the Assembly through the Council.

5. The WG shall work by correspondence, and use more meetings, workshops or seminars only if required. When meetings are scheduled, and in order to allow any WG submissions and reports to be considered in IRCC, an item, WG meeting should not normally occur later than six weeks before a meeting of the IRCC.

6. Decisions should generally be made by consensus. If votes are required on issues or to endorse proposals presented to the WG, only Member States may cast a vote. Votes shall be on the basis of one vote per Member State represented. In the event that votes are required between meetings or in the absence of meetings, including for elections of the Chair and Vice Chair, this shall be achieved through a postal ballot of those Member States on the current membership list.

7. If a secretary is required it should normally be chosen from a member of the WG. The draft minutes of meetings shall normally be distributed by the Secretary within six weeks of the end of meetings and member comments should be returned within three weeks. Final minutes should be distributed and passed on the IRCC website within three months after a meeting.

8. Expert Contributor membership is open to entities and organizations that can provide a relevant and constructive contribution to the work of the WG. Expert Contributors shall seek approval of membership from the Chair. Expert Contributor membership may be withdrawn in the event that a majority of the Member States represented in the WG agree that an Expert Contributor's continued participation is irrelevant or unconstructive to the work of the WG.

9. All members shall inform the Chair in advance of their intention to attend any meetings of the WG. In the event that a large number of Expert Contributor members seek to attend a meeting, the Chair may restrict attendance by inviting Expert Contributors to act through one or more collective representatives.

10. The working language of the WG shall be English.

Activities

The main subjects dealt with during the reporting period:

- Information on MSDI implementation from MSDIWG members
- MSDI training and e-learning
- Maturity Assessment template to RHC
- Update of C 17
- The IHO/OGC conceptual study
- Cooperation with OGC
- Cooperation with UN-GGIM
- Communication
- The MSDIWG to focus on “security”
- IHO strategic plan and establishing a draft IHO MSDIWG input
- Spatial Data Quality
- S-100
- Cooperation with the International Cable Protection Committee

RHC MSDI Ambassadors

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.

It is recommended that the National Reports include the topics from C-17, item 2.1 on what constitutes a MSDI:

- Policy and Governance
- People & Organizations
- Enablers (the framework for data acquisition, management, updating and dissemination)
 - o Standards
 - o Technology
 - o Metadata
- IHO S-100 Universal Hydrographic Data Model
- Content
- Education and Learning

MSDI training material

The establishment of MSDI training material, including the teaching material, will be divided into two phases:

Phase 1. MSDI orientation. The course is aimed at students who are marine-focused, but have very little experience of MSDI concepts or practice.

Phase 2. Fundamentals of a Marine Spatial Data Infrastructure. The course is aimed at students who are marine geospatial professionals but who have very little experience of MSDI. It is designed as an introductory, one-day course in the fundamentals of MSDI concepts, theory, and practice.

There are two main uses of these documents in conjunction with the course slides themselves.

1. A participant who wants to download and self-learn from the materials provided.
2. A participant who wishes to deliver the materials in a group setting with stakeholders.

