



IHB File N° S3/8151/MSDIWG

CIRCULAR LETTER 56/2015
6 August 2015

MARINE SPATIAL DATA INFRASTRUCTURE (MSDI) QUESTIONNAIRE

Reference: Report of the MSDIWG to the IRCC7 (*doc. IRCC7-8E rev1*)

Dear Hydrographer,

1. The Inter-Regional Coordination Committee (IRCC), at its 7th meeting in June in Mexico City, approved the Terms of Reference for the Marine Spatial Data Infrastructure (MSDI) Working Group (MSDIWG) and consolidated the transfer of this body from the Hydrographic Standards and Services Committee (HSSC) to the IRCC. The Committee also approved the MSDIWG Work Plan for 2015-2020 (see Reference, Annex C). Work item A.1 of the MSDIWG Work Plan is to "*Set up a survey to establish current position in respect of benefits and challenges faced by Member States' role in National Spatial Data Infrastructure (NSDI) and / or MSDI*". In order to implement this task, the MSDIWG has decided to circulate a questionnaire initiated by Canada (Annex A).
2. Canada took the initiative early in 2015 and completed a short study to review the way a sample of comparable nations have developed an MSDI to support the distribution of navigational information to commercial shipping, recreational boaters, and the general public. The result of this survey will be reported to the eighth meeting of the IRCC by the MSDIWG next year, where several presentations will address best practices for MSDI.
3. In order to broaden the results of study, the MSDIWG has requested that the IHB issue a Circular Letter inviting full participation in the questionnaire. The Directing Committee invites Member States to complete and submit the questionnaire provided in Annex A to the Canadian Hydrographic Service (kian.fadaie@dfo-mpo.gc.ca) with copy to the MSDIWG Secretary, Mr. John Pepper (john.pepper@oceanwise.eu) at their earliest convenience and **no later than 15 October 2015**.
4. Noting that Canada has already collected this information from several countries those countries that have already responded, are not required to complete the questionnaire again.

On behalf of the Directing Committee

Yours sincerely,

Mustafa IPTES
Director

Annex A : Questionnaire on Marine Spatial Data Infrastructure (MSDI) Implementation.

Status Update of Marine Spatial Data Infrastructure (MSDI) Implementations related to a Marine Spatial Architecture

The intent of the study is to determine the relative level of advancement of various countries in the development of their MSDI. It also explores what is offered and what can be offered within a given resource framework. This means that the questions are intended to scope the scale of the MSDI resources required in their development.

Section 1 – General: Define the MSDI name, owners, mandate, users and access types

Does the MSDI possess a discovery portal, web page, web mapping service? If so please provide the link

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1.1. **Identification** – Identification of the MSDI (e.g.: Title, description; such as Canada’s Federal Geospatial Platform or INSPIRE)

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1.2. **Sponsorship** – Organizations responsible for MSDI development?

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What organizations are funding the MSDI?

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1.3. **Mandate** – What is the Intended purpose of the MSDI?

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1.4. **Audience** –Who are target users? (e.g.: Senior Management, Operational Management, Public Use, Academia, Private Sector, Specific Users such as mariners or all of the above)

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Is the MSDI available to the public or is access restricted to a select community?

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Section 2 – Policy

2. Policy: Define policies associated with MSDI and key purpose or objectives

Is the MSDI in development or is it operational?

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2.1. Governing Policies – What are the governing policies of the MSDI? (e.g.: Policies related to public access, sales, support for a service such as navigation, etc.).

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What are the policies on copyright in your MSDI?

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What are the costs to access the information in your institution, if any?

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Does your MSDI support conventions? (e.g.: Navigation, UN Convention on the Law of the Sea, or International Maritime Organization (IMO) regulations, etc.)

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2.2. Management Policies – Are there policies for the management of the MSDI? (If possible provide a link) and how is it structured?

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2.3. **Support Usage** – What are the main applications of your MSDI? (e.g.: sell charts, promote scientific research, etc.).

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Does it support emergency or safety services?

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Is your MSDI the only source of this information? (e.g.: Is the MSDI the only way to obtain electronic charts or updates of auxiliary data such as digital bathymetry data?)

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3. Technical Oriented Questions: Level of Services implemented.

Levels to be indicated by:

Operational	[]	An operational service is fully available to its target audience (not necessarily to the public)
Introductory	[]	An introductory service has limited availability or limited data
Demonstration	[]	A demonstration service is technically functional, but not intended for operational use
Planned	[]	A planned service is in the planning or software development stage
Not Available	[]	A service that is not available

3.1. **Data Discovery** - The ability to find the data offered through the MSDI.

3.1.1 Is there a Discovery Portal (compliant with the OGC¹ Catalogue Service for the Web² (CSW) protocol available or compliant with another specification)

Operational [] Introductory [] Demonstration [] Planned [] Not Available [].

If not compliant with OGC CSW, which specification is it compliant with?

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¹ OGC Open Geospatial Consortium < <http://www.opengeospatial.org/> >

² OGC Catalogue Service for the Web (CSW) < <http://www.opengeospatial.org/standards/cat> > < http://en.wikipedia.org/wiki/Catalog_Service_for_the_Web >

3.1.2 Is the data available from a website, if so how? (e.g.: HTML webpage, FTP site, or other download service).

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3.2. **Web Mapping** - The ability to view the data offered through the MSDI.

