6ᵗʰ Meeting of the Marine Spatial Data Infrastructures Working Group
IHO-MSDIWG6
London, UK, 4 – 6 March 2015

Report

Day	Agenda Item	Subject	Action
1	1	All participants were welcomed by the hosts (UKHO) and the MSDIWG Chair. Participants also introduced themselves to everyone present.	
	2	**Terms of Reference of MSDIWG:** 1. The group reviewed the new role of MSDIWG as part of IRCC and endorsed the change of focus resulting from the move to IRCC governance. 2. Any technical questions that WG members raise or come to their attention will be forwarded to HSSC. 3. WG noted that the lack of direction provided to RHC's means they are not all able or willing to discuss MSDI as a standing agenda item in a meaningful manner. Canada requested clarity and guidance on how this might be achieved. OceanWise and UKHO supported this comment and requested that more guidance should be given by IHB. IHB stated that it does not give guidance to RHC and suggested that this guidance should come from this WG via IRCC. It did admit that some RHC's are poorly equipped to deal with MSDI matters. 4. WG should provide support and guidance as not all RHC's have the same level of understanding. Esri stated that education is key but that needs must be identified. Canada stated that Data Management is a key pillar of MSDI and that all RHC's must be aware of this. Norway suggested that MSDIWG define specific questions that should be raised at RHC's about MSDI.	

	3	1. A review of action items from MSDIWG5 was completed. Two actions were held over to WG6 pending clarification on progress namely:
		   a. Secretary to contact GeoScience Australia about progress on providing a template reporting document for data providers and users. *Afternote: Geoscience Australia is unable to commit to undertaking this action item (19.03.2015)*
		   b. Chair to re-submit a funding proposal to IRCC for outreach purposes.
		   c. All other actions were marked as completed, absorbed into business as usual or the specific subject is no longer under the remit of MSDIWG and IRCC.
		2. Review from HSSC-6 in respect of MSDIWG
		   a. Vice Chair gave an update regarding the move from IRCC to HSSC at HSSC-6 in Nov 2014. A standing agenda item on MSDI will now take place at HSSC meetings with MSDIWG Chair providing a summary report on relevant matters affecting HSSC (e.g. technical issues). WG to provide important items as part of said report.
		   b. Caris and Norway agreed to provide Chair with a technical paper to support HSSC-7 standing agenda item on MSDI.
		3. Feedback from IRCC-6:
			2/2014
			
			9/2014
			
			1/2015

		a. There was no additional feedback to that already stated.
		b. A full report on WG activities will be prepared by Chair for IRCC-6.
		c. Chair suggested a document be submitted to CBSC Chairman to request resources be made available to enable promotional support and training material. A project proposal will follow discussions. IHB reminded the WG that any proposal to CBSC must comply with the CB Procedures and be aligned with the IHO CB Strategy.
		4. Review of other relevant items:
		A discussion on crowd sourced bathymetric (CSB) data capture and its impact on MSDI resulted in MSDIWG looking at the non-technical impacts of CSB on MS's.
		    a. GSDI outlined the role of EU land mapping and cadastral membership body, Eurogeographics in furthering the development and impact of Crowd Sourced Data. Norway suggested that wider stakeholders be involved in discussions of the value and benefit of CSB in the HO community. UKHO stated that MSDIWG should develop the argument that makes the wider use of such data acceptable to HO's in terms of ownership and liability.
		    a. Canada added that charts are legal documents and that liability is intrinsic in them. Non-HO data is labelled as "non-authoritative" with the metadata tagged as such.
		    b. Esri added that the "de-facto" safe usage of such data indicates a level of confidence in such data and that a level of uncertainty can be assigned to CSB data. Germany agreed and added that "reports from mariners" was no different as it is crowd sourced by nature so using "vessels of opportunity" is no different!
		    c. OceanWise stated that MSDIWG has a role in managing the process of acceptance and how increased volumes of CSB can be managed and published.
		    d. Norway added that MSDI already uses crowd sourced data in a wider manner than just CSB. IHB summed up by adding that GEBCO is crowd sourced data and is already used by IHO.
		    e. An action was agreed that Caris and Canada prepare a presentation to MSDIWG-7 on new data collection technologies.
		    f. OceanWise, Esri, USA, GSDI, IHO and Envitia will review and report to MSDIWG-7 on other relevant new technologies.
		
		There followed a presentation by UKHO on "data centricity"; a route that all HO's must now follow to remain relevant in 2015. A discussion followed about how S-100 will be implemented and the S-57 to S-101 conversion which does not provide answers in terms of richer data sources. OceanWise offered to assist any HO wishing to adopt a data centric approach by using its robust tools and processes to create seamless data and single geometries for real-world features.
			
