

**International Hydrographic  
Organization**



**United States - Canada  
Hydrographic Commission**



International Hydrographic Organization (IHO)  
**United States-Canada Hydrographic Commission (USCHC)  
Meeting**

16 March 2015

Gaylord National Resort & Convention Center

201 Waterfront Street, National Harbor, Maryland 20745, U.S.A.

1. Introductions and Welcome Glang/Hains  
[Ref: 1a-USCHC-38 List of Participants]

The Chair, RDML Gerd F. Glang, Director Office of Coast Survey, opened the meeting by welcoming all participants to the Gaylord National Harbor Hotel. He further noted that we have a full agenda. Denis Hains added that Canada is appreciative of the U.S. for hosting the U.S.-Canada Hydrographic Commission meeting. Visitors and observers were acknowledged followed by introduction of all participants. The List of Participants is available as Annex A to these minutes. Finally, RDML Glang provided information on the facilities including the availability of Wi-Fi and the user/password information.

2. Approval of Agenda Glang/Hains  
[Ref: 2a-USCHC-38 Agenda]

RDML presented the agenda and asked for comments. Stanley Harvey indicated that RDML Timothy Gallaudet, Commander, Naval Meteorology and Oceanography Command and Hydrographer of the U.S. Navy, expressed his regrets for being unable to attend the USCHC meeting. No further comments were made and the agenda was approved.

3. Organizational and Personnel Update/National Report Glang  
➤ Office of Coast Survey/NGA/Navy  
[Ref: 3a-US National Report]

RDML Glang presented the U.S. National Report. Highlights of the report included information on:

- New Strategic Plan
- Staffing and Budget Issues
- New Chart Production Processes

- Area of Hydrographic Surveys
- Crowdsourced Bathymetry

- Canadian Hydrographic Service  
[Ref: 3b-CHS National Update]

Hains

Mr. Denis Hains presented the Canadian National Report, noting that Canada had similar staffing, budget, administrative, and operational challenges. Mr. Hains specifically mentioned the challenges of acquiring hydrographic data in the Arctic. He further noted with interest the U.S. reports reference to justifying budgeting in terms of benefits for all mariners as opposed to focusing only on SOLAS class mariners. He also noted the importance of making as much data as possible available not only for charting purposes but for other uses as well.

4. Review of Past USCHC Actions  
[Ref: 4a-USCHC Actions]

Justi/Brunt

Jonathan Justi addressed the status of actions from USCHC 37, noting that many of them were completed. There were a few on-going actions which have been forwarded into the current meetings action list and are included in the List of Actions at Annex B.

**Action 1: Forward all "ongoing actions" from prior USCHC action lists to a revised new Action List.**

Review US-Canada Level of Service for Charting Products

The Level of Service points of contact is considered extremely important and was recommended as an on-going activity.

**Action 2: Circulate the CAC TOR to the USCHC members for their review. Review to include a possible focus on a MSDI-relevant cooperation as a focal area. If relevant, report to IRCC-7.**

**Action 3: Review Level of Services Agreement for Nautical Products and Services annually and update points of contact at each USCHC (annually)**

5. IHO Inter-Regional Coordination Committee (IRCC)

- Review IRCC 6 Actions  
[Ref: 5a-USCHC-38 IRCC Actions]

Justi/Brunt

Jonathan Justi provided a tabulation of IRCC 6 actions. He went through the status of actions and noted that additional follow-up is required on a few of them. One of note is to encourage action by the appropriate authorities to approve new IHO membership applicants.

- Draft USCHC report to IRCC

Justi/Brunt

[Ref: TBD]

Jonathan Justi indicated that preparation of the USCHC Report to IRCC 7 is in progress. Doug Brunt added that there will be another opportunity for further review prior to finalization. Denis Hains added that Canada would have some further refinements to the report. An action was taken for everyone to “review the USCHC report to IRCC 7.”

**Action 4: Review, update and provide the USCHC report to the IRCC Chair and IHB by early April (CL 16).**

- IRCC-7 Participation (1-3 June 2015, Mexico City, Mexico) Glang/Hains

The potential participants to IRCC 7 were discussed. Mr. Hains inquired whether MSDI would be a subject to be addressed at IRCC 7. Robert Ward responded that there would be some discussion on MSDI and that he would submit a paper on that topic.

