



**Baltic Sea – North Sea
Marine Spatial Data Infrastructure
WG
(BS-NSMSDIWG)**



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**Draft Workshop Schedule Day Two
BS MSDIWG4**

Day Two: November 17, 2015

Theme	Time	Subject	Responsible
Welcome	0900 - 0910	Welcome and the conclusions from Day One	Host/chair
Status	0920 - 1020	The work of VASAP/HELCOM data expert group	Chair
		Terms of reference for the BS-NSMSDI WG (see below)	Chair/All
Break	1020 - 1035		
Presentations	1035 - 1230	BS-NSMSDI WG Work plan- What are the outputs waited for each task? Topics for discussion: Task 1: A review of C-17 (part 2.1 related to the role of HO in MSDI) as well as a chapter dealing with on the status of MSDI in the Baltic and North Sea countries e.g. a report "MSDI in the Baltic and North Sea countries" Task 2: A chapter in the report "MSDI in the Baltic and North Sea countries" listing the projects relevant for BS-NSMSDI with the web links and explanation why each project is relevant to BSMSDI Task 3: Tbd (chapter in the report "MSDI in the Baltic and North Sea countries"?) Task 4: The output may be a report dedicated to the standards (S57, S100, OGC, ...) of interest for MSDI with a focus on INSPIRE --> Ellen provided a very interesting presentation about standards in BSMSDI3 which could be used as a base material for this report and there are also material in the UN-CGIM report "A Guide to the Role of Standards in Geospatial Information Management" Task 5: the output may be a review of C-17 (to be submitted to MSDIWG) Task 6: the output may be a demonstrator with BSHC web page	All
		Setting goals for this meeting's results. Topics for discussion, the various outputs could be: - proposal for revision of C-17 (through tasks 1 and 5) - a report "MSDI in the Baltic countries: status and relevant projects" (trough tasks 1 and 2 and maybe 3), - a report "Which standards for MSDI? Focus on INSPIRE" (task 4) - demonstrator and web page (task 6)	All
Lunch	1230 - 1330		
Work plan	1330 - 1400	Work plan - working on the tasks defined in the work plan	All

Separate session on BSHC- HELCOM cooperation.	1400 - 1500	Presentation about HELCOM.	HELCOM
		Presentation about the Baltic Sea and North Sea MSDI work group.	Chair
		Data approach from a HELCOM perspective. (INSPIRE compliant and use the EUROSTAT GISCO/EEA grid for grid based data.) Data approach from a IHO approach. (Presentation about IHO S-100)	HELCOM Chair
Break	1500 - 1515		
Separate session on BSHC- HELCOM cooperation.	1515 -1600	Discussion about how the hydrographic offices can contribute with our data to HELCOM, and how HELCOM and BS-NSMSDIWG can cooperate in the future	All
		Way ahead	
		Anny other business	All
		Closing of the separate session on BSHC-HELCOM cooperation.	
Work plan	1600 - 1700	Work plan - working on the tasks defined in the work plan	All
Closing	1700	Closing of day two	Chair



Day Three: November 18, 2015

Theme	Time	Subject	Responsible
Welcome	0900 - 0910	Welcome and the conclusions from Day Two	Host/chair
Work plan	0920 - 1020	Work plan - working on the tasks defined in the work plan	All
Break	1020 - 1035		
Work plan	1035 - 1230	Work plan - working on the tasks defined in the work plan	All
Lunch	1230 - 1315		
Evaluating	1315 - 1500	Evaluation	All
		How to proceed	All
		Update of work plan and action list	All
Next meeting		Next meeting	Chair
		Any other business	Chair
Closing of the workshop	1500		

MSDI and MSP – seen from a Regional perspective

[Agriculture](#)

[Fisheries](#)

[Industrial releases](#)

[Marine protected areas](#)

[Maritime spatial planning](#)

[Monitoring and assessment](#)

[Response to spills](#)

[Species and habitats](#)

[Shipping](#)

[Waste water & litter](#)

[HELCOM-VASAB Maritime Spatial Planning Working Group](#)

[Horizontal Action Spatial Planning](#)

[Country fact sheets](#)

[MSP Roadmap](#)

[MSP Principles](#)

[MSP Data](#)

[MSP and fisheries](#)

[Plan Bothnia](#)

[Other MSP initiatives](#)

[Publications](#)

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MARITIME SPATIAL PLANNING



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Photo: EWEA, European Wind Energy Association 1982-2007

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EUSBSR
EU STRATEGY
FOR THE BALTIC
SEA REGION

HORIZONTAL ACTION 'SPATIAL PLANNING'