			3/2015
			
			4/2015

	4	Setting goals for MSDIWG-6 were agreed by all attendees. The objective was to enable the easier delivery of outcomes through a less-ambitious but nevertheless important list of tasks. This is reflected in the new 2014-15 Action Plan which was agreed.	Action plan as circulated
	5	**National presentations:** The following HO's provided presentations on their MSDI development as part of NSDI; Canada, Japan, Denmark, Netherlands, USA and France.	Go to IHO website

		Some presentations are available on the IHO website for download as .pdf files. Canada will provide feedback to MSDIWG from its independent audit of MSDI across IHO MS undertaken in February 2015.	5/2015

	6	**Regional presentations:**
		   a. *Baltic Sea RHC MSDIWG*: WG Chair gave an update on activities in the Baltic Sea with terms of reference focussing on the regional a co-ordination approach and benefits to be derived. BSMSDIWG now has MS from North Sea RHC attending. The primary driver for success is the EC INSPIRE Directive and compliance with it. Activities in six work streams for 2015-20 are focusing on organising the use of the best available data; trans-boundary co-operation between EC MS; promoting cooperation with "third countries" (those with boundaries with EC MS but not themselves part of the EU). 11 datasets are required for overview purposes with a total of over 80 datasets as inputs including a DEM (but not charts!). The HELCOM/VASAB Marine Spatial Planning programme is a key driver as it will lead to the development of a Common Operating Picture (COP) for the Baltic Sea.
		   b. *Meso-American and Caribbean RHC:* The Maritime Economic Infrastructure Programme (MEIP), presented by NOAA, is seeking to gain leverage for future capability building and funding in the MACHC region. It will make available its ENC on-line facility to support the programme. Bathymetric data capture scoping study being conducted by UKHO with Commonwealth Secretariat (UK) funding is almost complete prior to a project proposal submission to Funding Agencies to enable implementation.
		   c. The appointment of MSDIWG Vice-Chair as liaison on MACHC MSDI activities for 2015-16 (RNN acting as Chair of MACHC) was noted. Vice-Chair to report back to MSDIWG-7 on MEIP developments in MACHC.
		    OceanWise added that links between MEIP, MACHC, MSDIWG and IOC Caribbean Atlas programme are important in ensuring a "joined up approach" in the region to reduce duplication and costs.
			18/2015

	7	**Challenges for the future from a private sector perspective:**
		Esri and OceanWise identified nineteen challenges which they see as important in ensuring MSDIWG and IHO can deliver a new way of working. The main points raised were:
		   a. Slow evolution of IHO MS with a desperate need to more urgency to realise their potential as "geospatial agencies" rather than just chart publishers
		   b. The responsibility on the IHO to provide greater leadership in delivering a community that is "much more than charting"; developing from cartographers to data managers and editors of digital data
		   c. Greater capability and capacity building in information management and MSDI to enable the move to a data centric work environment (including dynamic data);
		   d. Education
		   e. Enhancing the profile of the IHO community in terms of building links with the land based geospatial sector and identifying the "hooks" making MSDI compelling to HO's.	

	8	**What are the key challenges for the future**:
		The biggest challenges overall facing HO's were considered to be:
		    a. The need for strategy development aimed at politicians
		    b. Education, training and change management
		    c. Greater collaboration across national boundaries and agencies
		    d. Improved data management processes
		    e. The role of the IHO in the information business?
		    f. Convergence between MSDI and e-navigation
		    g. Promoting MSDI across the IHO community (See Task E)	

	9	**General presentation of Task C/C.1-2** C1.1: MSDI education and training among MS is facilitated by RHC's and financed by CBSC. Such training has been delivered by MSDIWG Expert contributors since 2010. Individual MS are increasingly requesting such training for managers and practitioners which they finance themselves. C1.2: MSDIWG was involved in facilitating a half-day workshop at INSPIRE Conference held in Aalborg, Denmark in June 2014. It was felt that specific IHO INSPIRE related workshops are no longer appropriate given the maturity of the INSPIRE delivery programme.	