**Action 5: U.S. and Canada to inform MSDI WG of its practices and illustrative examples related to updating C-17.**

- World-wide ENC Database (WEND) Working Group Report from the WENDWG-5 Meeting Nyberg

John Nyberg provided a summary of the discussions at the recent WEND WG meeting. Highlights included:

- AIOs and a document to be provided by the UK, noting the benefits of AIOs;
- The disbanding the RENC harmonization group which will now become a standard WEND WG agenda item;
- The repository for storing documents on “Best Practices,” which now includes the U.S.-Canada resolution to addressing ENC overlaps;
- The grid-scheme for ENCs; and
- The Primar overlap checker software being made available to Member States as a tool.

John further indicated that there will be a proposal from the WEND Chair on how to implement the WEND Principles. In addition it was noted that the WEND would invite subject matter experts to future meetings. Robert Ward added that this was one of the best received WEND meetings in some time, especially considering the complexities of the issues. Julia Powell added that Yves Guillam provided an excellent summary with clear conclusions of the issues. John Lowell mentioned discussion on how we might prioritize WEND actions in order to provide appropriate guidance to the group. John Lowell also asked about the status of the WEND Vice Chair. Mr. Hains replied that there is no change to the status of vice chair at this time. Robert Ward added that Tom Karsten will be leaving and vacating the IRCC Chair, IRCC and that Dr. Parry Oei will assume that role.

- MSDIWG-6 (4-6 March 2015, London, United Kingdom) Fadaie/Hick

Ms. Kian Fadaie reported that there was a healthy discussion on what is understood as to be Marine Spatial Data Infrastructure (MSDI). In general she indicated that mapping agencies take care of SDI and that Hydrographic Offices are taking care of MSDI. It was further noted that there are a number of different ideas of what MSDI actually is. One of the essential activities will be the cooperation of MS and the coordination of the data. It was noted that Canada has sent a MSDI WG questionnaire (in French and English) to TSMAD. Robert Ward suggested seeking assistance of the IHB to translate the questionnaire into Spanish as well.

- National data policies Lowell/Hains

John Lowell mentioned that the U.S. has an open data policy to make all relevant data available to users in multiple disciplines. Denis Hains followed, noting that Canada has a similar policy.

- Canadian Federal Geospatial Platform Fadaie

Ms. Kian Fadaie noted that this platform serves as an opportunity for federal departments and agencies to manage geospatial information assets in a more efficient and coordinated way by using a common “platform” and that plans are to use this platform for MSDI. It consists of authoritative geospatial data, services, and applications, built on a shared infrastructure that will enable information to be managed spatially, analyzed, and displayed in a visual context to enhance decision-making.

- Regional implementation Nyberg

John Nyberg presented the ENC Online concept, which had been agreed as a regional MACHC project in December 2014. ENC Online displays ENC's, but the files cannot be downloaded. (see [www.nauticalcharts.noaa.gov/ENCOnline](http://www.nauticalcharts.noaa.gov/ENCOnline)) John further proposed that a joint MACHC/USCHC ENC online project be explored. Dr. Fadaie indicated that CHS would look at the applications to explore providing a set of layers rather than have a long list of individual layers. Denis Hains added that CHS could make data available to the USCHC, but there may be some restrictions to public release due to liability issues. Chris Thorne thanked the U.S. for supporting the demonstration as it also pertains to the MACHC MEIP, but expressed similar concerns regarding liability.

**Action 6: Invite Canada to consider joining with a current MACHC project to produce an ENC online service for the Americas (regional contribution to MSDI) or other related initiative to demonstrate the utility of ENC data to MSDI-relevant regional applications**

- IRCC-7 Proposals discussion Glang/Hains

Robert Ward suggested that the RHC could make a proposal on Satellite Derived Bathymetry (SDB) to IRCC, or alternatively, several MS could make a proposal to the Assembly. He further indicated that the last Conference recognized that MSDI is important and that SDB could be approached similarly. It may also be possible to propose this topic as a standard agenda item for IRCC/HSSC. RDML Glang elaborated that this could be broached via an SDB update report to the Committee. Katie Ries added that the RHC could propose this topic and Robert Ward added that a CL requesting Agenda Items is still open and suggested that we submit SDB as an agenda item for IRCC 7. Chris Thorne followed up, expressing concern about how we might inform the user on the value and/or danger of SDB data. This discussion was followed up by a presentation during a working lunch by Dr. Shahak Pe'eri on this topic.