HIGHLIGHTS

[HELCOM statement in 2014 VASAB Ministerial Conference, 26 September 2014](#)

[The key to governing the fragile Baltic Sea - Maritime Spatial Planning in the Baltic Sea Region and the way forward, by Jacek Zaucha](#)



Baltic Sea Region MSP Data Expert Sub-Group 1st meeting

01-02/10/2015
Radisson Blu Hotel Latvija
Elizabetes iela 55
Riga, Latvia

01/10/2015	1 st DAY
15:00 - 15:30	Registration and opening
15:30 - 15:40	Overall introducing with Expert Group members
15:40 - 16:00	Agreement on general formalities, procedures and rules
16:00 - 16:10	Chair election
16:10 - 18:00	Overview of MSP activities and data-use in BSR countries: BSR countries approaches for data use in MSP – short presentations, each MS; <i>national state of play of MSP Data:</i> <ul style="list-style-type: none">- <i>Data availability, ownership, legal issues etc;</i>- <i>Data services - accessibility</i>
17:45 - 18:00	1 st Day closing

02/10/2015	2 nd DAY
8:30 – 9:00	Coffee; opening 2 nd Day
9:00- 10:30	Existing experience and challenges in MSP Data – <i>ppt of other groups dealing with MSP data</i> – <ul style="list-style-type: none"> - <i>HELCOM [tbc]</i> - <i>IHOs Baltic Sea Marine Spatial Data Infrastructure Working Group [tbc]</i> - <i>Other ppt upon suggestions</i>
10:30 – 11:30	<i>Coffee break</i>
11:30 – 12.30	Development and agreement of extended work plan of the Sub-Group
12:30 – 13:00	Agreement on list of BSR National MSP Data Contact Points and starting an Additional list
13:00 – 13:30	Agreement on further steps, hosts and time-schedule of the next meetings
13:30 – 14:00	Closing & lunch





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Task 1.

Work item:

Hydrographic data and legal aspects

- Definition of HO role in MSDI**
- Study on status on implementation and responsibility with relevance to MSDI in the Baltic and North Sea countries**



Definition of HO role in MSDI

**Guidance for Hydrographic Offices
IHO Publication C-17 - Edition 1.1.0
February 2011**

Marine Spatial Data Infrastructure (MSDI) - the marine dimension of an SDI

MSDI is the component of an SDI that encompasses marine geographic and business information in its widest sense.

This would typically include seabed topography (bathymetry), geology, marine infrastructure (e.g. wrecks, offshore installations, pipelines and cables), administrative and legal boundaries, and areas of conservation, marine habitats and oceanography.



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SDI is a framework comprising the following key components:

4.1 Policy

A policy should exist defining the need to create information that is interoperable.

4.2 People & Organisations

Functional SDI requires willingness and practical co-operation between the various There should also be a clearly defined governance structure and transparency in the organisations that create, share and use information to implement the overall policy. Dision-making and reporting to foster a shared sense of working towards a common goal.



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4.3 Enablers

The enablers in SDI are the essential building blocks in the development of SDI's that provide the framework for data acquisition, management, updating and dissemination. Examples include:

- **Standards:** International Standards for geographic information exist or are being developed and, in many areas, sector-based standards are being put in place that depend on these over-arching standards; for example, IHO S-100 relies on the ISO 19100 series of geographic standards. The standards work of the Open Geospatial Consortium (OGC) especially in the areas of data content modelling, data transport, and web services are critical to developing a robust SDI approach;
- **Technology:** The provision of technical infrastructure will enable the delivery of data and services to allow the viewing, transformation and downloading of information. As the technical infrastructure matures, development can include the ability to work within various geodetic systems and transform data between such systems; and
- **Metadata:** At its simplest, metadata is „data about data“ and describes the characteristics of a dataset (i.e. content, value and limitations) and is normally held in a metadata management system or clearinghouse to provide mechanisms of search and retrieval. It is a vital component in “discovering” data and information and understanding how the data can be used.



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4.4 Content

Arguably, the most important component of SDI is the information content which is available to users. Without content, expressed within a consistent coordinate reference system, SDI is of minimal use. At the core of this information is reference information (i.e. the common datasets, themes or spatial data layers that most people use most of the time and which collectively make up a digital base „map“ that can be viewed and queried). Reference information may be defined as any geographic feature that is used as a location reference for application information, or can be used in geographic analysis. Application information provides the „outer layer“ of information which is generally “application” or “business” specific. It may contain no spatial reference(s) other than provided by the reference information and consist only as supplementary properties.