	9	**Task C2: Establish Training syllabus for IHO use**
		    a. After discussions regarding the need for MSDIWG to provide MSDI Training Course material to IHO MS, OceanWise agreed to make available its MSDI course templates to WG Members. They comprise ½, 1, 2 and 5 day courses aimed at a range of audiences.
		    b. These templates will be circulated to MSDIWG Members for comment by Chair.
		    c. Course content material will be submitted to IRCC-7 by Chair for consideration and eventual inclusion in the 2016 Capacity Building Work Programme.
		    d. MSDIWG will provide course content templates for Training and Education as an Annex to Publication C-17 as part of its review and update process.
		    e. The input to training course content by academia and NGO's was discussed to ensure an element of consistency with other programmes is developed. All WG Members were asked to encourage third parties to engage in such training.
			6/2015
			
			7/2015
			
			16/2015
			
			8/2015

2	10	**General Presentations on Tasks A & B**
		
		Task A. Promoting National and Regional Best Practise
		A.2 Benefits and Challenges faced by MS's in respect of MSDI
		    a. Framework for Business Case development: MSDIWG agreed that the key components are investment, change management and the monitoring of outcomes both qualitatively and quantitatively. It is important to identify dis-benefits and balance against benefits and estimate both in financial terms.
		    b. Challenges should be noted and placed in IHO Publication C-17. DGIA agreed to make its business case template available?
			
			Ref:
			11/2015

	10	**Task A: What are the tasks for the next 3 years** **a.** The work plan for 2015 -18 was slimmed down to reflect the ability of a relatively small number of volunteers to manage and deliver it. The revised work plan is available as a separate document outlining specific objectives, tasks and actions for delivery.	

	10	**Task B Review existing standards and their appropriateness to MSDI**	
		B.1. Level of S-100 understanding and use in support of SDI;	
		a. UKHO presented a paper (10.2 refers) for consideration concerning the matrix of data requirements mapped against activities associated with S-100, AML, IMO and OGC standards. Whilst the WG Members considered it an innovative way of identifying which specifications planned or being considered as S-XXX series, it was too early to consider it as a workable matrix.	
		b. Envitia stated that data requirements for MSDI still remain immature but suggested that if the matrix was published as part of MSDI literature at this time, users would define improvements needed and / or additional requirements. HO's would then improve and re-publish data and that way continuous improvement could be achieved through a de-facto route rather than in a de-jure manner.	
		c. Norway asked that priority be given to harmonising datasets to enable sharing and re-use.	
		d. OceanWise voiced some concern that the status and development of S-1XX specifications is unclear and confusing to stakeholders.	
		e. Chair will request, through IRCC, that HSSC provide a report stating which bodies and communities are developing S-1XX specifications and the level of maturity of these specifications.	13/2015
		f. Requests were made by MSDIWG for the following items to be tabled, through IRCC, at HSSC-7 by MSDIWG Chair:	
		i. Does the new S-102 specification align with INSPIRE Elevation data specification?	
		ii. Does EC-JRC, in developing INSPIRE specifications, take account of S-100 Universal Hydrographic Data Model?	13/2015
		iii. Make IHO EU MS's aware of the importance of engaging in the INSPIRE implementation and maintenance processes.	
		iv. Make IHO EU MS aware of the EU Location Framework of which Norway is Vice-Chair.	
	11	**Task D: Maintain MSDI documentation on the IHO website**	
		D.1.1-1.3 Proposal to MSDIWG to re-structure MSDI page on IHO website	
		a. MSDIWG was asked if it requires a new HTML page for its enhanced content on the IHO web-site. The consensus was that we do need greater space in which to place more content.	
		b. LinkedIn as a social media source was discussed. Caris (Paul Cooper) has already established an IHO MSDI LinkedIn Group.	
		In addition to maintaining documentation on the website, Vice Chair suggested that MSDI should be promoted more widely enough across the IHO MS's. It was suggested that MSDIWG approach CBSC through IRCC with a project request to develop a communications plan for MSDI. Such a project would develop promotional plan to support the training that will be available to MS but also provide additional material that would be used by RHC's. Ideas focussed on creating an awareness leaflet, poster and/ or roller banner.	Ref: 9/2014
		MSDIWG agreed to refresh the White Paper (of May 2010) authored by Paul Cooper, John Pepper and Mike Osborne. Caris and OceanWise will review and re-publish MSDI White Paper as a MSDIWG document.	17/2015
		Chair to contact CBSC Chair to discuss this proposal and potential funding to enable delivery.	2/2015