3.2.1 Is there a Web Mapping Service³ (WMS) available (compliant with the OGC Web Mapping Service standard protocol or compliant with another specification)?

Operational [] Introductory [] Demonstration [] Planned [] Not Available [].

If not compliant with OGC WMS, which specification or proprietary service is it compliant with?

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3.2.2 Is the data viewable using a conventional HTML web browser and/ or is a special software tool or app used?

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3.3. **Access to Feature data** - The ability to access feature level data (such as IHO S-57 or future IHO S-10X ENC data) through a web service or through a file service.

3.3.1 Is there a Web Feature Service (compliant with the OGC Catalogue Web Feature Service⁴ protocol or compliant with another specification)?

Operational [] Introductory [] Demonstration [] Planned [] Not Available [].

If not compliant with OGC WFS, which specification is it compliant with?

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3.3.2 Is there the ability for select users to upload/download data (e.g.: ICE Service spotters reporting ice conditions or the reporting of nautical hazards)?

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³ OGC Web Mapping Service (WMS) < <http://www.opengeospatial.org/standards/wms> > < http://en.wikipedia.org/wiki/Web_Map_Service >

⁴ OGC Web Feature Service (WFS) < <http://www.opengeospatial.org/standards/wfs> > < http://en.wikipedia.org/wiki/Web_Feature_Service >

3.4. **Access to Coverage Data** - The ability to access imagery, gridded or other coverage data through a web service or through a file service (e.g.: IHO S-102 Bathymetry data).

3.4.1 Is there a Web Coverage Service (compliant with the OGC Web Coverage Service⁵ protocol or compliant with another specification)?

Operational [] Introductory [] Demonstration [] Planned [] Not Available [].

If not compliant with OGC WCS, which specification is it compliant with?

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3.4.2 Is there an extended Web Coverage Service (e.g.: supporting extensions such as transactions, subsetting, or special coverage types such as TIN or quad tree)? If yes please elaborate.

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3.5. **Online data processing** - The ability to apply geospatial processes to data such as calculations based on the data. (e.g.: Find all of the rivers and stream upstream of a point on a selected river, calculate tidal levels or simply to calculate distance).

3.5.1 Is there a Web Processing Service (compliant with the OGC Web Processing Service⁶ protocol or compliant with another specification)?

Operational [] Introductory [] Demonstration [] Planned [] Not Available [].

If not compliant with OGC WPS, which specification is it compliant with?

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3.6. **Data Questions** - Data types, volume and audience?

3.6.1 **Data Types** – Which types of data are supported?

geolocated textual data (e.g.: a Gazetteer) such as a list of place names, or a maritime “List of Lights”, etc. []

auxiliary textual data (e.g.: location keyed information) such as road map directions, maritime “Sailing Directions” etc. []

bit map images (e.g.: georeferenced scanned or generated images of maps) such as road maps or other map elements that may be included in a Web Map []

⁵ OGC Web Coverage Service (WCS) < <http://www.opengeospatial.org/standards/wcs> > < http://en.wikipedia.org/wiki/Web_Coverage_Service >

⁶ OGC Web Processing Service < <http://www.opengeospatial.org/standards/wps> > < http://en.wikipedia.org/wiki/Web_Processing_Service >

	Service.	
<i>Imagery</i>	(e.g.: georeferenced satellite or other geospatial imagery)	[]
<i>Pictures</i>	(e.g.: image views) scenes as viewed from a location, such as the harbour views in a chart PICREP, or Google Street View.	[]
<i>feature data</i>	(e.g.: access to the geospatial features that make up a map)	[]
<i>coverage data</i>	(e.g.: other types of coverage data than imagery)	[]

3.6.2 **Topic** – What is the subject matter addressed by the information service.

<i>topographic data</i>	surface relief map	[]
<i>imagery</i>	satellite imagery	[]
<i>transportation and logistics data</i>	road maps, routes and directions	[]
<i>marine</i>	eNavigation, supporting marine data such as currents, ice, oceanography, marine biology, fisheries, sovereignty, sonar bathymetry	[]
<i>military</i>	defence, public safety or other high security data	[]
<i>other</i>	(please elaborate)	[]

If other, please elaborate.

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Section 4 – Standards

4. MSDI Standards Oriented Questions:

There are a broad range of standards needed to support the technology used in the data infrastructure. It is relatively easy to say that the IHO, ISO and OGC standards are supported, but there are many choices involved in the standards. How are product specifications managed?

4.1. **IHO Standards** – Which is the International Hydrographic Organization (IHO) standards are supported? (e.g.: IHO S-57, IHO S-100, etc.)

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Section 5 – Resources

5. Resource Oriented Questions:

Understanding the resource related issues is probably the most important part of determining the scale of a Marine Spatial Data Infrastructure for comparison purposes.

5.1 Timeframe – Start date and projected end date of project.

Start Date End Date

5.2 Life Span – Is the MSDI intended to be a permanent operational system, explain?

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5.3 Resources – What are the resources allocated to this MSDI (e.g.: budget, personnel, and organizational support, etc.?)

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What is the funding mechanism used to support the MSDI (e.g.: Government, partnership, private sector, etc.)?

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5.4 Future Plans – What are the future plans for the continued use or development of the MSDI?

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5.5 Advice – Do you have any advice for others developing an MSDI?

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5.6 What were the challenges you faced and what lessons have you learned?

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