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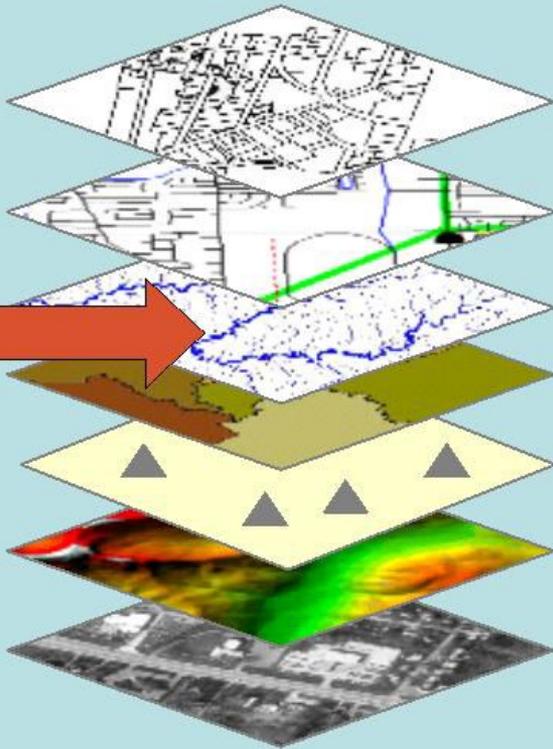


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The NSDI



Base geodata



Properties, buildings

Roads / railways

Hydrography

Admin boundaries

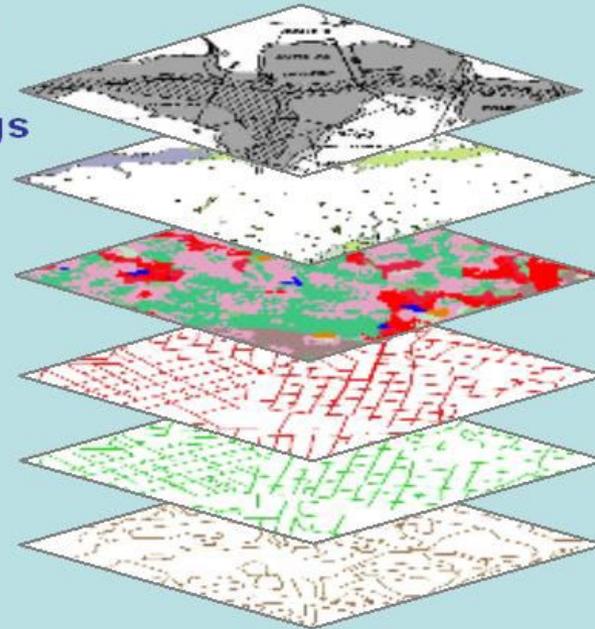
Geodetic points

Elevation

Orthophotos

Etc

Thematic geodata



Flood areas

Population

Land cover

Biology

Economy

Health

Etc



WHITE PAPER

The Hydrographic and Oceanographic Dimension to Marine Spatial Data Infrastructure Development : “Developing the capability”



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Infrastructure?

To explain MSDI it is necessary to put it in the context of Spatial Data Infrastructure.

The term Spatial Data Infrastructure (SDI) is often used to denote the relevant base collection of technologies, policies and institutional arrangements that facilitate the availability of and access to spatial data. An SDI is a framework comprised of the following components:

Policy: The defining of the requirement to create interoperable information.

Organizations: Identification of which organizations are willing or mandated to practice cooperation in the sharing and exchange information and to make such information readily available as a means of implementing national (or federal) policy and support “spatially enabled government”.

Standards: The foundation of the data collection, management, updating and distribution efforts. Some International standards (e.g. ISO / OGC) include those for geographic information, technology infrastructure to enable data discovery and delivery, and metadata for cataloguing, discovery and retrieval.



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What is Marine Spatial Data Infrastructure?

As the marine component of an SDI the Marine Spatial Data Infrastructure (MSDI) encompasses all marine geographic and business information.

For MSDI to be successful, it must be based on clear, broad-based goals that define the desired outcomes to be achieved.

Typical data content includes marine boundaries and limits, conservation and preservation areas, marine habitats, oceanography, bathymetry, hydrography, geology, marine infrastructure, wrecks, offshore installations, pipelines, and cables.