2	11	**Task E: Maintain and extend Publication MSDI C-17 (IHO Task 2.9.2)**	
		E.1.1-1.4 MSDI "Four Pillars"	
		a.　　Vice Chair and Roger Longhorn suggested that the GSDI Cookbook could incorporate parts of Publication C-17.	
		b.　　Roger Longhorn stated that UN-GGIM is aware of C-17 and an annexure addition to the GSDI Cookbook would secure its wider visibility. There are definitely no plans to replace C-17 with the GSDI Cookbook.	
		c.　　All WG Members were requested to provide information on any MSDI developments for inclusion in C-17.	
		d.　　MSDIWG agreed that there is a requirement to promote MSDI and Publication C-17 more widely.	
		e.　　WG members sought clarification on what HO's thought their role was in MSDI and also the role MSDI plays in a HO. Due to the lack of impetus in engagement in MSDI by IHO MS's, a task group was formed comprising Esri, Envitia, Chair, Vice-Chair to investigate this matter.	
		E.2. Monitor technical developments in MSDI	
		E2.1. Oil Spill Response	
		a.　Envitia and Caris described the OGC Oil Spill protocols and the links with the Seabed Survey Data Model (SSDM), ISO and S-100 standards. These links enable the potential for stakeholders to deliver a Common Operating Picture (COP) for this activity using, for example, GML to link and portray the data. The COP is effectively a Maritime Information Infrastructure for particular events and provides a good use-case.	
		b.　Chair suggested that consideration should be given to also creating a similar COP use-case for Marine Spatial Planning (MSP).	12/2015
		c.　Caris and Envitia agreed to provide material to enable MS to build use cases for Oil Spill Response and other activities.	10/2015
		d.　OceanWise agreed to provide the web link to the Marine Management Organisation (MMO) MSP portal in the UK. Roger Longhorn (GSDI) agreed to provide links to WG DIKE initiative at EC DG Environment to view similar initiative.	10/2015
		e.　MSDIWG will initiate a study to ascertain if funding for MSP COP (from the geospatial information perspective) might be forthcoming to enable an IHO proposal to develop a MSP COP. Roger Longhorn will investigate this option further.	9/2015
		f.　MSDIWG agreed that by generic use-cases template for MSDI would provide input to building business case submission templates for MSDI.	11/2015
		g.　Denmark agreed to undertake the development of a business case template.	
		E.3. Datasets for inclusion in MSDI The meeting confirmed that bathymetry, as a core reference theme, is considered the most important dataset for inclusion in MSDI. Other HO themes were discussed, namely geographic names, oceanographic features and restricted / regulated areas/management zones. MSDIWG will act on feedback from Canada regarding its recent research exercise results to	Ref:16/2015

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		provide guidance to HO's in Publication C-17.	

	11	**Task G: MSDI as a Standing Agenda item at RHC's**
		    a. Chair informed the meeting that he will brief all RHC Chairs at IRCC-7 about the importance of reporting MSDI activities in each RHC. This reporting should be structured to enable RHC's to fully understand what is happening and where and to encourage MS to get involved.
		    b. CBSC will be asked to task all CB Coordinators to provide information on the state of MSDI within their areas.
		    c. IRCC to recommend each RHC appoint a MSDI "champion" to represent MSDIWG interests and to feed information back to MSDIWG on activities in that RHC.
		    d. WG Chair /Secretariat will create and circulate a matrix of RHC's with appointed RHC MSDI "champion" contact details
			14/2015
			
			14/2015
			
			15/2015

	12/13	**Feedback from Sub-Groups** There were no items for consideration under this agenda item as sub-group working was not undertaken.	
	14	**Items from the work plan not covered by sub-groups** All items from the work plan were covered without the need for sub-groups	
	15	**Update MSDIWG work plan 2015-16** The updated work plan and action list for 2015-16 was agreed and has been circulated for comment to all MSDIWG members.	
	16	**AOB** There were no AOB items	
	17	**Content for next MSDIWG meeting** MSDIWG discussed options to extend the activities to 5 days to enable it to host a one-day Demonstration Workshop for expert contributing bodies adjacent to the Open Forum and MSDIWG-7. Chair and Secretariat will develop ideas of how this might best work but the preferred option would be for the Workshop to take place on the day preceding the Open Forum. This would allow non-MSDIWG stakeholders (e.g. EAHC MS, government, academia, commercial, charity, NGO representatives) to come along to see what the MSDIWG commercial partners can offer. Attendees at the workshop would then be encouraged to stay on for the Open Forum. This approach will be developed in consultation with 2016 hosts.	Chair/ Secretariat
	18	**Place and time of next meeting** Japan (JCG/JHOD and JHA) volunteered to host MSDIWG-7 meeting, Open Forum and Demonstration Workshop in Tokyo from 1st-5th February 2016. The title for the event has yet to be decided. MSDIWG Chair and Secretariat will work with the hosts to develop the content and themes for the Open Forum and Workshop.	Chair/ Secretariat
	19	The meeting closed at 1400.	