

**International Hydrographic
Organization**



**United States - Canada
Hydrographic Commission**



Minutes of the 33rd Meeting of the
International Hydrographic Organization

UNITED STATES - CANADA HYDROGRAPHIC COMMISSION

Ottawa, Ontario

Canada

May 17-18, 2010

Co-Chairs

Capt. John Lowell, NOAA
Director, Office of Coast Survey (OCS)
National Oceanic and Atmospheric
Administration (NOAA)

Dr. Savithri Narayanan
Director General, Dominion Hydrographer
Canadian Hydrographic Service (CHS)
Fisheries & Oceans Canada

1. Welcoming Remarks

S. Narayanan and J. Lowell jointly welcomed the group.

Before proceeding S. Narayanan asked to approve the agenda and two new items were proposed:

- J. Lowell added 4.1.7 Step back and review directions for the Transboundary ENC Project
- S. Hinds added 6.4 Discussion of the NAV55 Denmark proposal for placing caution-type notes on Arctic products related to suitability for electronic navigation.

The revised agenda is given in Annex A

2. Approval of the minutes from the 31st USCHC meeting.

2.1 Status of Actions Arising from the 32nd USCHC

All ACTION items were reviewed and the Commission unanimously agreed to approve the minutes from the 32nd USCHC meeting.

3. Organizational Updates

3.1 Canadian Hydrographic Service

S. Narayanan, the Canadian Dominion Hydrographer provided organizational updates that have occurred in Fisheries and Oceans Canada of relevance to the

Canadian Hydrographic Service (CHS) over the last year. Most notable is the appointment of Dr. Siddika Mithani as the new Assistant Deputy Minister, Oceans and Science, Fisheries & Oceans Canada (DFO). In addition Sylvain de Margerie is now the new Director of Integrated Science Data Management, reporting to the Dominion Hydrographer. Furthermore, the CHS Director at Bedford Institute of Oceanography will now be reporting to a new Director of Science, Dr. Alain Vezina.

Autonomous Underwater Vehicle technology has been successfully used in hydrographic under-the-ice surveys this spring in support of Canada's UNCLOS program. The Arctic is an increasing priority for the Canadian Government and this creates significant challenges and at the same time excellent opportunities for CHS and DFO.

3.2 Office of Coast Survey

J. Lowell, the US National Hydrographer and Director of the Office of Coast Survey (OCS) provided organizational updates for the US. Jack Dunnigan has retired and in his place now is Dave Kennedy as the acting Head of the National Ocean Service, with Holly Bamford as Deputy Head. Within OCS itself Captain Doug Baird is the new Chief of Marine Charting, with John Nyberg as the Deputy.

The single source production environment continues to be a goal for OCS. Significant coordination improvements have been made to facilitate greater throughput of newly acquired data from the hydrographic surveys group to the marine charting group.

4. Chart Advisors Committee (CAC) Report

4.1 Transboundary ENC Report and Recommendation

D. Pelletier presented the ACTIONS of the Chart Advisors Committee and introduced the Transboundary ENC program which has been the dominant focus of CAC since 2008. Several technical and legal issues have been identified and progress is being made to find solutions.

4.1.1 Transboundary ENC Report 1 of 4 – Limits

This is the official document that details the corner points of the Transboundary ENCs and which Hydrographic Office has production responsibility. OCS agreed to review the technical accuracy and to forward to CHS for approval.

ACTION: C. Winn to coordinate OCS delivery of the final Limits document

4.1.2 Transboundary ENC Report #2 – Coding Guide for Chart Notes

This Coding Guide is the official document to describe agreed coding practices which are not explicitly covered by the S-57 Coding Guide. It was not possible to finalize this document because legal approval of the ENC notes for the disputed boundary area is outstanding.

ACTION S. Hinds: to coordinate discussions between OCS and CHS Legal Counsels to obtain the necessary disputed boundary note approvals.

4.1.3 IIC Transboundary ENC Simulation Report

S. Hinds presented the background and process that was followed to contract an ENC simulation exercise to test performance of overlapping ENCs. Steve Barnum (US Hydrographer retired) and Savi Narayanan (Dominion Hydrographer) made a decision at the 4th Extraordinary International Hydrographic Conference (EIHC), 2009 to pursue a duplicate ENC coverage solution to a complex problem involving official languages for ENC products. This decision was taken pending assurance that no safety issues would result. As such, it was necessary to run an Electronic Chart Display and Information System (ECDIS) test to understand how the system would perform with nearly exact duplicate files. Duplicate ENC files between OCS and CHS were proposed as a possible solution to the complex need to show both English and French language in Transboundary ENCs.