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Common MSDI Themes

- *Horizontal and vertical datum*
- *Maritime Baseline*
- *Offshore Cadastre*
- *Climate*
- *Bathymetric Elevation*
- *Seabed Character*
- *Land ownership*
- *Flood Hazards*
- *Marine Boundaries*
- *Offshore Minerals*
- *Shoreline*
- *Seabed infrastructure*
- *Oceanographic features*
- *Gazetteer*



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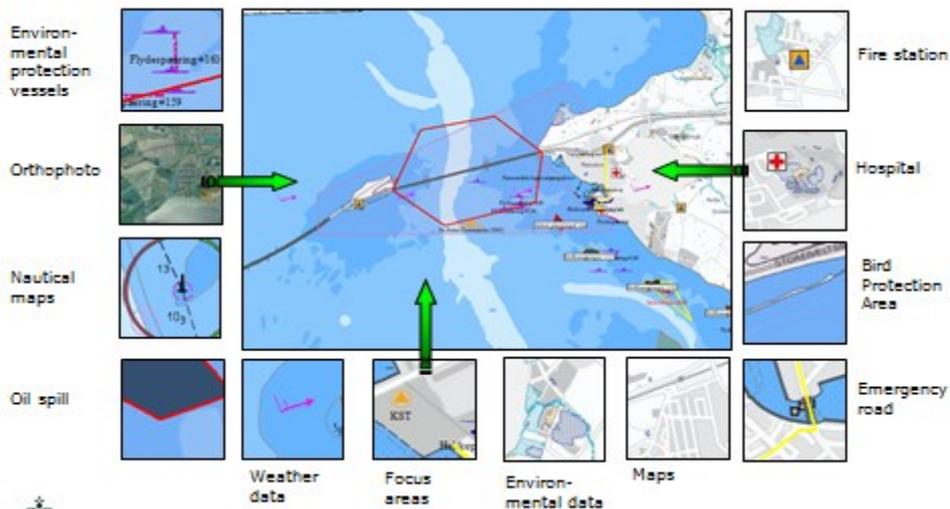
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Definition of HO role in MSDI

Ensure that relevant HO data sets are used in regional SDI

We should as a MSDI WG contribute with:

- Definition and presentation of different use cases
- Knowledge about relevant data and data providers/owners
- Ensure that the “right” hydrographic Information => dataset is available
- Knowledge about dataset => metadata
- Ensure access to hydrographic data when needed
- Define the requirements to quality of the data
- Governances
- Standardization and harmonization
- S-100



Definition of HO role in MSDI

MSDI – seen from a regional perspective

WE should focus on:

Planning across borders:

- Planning across sectorial interests
- Planning across sea/land (coastal zone)
- Focus on who to establishing a Common Operational Picture (E.g. MSP, Nature and environment, SAR)



Governance:

- Agree on the data-sets that should be exchanged, quality and standards
- Agree on the technical aspects, enabling the exchange of data-sets
- Input to the organisation of regional MSDI, e.g. rules, and agreements
- Ensure coordination between, different regions and initiatives
- Contribute with relevant input to when establishing financial models
- Establishing Metadata



BALTIC SEA HYDROGRAPHIC COMMISSION



The Baltic Sea Hydrographic Commission,

which is an integrant part of the International Hydrographic Organisation (IHO), promotes the technical co-operation in the domain of hydrographic surveying, marine cartography and nautical information among the neighboring countries of the Baltic Sea region.

The main objectives of the Commission are the coordination of the production of the Baltic Sea INT Charts, the coordination of hydrographic re-surveys, harmonization of chart datums, harmonization of Baltic Sea ENCs, and the exchange of information and the harmonization of practices with regard to various issues related to hydrography.

The most recent development is the [Baltic Sea Bathymetric Database](#) – accessible via this portal.



BALTIC SEA HYDROGRAPHIC COMMISSION



Baltic Sea North Sea Marine Spatial Data Infrastructure (MSDI) Working Group (BSNSMSDIWG)

Terms of Reference

(Approved by the BSHC 15th Conference 21 - 23 September 2010)

(Adjusted by the BSHC 20th Conference 16 - 18 September 2015)

With referencing to

- IHO Resolution 5 - 2009 on MSDI policy, adopted by the 4th Extraordinary International Hydrographic Conference in June 2009
- 1st HSSC Meeting (Singapore, October 2009) Marine Spatial Data Infrastructure Working Group (MSDIWG)
- Guidance for Hydrographic Offices IHO Publication C-17 - Edition 1.0
- EU INSPIRE Directive and respective national contributions of the MS

The BSHC at its 15th Conference recognised the need to initiate a study of MSDI in the Baltic Sea in order to identify areas where maritime implementation is underway and where problems can be foreseen and how the Baltic member states see the future development of MSDI in the region.