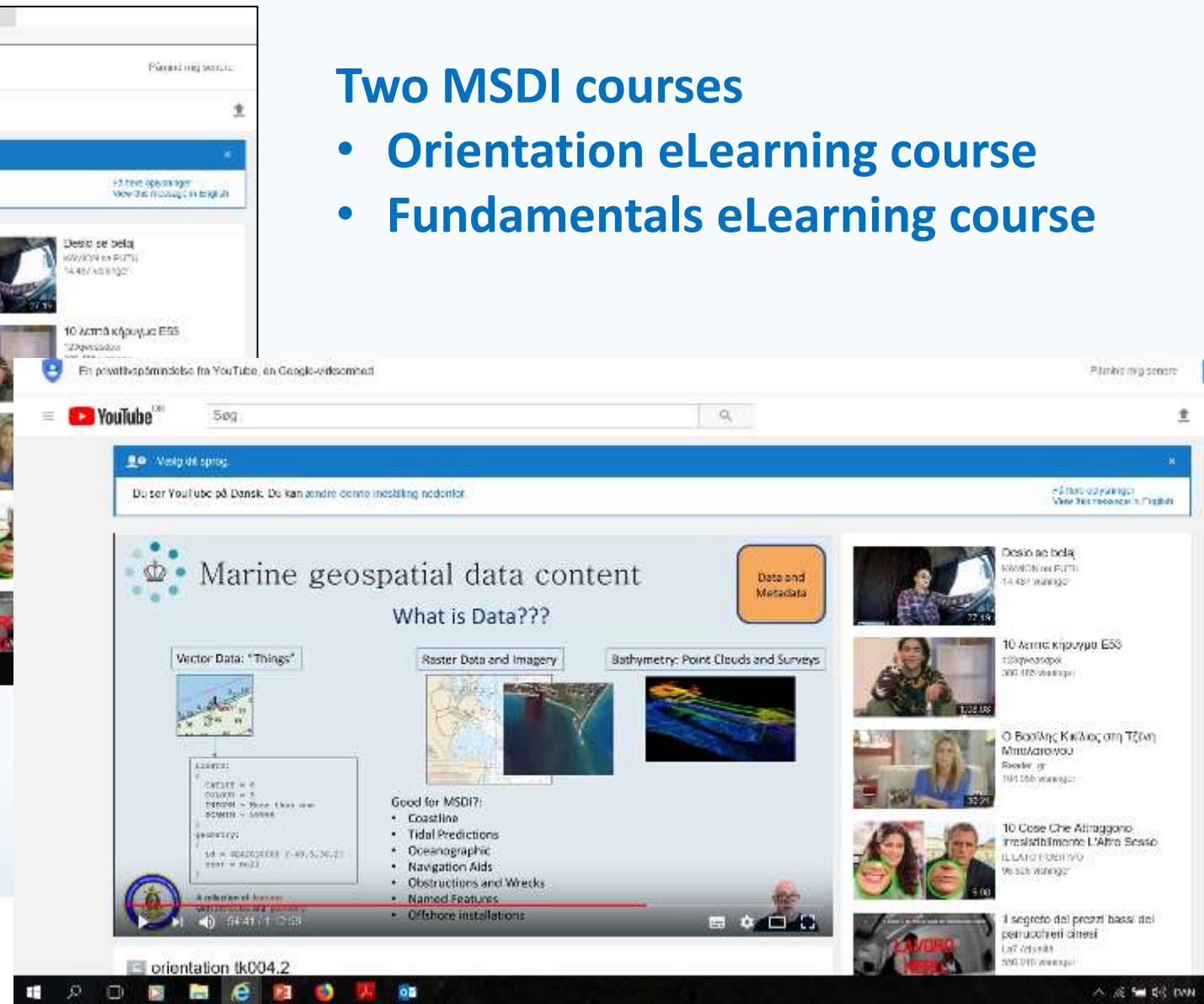
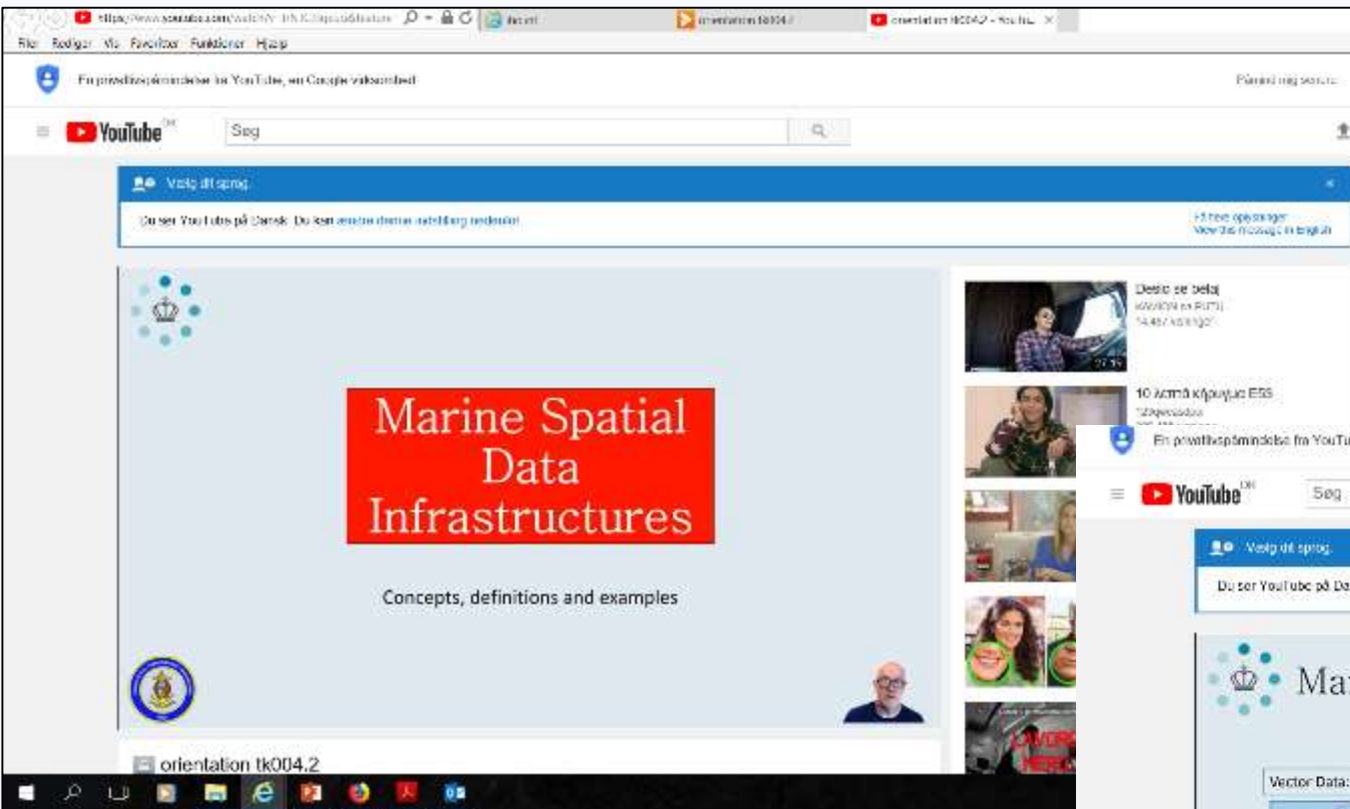
This slide features a light blue background. In the top left corner is a crown icon surrounded by green dots. In the top right corner is a small inset image of a person operating a surveying instrument. On the left side, there is a 2x2 grid of colored boxes: a red box labeled 'Policy and Governance', a green box labeled 'Technical Standards', a blue box labeled 'Technology', and an orange box labeled 'Data and Metadata'. A small 'MSDI' logo is centered between the top and bottom boxes of this grid. To the right of this grid is a large red rectangular box containing the text 'Marine Spatial Data Infrastructures' in white. Below this red box, the word 'Orientation' is written in a large, dark grey font. In the bottom left corner is a circular logo of the International Hydrographic Organization. In the bottom right corner, it says 'Produced by IHO TECHNOLOGIES'.