- Three distinct ECDIS systems, all of which were type approval eligible, were used.
- Five OCS ENCs were copied to a CA producer code and French text was inserted into various objects. Three ship voyage simulations were undertaken with various ECDIS configurations and observations made
- The ECDIS performed flawlessly in regards to loading and displaying ENCs
- The national text was handled differently by each of the ECDIS systems and this highlights potential improvements that could be made to the performance standard or the type-approval process.
- The test was considered successful in demonstrating a reasonable degree of confidence that duplicate ENCs do not put mariners at risk

4.1.4 Transboundary ENC Report #3 – Vertical Datums

United States and Canada use different reference datums for their water levels, which have traditionally been retained in the cooperative paper chart program. A briefing paper identifying the risks of following this practice for ENCs was presented. The maximum step between the datums at a border point was 1.5 metres which was shown to have impact only in shallow and flat bottom locations which pose zero risk to commercial vessels likely to be using ECDIS or ENC files. A decision was taken to continue the two datum practice on Transboundary ENCs.

4.1.5 Transboundary ENC Report # 4 – Cooperative Levels of Service

This is the official document outlining operational levels of service between the two organizations involved in this Transboundary ENC project. These service levels documented the business rules related to activities of:

- how French and English notes will be handled
- how the presentation of maritime boundaries would be handled
- how updating would be done

- how new versions would be generated and the necessary exchange of data will be performed

Given there are concerns that these Levels of Service may be perceived as binding the parties to performance levels it was recommended that Legal Counsel review the document.

ACTION S. Hinds and C. Winn: to solicit legal comment on the Level of Service document

4.1.6 Final Cooperative Transboundary Communication Plan

This document provides for the framework of a 90 day communication plan to inform dealers and users of any changes in the production and distribution of the transboundary ENC's. The following were points of discussion:

- There was concern as to whether or not the timeline was sufficient to permit Value-Added Resellers (VARs) and/or large chart portfolio managers to react.
- It may be reasonable to put out a notice indicating the intent and process to issue Transboundary ENC's, and if users have comments they could use existing established channels to communicate them.
- In addition to the timing, it was noted that both Hydrographic Offices may not have a solid understanding of how users obtain their ENC update messages and whether the full file replacement scenario presently being considered would impact them.

ACTION D. Pelletier: to investigate with P. Holroyd the needs of Canadian VARs in respect of Transboundary ENC release.

ACTION D. Pelletier and M. Kroll: to work with the CAC to determine if alterations to the Communication Plan are required in light of information received from VARs and/or large chart portfolio managers.

4.1.7 Step Back and Review Directions for Transboundary ENC's

J. Lowell presented a number of different scenarios for the production and management of the Transboundary ENC's and recommended that CAC be tasked with providing the pros and cons of each in order to support the current approach or offer reasonable alternatives. The following are the options:

1. Status Quo – the scope and impact of the overlap issue have not been well defined
2. Cut at border – this may be a simple solution in some geographic areas but may not be the best solution nationally.
3. Continue with the current plan of Canada duplicating Transboundary ENC's produced by the United States.
4. A mixed solution noting that one size may not fit all needs and that approaches could be different from one region to the other.

5. United States could re-consider their position on adding Canada's national French text to avoid the need of duplicate ENCs
6. All Transboundary ENCs in Canada-US waters be produced by Canada

ACTION CAC: to undertake a pro/con evaluation of these options and others that may surface during CAC discussions. In addition to pros and cons CAC should consider the level of effort, cost, political sensitivity, efficiency, and what is non-negotiable in their assessment and make recommendation. This work is to be provided to USCHC by June 10.

4.2. Other CAC Recommendations

4.2.1 Management of Area A INT Charts

INT chart discussions were deferred to a future meeting.

5. Welcome from the Assistant Deputy Minister of Science for Fisheries & Oceans Canada

Dr. Siddika Mithani joined the group for an interesting discussion on the background to the USCHC and the common challenges faced in hydrography. With comments from all participants it was clear that the challenges facing the United States and Canada in hydrography were also being experienced in other parts of the world. The role of governments working for public good, the role of data management for good stewardship, the challenge with organizational response to the emerging Google generation of users, and the opportunities in the Arctic were common challenges faced by all HOs.