The BSHC at its 20th Conference approved a request from NSHC to expand the BSMSDIWG to also include the NSHC in a dual MSDI Working Group.

Therefore the BSHC 20th Conference approved to expand the BSMSDIWG to the BS-NSMSDIWG with the task to study MSDI in the Baltic Sea

Skype window showing a contact named Mark Halliwell with a duration of 45:49. Includes icons for mute, video, and end call.

Members

Member States

- Denmark:** Tom Weber
Jens Peter Hartmann
- Estonia:** Peeter Valing
- Finland:** Juha Tiihonen
- Germany:** Stefan Grammann
- Latvia:** Normunds Duksis
- Sweden:** Johan Mattsson
- Holland:** Ellen Vos
- Poland:** Marcin Banaszak
- United Kingdom:** Edward Hosken
Mark Halliwell
- Norway:** Gerhard Heggebo

Observers

- HELCOM:** Hermanni Backer
Dmitry Frank-Kamenetsky

[Member list as PDF document](#)

Meetings

BS-NSMSDIWG4 2015-2 Finland

- [BS-NSMSDIWG4 Invitation](#)

BSMSDIWG3 2015-1 Germany

- [BSMSDIWG3 Workshop Schedule](#)
- [BSMSDIWG Work program](#)

skype



Mark Halliwell
46:47

Microphone icon (blue) and End call icon (red)

Arctic SDI



GEOSPATIAL DATA - A TOOL FOR BETTER
INFORMATION DECISIONS AND MORE EFFICIENT
ADMINISTRATION THE ARTIC

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[Arctic-SDI Geoportal](#)



[Arctic Council](#)



DA 08:47
28-10-2015

Arctic SDI Geoportal

http://geoportal.arctic-sdi.org/ Arctic SDI | Arctic Spatial Data L... Arctic SDI - ASDI view view

Filer Rediger Vis Favoritter Funktioner Hjælp

SEARCH
MAP LAYERS
SELECTED LAYERS 1
MY DATA
MAP PUBLISHING

Username
Password
Login

500 km
200 mi

08:51
28-10-2015

Arctic SDI Geoportal – Map Layers

The screenshot displays the Arctic SDI Geoportal interface. The browser address bar shows the URL <http://geoportal.arctic-sdi.org/>. The page title is "Arctic SDI | Arctic Spatial Data L...". The navigation menu includes "Filer", "Rediger", "Vis", "Favoritter", "Funktioner", and "Hjælp".

The "Map Layers" panel is open, showing a search bar and a list of layers categorized by theme. The "By Theme" tab is selected. The search bar contains the text "Search map layers." and a search icon. Below the search bar, the following categories and layers are listed:

- Atmospheric conditions (2)**
 - CAFF SeaSurfaceTemperature
 - CAFF SnowCoveredArea
- Background maps (1)**
 - Arctic SDI Background Map
- Bio-geographical regions (1)**
 - CAFF PrimaryProductivity
- Land cover (2)**
 - CAFF LandCoverType
 - CAFF Vegetation
- Oceanographic geographical features (1)**
 - CAFF Albedo
- Others (2)**
 - CAFF CDOM
 - CAFF Chlorophyll

The map in the background shows the Arctic region with labels for "Russia", "China", "Mongolia", and "Kazakhstan". A scale bar at the bottom left indicates 500 km and 200 miles. The Windows taskbar at the bottom shows the system tray with the date "28-10-2015" and time "08:54".



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Baltic Sea North Sea Marine Spatial Data Infrastructure (MSDI) Working Group (BSNSMSDIWG)

Terms of Reference

**The Baltic
Blue Chart**

Meetings

Documents

Links

North Sea

Data set available

Denmark
Sweden
Finland
Poland
Germany
Latvia
Lithuania
Russia

Metadata available

Denmark
Sweden
Finland
Poland
Germany
Latvia
Lithuania
Russia

Contact persons

Denmark
Sweden
Finland
Poland
Germany
Latvia
Lithuania
Russia





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Baltic Sea North Sea Marine Spatial Data Infrastructure (MSDI) Working Group (BSNSMSDIWG)

Data set available:

- Horizontal and vertical datum
- Maritime Baseline
- Bathymetric Elevation
- Seabed Character
- Marine Boundaries
- Offshore Minerals
- Shoreline
- Seabed infrastructure
- Oceanographic features





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- United Kingdom:** Edward Hosken
Mark Halliwell
- Norway:** Gerhard Heggebo



The Baltic Blue Chart