**Action 7: USCHC Chair to propose to IRCC to add an agenda item on SDB to allow member states to report development experiences.**

**Action 8: Complete the USCHC presentation to the IRCC-7 on SDB and share with IRCC. Emphasize limited applications of SDB especially concerning its role as a reconnaissance tool, for early warning, and emergency response and case studies. Propose make this a standing IRCC agenda item as part of USCHC presentation.**

**Action 9: Develop draft policy paper on the application and caveats concerning the use of SDB.**

6. IHO Hydrographic Services and Standards Committee (HSSC)

- Review HSSC-6 Actions Relevant to USCHC  
[Ref: 6a-USCHC-38 HSSC Actions]

Nyberg/Fadaie

John Nyberg provided a summary of the recent HSSC meeting. It was noted that Julia Powell has been selected Chair of S-100 and Korea holds the vice-chair. He further indicated that there was discussion on the S-100 registry and how it might be managed. Doug Brunt added that he and Jonathan Justi developed and displayed a spreadsheet on representation in international Working Groups. Dr. Kian Fadaie added that there was also discussion on performance indicators on the Data Quality WG.

- HSSC-7 Participation (9-13 November 2015, Busan, Republic of Korea)

Participation at HSSC 7 was not specifically addressed.

- HSSC-7 discussion

Nyberg/Fadaie

HSSC 7 will be held in Busan, Republic of Korea, on November 9-13, 2015.

7. EIHC Follow-up

- Global Crowd Sourced Data: Database Update and Policy

Glang

This topic was deferred and not further elaborated.

- Council Selection Process

Frey

This topic was deferred and not further elaborated at this time. It will subsequently be addressed via a tele-conference call.

**Action 10: Develop a protocol for selection of USCHC representation to the IHO Council for discussion prior to next meeting.**

8. Extra-Commission Briefs

- IHO – IHB Brief (incl. GEBCO update)

President Robert Ward

Robert Ward provided a summary and update on IHO-IHB matters. President Ward indicated that the Protocol of Amendments tally is 41 out of 48 MS who have indicated approval. He added that Turkey may shortly be the next to raise that number to 42. President Ward expressed optimism that the Protocol of Amendments would be approved by year end, or early 2016. He further indicated that 7 new States have been approved to join IHO and that both Malta and Vanuatu have pending applications in place. He further stressed the importance of all MS to encourage approval of new IHO applicants by their administrations. He also noted that Panama may be close to joining. Other items of note included the possibility of being able to recruit the S-100 administrator in 2016. Additionally, President Ward noted that the future of the HYDROGRAPHIC REVIEW may need to be examined, given the cost of paying an editor for a publication with limited distribution, whereas on the other hand, HYDRO INTERNATIONAL is a magazine with articles with a much greater distribution. It was stated that MS should endeavor to encourage contributions to the HYDROGRAPHIC REVIEW as well as to HYDRO INTERNATIONAL. Other comments by President Ward included that the notes from this meeting be provided to the IHB for archiving on the IHO-USCHC website. It was further noted that the GGIM had only two representatives besides Robert Ward in attendance who shared a hydrographic background. He suggested that MS explore linking to the UN Post 2015 agenda and GGIM. Finally he noted that the updates for S-11 for the USCHC have not yet been received.

**Action 11: US and Canada to pursue their national approval of Malta and Vanuatu to become member states of the IHO.**

**Action 12: Finalize USCHC meeting report and provide relevant final files to IHB for archiving on IHO USCHC-38 website**

**Action 13: MS to explore linking hydrography to the UN Post 2015 agenda and GGIM and its role in sustainable development and disaster risk reduction.**

**Action 14: Review and submit updated S-11 Region A.**

- MACHC

Lopez

Commander Ricardo López Cruz provided a brief summary of the status of Mexican hydrographic activities, including chart coverage and ENC production. Commander Cruz also provided a summary from the December 2014 MACHC meeting in México, including a proposal to IRCC for Spanish language in IHO manuals, training documents and specifications and other related documents as appropriate. Commander Cruz also suggested that enhanced communications between adjacent RHCs, such as the USCHC and MACHC, be implemented. He also suggested future attendance among adjacent RHCs and expressed support of the ENC Online for the Americas proposal noted by John Nyberg in agenda item 5, above.