6. Arctic Regional Hydrographic Commission (ARHC)

6.1 Progress of Statutes

S. Narayanan presented a status update indicating that Canada, Denmark, Norway and the United States have provided written notice that the Statutes have been reviewed and there is a green light to proceed. The statutes are being reviewed by the Russian Federation. Canada has offered to host the inaugural meeting of the ARHC in Canada in the Fall 2010. Canada was encouraged to continue with this proposal.

6.2 Geographic Limits of the Commission

Several interesting points were raised:

- Three principal approaches were identified as 1) keep the status quo of an ambiguous northern limit and negotiate services bilaterally between the two RHCs, 2) adopt the Arctic NavArea limits, 3) define a northern boundary for the USCHC.

- RHCs quite often align their areas of coverage with the INT chart areas but the northern limit of Area A is not defined.
- RHCs have in the past aligned with NavAreas but there is not hard rule on this.
- NavAreas are defined by IMO Member States and since they are one component of Marine Safety Information systems there is reasonable merit to aligning with these already approved areas.
- In US waters the area of coverage of the ARHC would dictate if the participant in the ARHC is OCS or the National Geospatial-Intelligence Agency (NGA).
- Defining new boundaries in the Arctic may prove to be a complicated process as they are many jurisdictions that may feel they have input.

ACTION A. Saheb-Ettaba: to review the ARHC proposed Statutes to determine if the language will accommodate any or all of the options and if not, what text could be proposed.

ACTION S. Narayanan: to raise the discussion on area of responsibility at a future meeting of the proposed Arctic Regional Hydrographic Commission

6.3 Inaugural meeting of the ARHC

ACTION S. Narayanan: to prepare a draft agenda for and organize a Fall 2010 inaugural meeting in Canada

6.4 Denmark NAV 55 proposal for notes on Arctic charts not suited to electronic navigation

ACTION CAC: provide options and recommendations for a caution note on Arctic charts that are questionable for use with electronic navigation. This will need legal input. A deadline of July 1 is required in order to properly brief NAV56 delegations.

ACTION CAC: Aligned with the ACTION on caution notes on Arctic charts there needs to be a recommendation to USCHC for a communication plan regarding gaps in Arctic coverage. Due date September 1, 2010.

7. IRCC Proposal for Clarifying RHC's Relationship with IHO

J. Lowell explained that a version of this draft IRCC2 proposal first surface at the 4th Extraordinary International Hydrographic Conference (EIHC) in Monaco June 2009. It was withdrawn at the Conference as there was general agreement that the IHO could not impose any relations on the RHCs and that the RHCs must voluntarily agree to be part of the IHO. This was again discussed at the 1st meeting of the Inter-Regional Coordination Committee (IRCC) that followed the 4th EIHC. It was suggested at IRCC1 that the USCHC bring forth a proposal to

IRCC2 to clarify the association of the RHCs to the IHO. The following were points raised:

- If the RHCs are not official bodies then it may not be possible for an RHC to raise a proposal to an IHO Committee. Therefore it is suggested this proposal go forth as a United States proposal to ensure it reaches the floor.
- The wording in most RHCs' Statutes implies they are associated with IHO through words such as 'integrant (or integral) part of the IHO'.
- Member States to the IHO Convention are signed on via a parliamentary or high-level Government signature while signatures to RHCs are generally at the Director General or Hydrographer level.
- It is unclear what status RHCs would have if they were to consider themselves part of the IHO. Would they be an organ or a subsidiary body?
- Currently RHCs may operate in any fashion they wish and with their future role in putting Member States forward for Council there may be merit to having some standardization of RHCs' operations.
- Relations between RHCs and IHO is a bit of a grey area but in general they work.
- It may be possible to put forth wording for RHCs to use in their Statutes that they could adopt voluntarily that would help clarify RHCs' association with IHO.
- If RHCs were to volunteer to be part of the IHO would that require opening the Convention or the Protocol of Amendments?

J. Lowell thanked the group for the open discussion and would consider the information provided here in their consideration of the draft proposal for IRCC2.