This slide is identical in layout to the one above. It features a light blue background with a crown icon in the top left, a surveying image in the top right, and a 2x2 grid of colored boxes on the left labeled 'Policy and Governance', 'Technical Standards', 'Technology', and 'Data and Metadata'. A large red box on the right contains the text 'Marine Spatial Data Infrastructures', and below it, the word 'Fundamentals' is written in a large, dark grey font. Logos for the International Hydrographic Organization and IHO TECHNOLOGIES are present in the bottom corners.

The MSDI eLearning course

Two MSDI courses

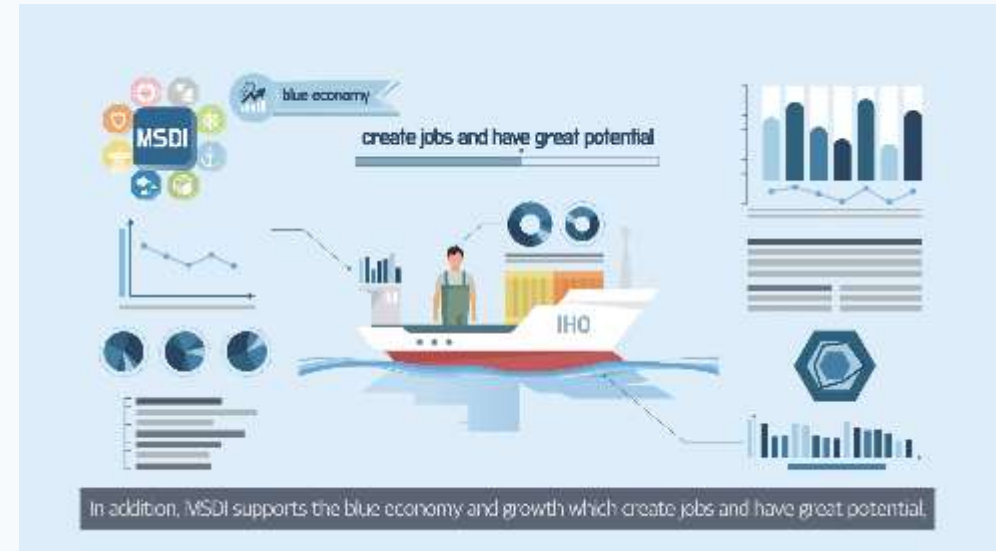
- Orientation eLearning course
- Fundamentals eLearning course



Activities and achievements

Communication and dissemination

<https://www.youtube.com/watch?v=5m15KBhd9v0>



Problems Encountered

Problems Encountered

The main challenges for the MSDIWG is to raise awareness of the importance of MSDI, and to provide training and education to support MSDI development at the Member State and RHC levels. These challenges are being addressed with the training material (in development), the planned upgrade of the C-17 and the establishment of MSDI Ambassadors at RHCs.

Justification and Impacts

The work in the MSDIWG is progressing well and a supporting Action Plan has been established.

The Work Programme creates the framework for the WG, in order to cope with the challenges in a forward-looking perspective.

The creation of regional MSDIWGs will give the Member States direct possibility to actively participate in the development of a well-functioning MSDI within the region's hydrographic domain and its surroundings.

Additionally, regional MSDIWGs benefit from both national and regional SDI activities in order to lead and address MSDI matters for the countries in the region.

Action Required of SAIHC

The SAIHC is invited to:

- a. note the report
- b. 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.
- c. discuss any item with relevance to SDI/MSDI/MSP and to take appropriate actions.