**Action 15: Explore opportunities to enhance RHC contacts and communications between USCHC and MACHC.**

➤ UKHO

Thorne

Chris Thorne provided a summary of UKHO activities. He specifically noted the retirement of Ian Moncrieff (as of January 31) and the appointment of the new Chief Executive, John Humphrey. Highlights included the UK surveys in the British Virgin Islands and the MEIP activities within the MACHC.

➤ Arctic Council/PAME

Oppenheimer

Peter Oppenheimer, who serves as legal advisor to the U.S. Delegation to the Arctic Council's Working Group on the Protection of the Arctic Marine Environment (PAME), provided a brief and background on PAME current activities, with a focus on shipping-related issues. PAME is working to advance implementation of its seminal 2009 Arctic Marine Shipping Assessment (AMSA) Report, which contains 17 overarching recommendations. . Among those recommendations is one on building the Arctic marine infrastructure, including navigational charts. Peter noted with appreciation the growing partnership between PAME and ARHC on navigational safety, reflected in part by a well-received presentation Denis Hains made at PAME in Yellowknife, Canada in October 2014. Since then, PAME had facilitated contacts between NOAA/OCS and Lindblad Expeditions for the latter to share Arctic depth-sounding information. Peter also shared information on PAME's work with respect to an Arctic marine protected areas network and efforts to support IMO measures that would protect the high seas area of the Central Arctic Ocean.

Finally, Peter reported that the U.S. would assume the rotating Chair of the Arctic Council in April 2015 for a two-year period, following on the very successful two-year chairmanship of Canada..

○ Arctic Marine Corridors

Tardif

Denis Hains addressed the Arctic Marine Corridors effort in the Canadian Arctic and that it has been taken over by the Canadian Coast Guard. Denis indicated that less than 1% of the Arctic is covered by adequate modern surveys. Further, at this time, the Arctic is not

considered a priority, but rather as an area of investment. RDML Glang added that the U.S. will use 3 vessels to survey the Bering Sea area.

- Beaufort ENC overlap resolution Powell

Julia Powell noted that the Beaufort Sea ENC overlap has been successfully resolved. The signing of the revised ENC cuts was concluded during the EIHC in October 2014. The revised charts are to be released by the hydrographic offices by the end of March. It was further indicated that this effort is considered a “Best Practice” or case study for ENC overlap resolutions and which could be implemented elsewhere.

## 9. Informational Items and Status Reports

- World class tanker safety system: Phase One Prince

Dave Prince provided a summary on the phase one of the World class tanker safety system and that it stresses prevention/preparedness of oil spills. With the proposed pipeline terminus at Kitimat, British Columbia, efforts in tanker safety have been emphasized. He added that work had been going on for about 10 years, but that the project has had funding for only the past 2 years.

- World class tanker safety system: Phase Two Fadaie

Dr. Kian Fadaie addressed phase two of the World class tanker safety system, noting that this phase deals with modern navigation systems. She indicated the two primary components: taking all reasonable measures to avoid spills in the first place; and responding to and cleaning spills quickly and effectively. Dr. Fadaie noted that there were 4 studies in areas that have the highest level of tanker traffic as follows:

- Southern portion of British Columbia
- Saint John and the Bay of Fundy, New Brunswick
- Port Hawkesbury, Nova Scotia
- Gulf of St. Lawrence, Quebec

- CHS&OS Water Levels and Currents Web services Maltais

Louis Maltais provided a summary of the web services being made available by CHS&OS. It was indicated that as snow and ice melt is an important event in the northern climates, any rise in water levels can have significant impact on mariners. The CHS&OS web services provide important navigational information for mariners. Louis noted that these free web services provide access to water level predictions, water level observations, and water level forecasting and interpolation system.