8. International Hydrographic Bureau (IHB) Report

R. Ward provided a brief report of the work of the IHB covering topics such as:

- Progress of Member States approval of the Protocol of Amendments
- ENC reporting to NAV56
- Progress of negotiations to advance release of S-23
- Staff changes at IHB

9. United Kingdom Hydrographic Office (UKHO) Report

M. Aspden provided a brief report on the work of the UKHO covering topics such as:

- UKHO business model including mission, key target indicators, and governance
- International training and partnerships
- Challenges for the Admiralty Chart Service in particular with ECDIS mandation around the corner

10. Canadian Coast Guard (CCG) presentation on Virtual Aids to Navigation (V-AtoN)

This was an informative presentation by Joanna Bellamy to outline the progress to date on the concept of V-AtoN at the international level through IALA and within CCG itself. Several matters of a hydrographic nature were asked which was appreciated as a feedback mechanism to CCG.

- V-AtoN symbology should be harmonized with charting symbology.
- It was not clear if a Temporary Notice or Notice to Mariners would accompany all V-AtoN.
- If private sector entities are licenced to issue V-AtoN is there a risk of clutter?
- Many AIS units are only numerical as defined by the carriage requirement so will the information be transferrable to paper charts and/or ECDIS?
- IMO has not defined when or how V-AtoN may be used and this is a risk to safety, especially in light of the fact that many countries have now adopted this new technology.
- If V-AtoN are to be more permanent than temporary and are incorporated into the nautical chart why do you need to retain the V-Aton symbol (VTS symbology on a chart was noted as a virtual aid)?
- It was noted that the GDMSS had a system to hand-over their warnings from temporary to permanent.
- IHO TSMAD WG is currently considering V-AtoN symbology as a precaution if they come into regular use.

11. Next Meeting and Closing Remarks

S. Narayanan and J. Lowell provided closing remarks. The next USCHC meeting is to be hosted by OCS and the tentative date would be April – May 2011.

S. Narayanan adjourned the Commission meeting.

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Agenda

33nd Meeting of the
International Hydrographic Organization

UNITED STATES - CANADA HYDROGRAPHIC COMMISSION

615 Booth St., Ottawa, Canada, 3rd floor, Boulton Board Room

May 17, 2010, 13 h 00 – 17 h 00

May 18, 2010, 08 h 30 – 12 h 00

Chairs: Dr. Savithri Narayanan
Captain John Lowell

May 17, 2010

Day 1- 13 h 00

1. Opening Remarks and IntroductionsS. Narayanan and J. Lowell
2. Approval of Minutes of 32nd MeetingS. Narayanan and J. Lowell
 - 2.1 Status of Actions Arising From 32nd Meeting USCHC
3. Organizational Update S. Narayanan and J. Lowell
 - 3.1 Canadian Hydrographic Service
 - 3.2 Office of Coast Survey

Day 1- 13 h 30

4. Chart Advisors Committee Report.....D. Pelletier and K. Ries
 - 4.1 Transboundary ENC Report and Recommendations.....S.Hinds and C. Winn
 - 4.1.1 Limits of Transboundary ENCs in Juan de Fuca Straits
 - 4.1.2 Final ENC Transboundary Coding Guideline for Chart Notes
- Boundary Notes
 - 4.1.3 Results of the Transboundary ENC Simulation Test
 - 4.1.4 Transboundary ENC Note for Different Datums
 - 4.1.5 Cooperative Levels of Service Agreement
 - 4.1.6 Final Cooperative Communication Plan
 - 4.1.7 Step back – summarize and review options

Day 1- 15h 30

- 4.2 Other CAC recommendationsK. Ries and D. Pelletier
- 4.2.1 Management of Area A International Charts

Day 1- 16h 30

- 5. Meeting with Assistant Deputy Minister Oceans and Science, Dr. Siddika Mithani

Day 1- 17 h 00 Adjourn (short post-meeting refreshments and evening dinner to follow)

May 18, 2010

Day 2- 08 h 30

- 6. Proposed Arctic Regional Hydrographic Commission.....S. Hinds and C. Winn
 - 6.1 Progress of Statutes
 - 6.2 Geographical Limits of the Commission
 - 6.3 Inaugural Meeting discussions
 - 6.4 USCHC Action Regarding Denmark NAV55 Proposal for notes on Arctic Charts

- 7. Proposal to the IRCCOffice of Coast Survey

- 8. IHB ReportR. Ward, IHO Director

- 9. Report from UKHOM. Aspden, UKHO
Liaison Officer

Day 2- 10 h 30

- 10. Canadian Coast Guard – Virtual Aids to Navigation.....J. Bellamy

Day 2- 11 h 30

- 11. Next Meeting and Closing RemarksS. Narayanan and John Lowell

Day 2- 12 h 00 Adjourn