- Continuous Vertical Data Project – Canada Fadaie

Dr. Kian Fadaie provided a summary of the Canadian Continuous Vertical Data Project, noting that CHS has one huge model, as opposed to other HOs which may have several models merged together. The goal is to develop a surface connecting chart datum (CD)



to the national geodetic reference frame which captures the relevant spatial variability as modeled by integrating ocean models, water levels, GPS observations, sea level trends, satellite altimetry, and a geoid model. Further, CHS is now on the second version and will include mathematical methods in the future. She also indicated that this is not a static project and that newer versions would include Arctic data.

10. Review of USCHC-38 Meeting Actions

Culibrk/Frey

Jonathan Justi and Danilo Culibrk provided the list of actions from this meeting. During this review several actions were adjusted as appropriate. The final List of Actions is provided as Annex B to these notes.

11. Next Meeting and Closing of USCHC-38

Glang/Hains

Mr. Denis Hains stated that the next meeting of the USCHC would be in conjunction with the Canadian Hydrographic Conference 16-19 May, 2016 in Halifax, Nova Scotia. As May 16 is a Monday, the USCHC would be scheduled for that day. As a final comment, Mr. Hains thanked the U.S. for hosting the 38<sup>th</sup> USCHC and a very productive day.

RDML Glang added that he will enjoy all the intermediate conversations with our neighbors and colleagues. He thanked Canada for travelling to the Washington area for this meeting and to Robert Ward, President of the IHO. He also expressed gratitude to Ricardo López Cruz, representing the MACHC and Chris Thorne, representing the UKHO as well as Peter Oppenheimer, representing the Arctic Council.

With those final comments, RDML Glang officially closed the 38<sup>th</sup> USCHC.

**USCHC-38**  
**List of Participants**  
(as of March 16, 2015)

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## List of Actions

## Annex B

USCHC #	#	ACTION	Status/ Due	Responsible
USCHC-38	1	All "ongoing actions" from prior USCHC action lists will be added and acted upon in the new period. (each one to be listed and numbered in this table)	Ongoing	Justi/Brunt
USCHC-38	2	Circulate the CAC TOR to the USCHC members for their review. Review to include a possible focus on an MSDI-relevant cooperation as a focal area. If relevant, report to IRCC-7	May 31	Ries/Nyberg
USCHC-38	3	Review Level of Services Agreement for Nautical Products and Services annually and update points of contact at each USCHC (annually)	Ongoing	Powell/Brunt
USCHC-38	4	Review, update and provide the USCHC report to the IRCC Chair and IHB by early April (CL 16)	10-Apr	Brunt/Justi
USCHC-38	5	US and Canada to inform MSDIWG of its practices and illustrative examples related to updating C-17	1-Oct	Fadaie/Hick
USCHC-38	6	Invite Canada to consider joining with the MACHC to produce an ENC online service for the Americas (regional contribution to MSDI)	1-July	Nyberg
USCHC-38	7	USCHC Chair to propose to IRCC to add an agenda item on SDB to allow member states to report development experiences.	1-Apr	Hains
USCHC-38	8	Complete the USCHC presentation to the IRCC-7 on SDB and share with IRCC. Emphasize limited applications of SDB especially concerning its role as a reconnaissance tool, for early warning, and emergency response and case studies. Propose make this a standing IRCC agenda item as part of USCHC presentation.	10-May	Glang/Hains
USCHC-38	9	Develop draft policy paper on the application and caveats concerning the use of SDB	USCHC39	Glang/Hains
USCHC-38	10	a. arrange teleconference with interested USCHC members for Erich Frey to brief and all to discuss Council Selection Process and USCHC context (Fall 2015)  b. Develop a protocol for selection of USCHC representation to the IHO Council for discussion at next meeting	USCHC39	Brunt/Justi
USCHC-38	11	US and Canada to pursue their national approval of Malta and Vanuatu to become member states of the IHO	1-Nov	Justi/Brunt
USCHC-38	12	Finalize USCHC meeting report and provide relevant final files to IHB for archiving on IHO USCHC-38 website	1- July	Justi/Brunt/ Frey/Culibrk
USCHC-38	13	MS to explore linking hydrography to the UN Post 2015 agenda and GGIM and its role in sustainable development and disaster risk reduction	Ongoing	Nyberg/
USCHC-38	14	Review and submit updated S-11 Region A	Aug	Nyberg
USCHC-38	15	Explore opportunities to enhance RHC contacts and communications between USCHC and MACHC.	Ongoing	Brunt/Justi