

4th Meeting

Arctic Regional Hydrographic Commission

January 29-30, 2014
Portsmouth, NH, USA

1 Opening of the Conference

1.1 Welcome

The Chair, Evert Flier, opened the 4th Arctic Regional Hydrographic Commission meeting and welcomed delegates from all member states (Canada, Denmark, Norway, Russian Federation and USA), the President of IHO, Larry Mayer representing IBCAO as well as the observer from Finland.

He thanked the US hosts for the thorough preparations and the good choice of venue, and made note of the diverse and very interesting papers presented at the Scientific Forum the preceding day.

Administration and logistics

US briefed on practical matters of the meeting, visit to the NOAA ship Hassler as well as the evening's setting.

1.3 Adoption of the agenda

Reference document ARHC4-1.3rev3

The Annotated Agenda, *ARHC4-1.3.1rev1*, was used as guiding document for the progress of the meeting.

The agenda was adopted without any change.

1.4 Status of actions from ARHC3

Reference document ARHC4-1.4

ARHC2-04C. Canada has added to web sites links containing updated information of interest. Action closed

ARHC2-05. This item will be covered by other activities and the meeting agreed to close the action. Ward commented on the contact with cruise operators in Antarctica for data collection.

ARHC3-01. Denmark has sent a letter to TSMAD and also distributed test data. Reference is made to document ARHC4-4.6 from TSMAD vice chair. Action closed

ARHC3-17. A workshop will be arranged in 2014.

ARHC3-21. We agreed on last meeting to change the process. The Statutes remain unchanged for the time being and we just refer to the circulated documents that all countries have accepted. Ward briefed the meeting on how some other HC practice amendments, no full signing round required. We find the final Minutes from ARHC3 to be sufficient documentation. Ref ARHC3-25. Action closed.

All other Action Items have been completed prior to the meeting.

2 National updates on Arctic hydrography

2.1 National report Canada

Reference document ARHC4-2.1

Michael Hecimovich presented the Canadian national report. CA is in the process of recruiting a new Hydrographer after the retirement of Savithri Narayanan some month ago. Director Dr. Kian Fadaie is the acting National Hydrographer.

Oceanography is now included in the organization.

Northern Canada Vessel Traffic Services Zone was presented. Capacity challenges were highlighted. CHS does not have a dedicated survey ship, budget or program for the Arctic. A recent cooperation with the Navy has been quite successful.

Many paper charts do not have the quality to be converted to ENCs. Cooperation with other institution and utilization of ship-of-opportunity take place to some extent. There will be an emphasis on collaboration in the future.

The report was noted by the ARHC4.

2.2 National report Denmark

Reference document ARH4-2.2

Jens Peter Hartmann and Lars Hansen presented the Danish national report.

The Danish Geodata Agency was established in order to fulfil and support the new strategy that was developed in 2012. The experience with the rather new organization was described. A new deputy Director/National Hydrographer has recently been appointed.

The survey program in Greenland up to now has been concentrated on south western area. The new survey program will focus of the waterways connecting the major communities.

The report was noted by the ARHC4.

2.3 National report Norway

Reference document ARHC4-2.3

Evert Flier presented the Norwegian national report.

The Mapping Authority, included the Hydrographic Service (NHS), has been transferred to a different Ministry

Three new survey launches will be operational within a few months.

The possibilities related to high density data release in Svalbard was highlighted. These kinds of products will be demonstrated to for politicians and others.

The NHS role in the BarentsWatch (a monitoring and information system for sea and coastal areas) was mentioned.

The report was noted by the ARHC4.

2.4 National report Russia

Reference document ARHC4-2.4

Leonid Shalnov presented the Russian national report.

He conveyed a greeting from Director Sergey Travin, who was appointed as the National Hydrographer last October after the retirement of Capt. Alexander Shemetov.

The basic directions of activity of the Hydrographic Office of the Navy were presented. The HO of the Navy has a Northern Unit, but the tracks for the Northern Sea Route (NSR) are under the responsibility of the Ministry of Transport. Chart production takes place at Institute of Navigation and Oceanography (the HO).

Four new ENC's and one new edition for the Arctic area were published in 2012-2013.

More than 500 charts are available as Print on Demand. A distributed printing solution is available at 5 locations throughout Russia.

The report was noted by the ARHC4

2.5 National report USA

Reference document ARHC4-2.5

Gerd Glang presented the US national report.

Some changes in the leadership were presented. Three different Governmental Agencies have recently published their Arctic Strategies, see INF documents.

The Office of Coast Survey (OCS) does have a limited cooperation with the Coast Guard with respect to surveying.

A recent Mobile App provides free nautical charts (raster). The solution is based on the Coast Pilots. It is likely that the product will be handed over to a private company. Several countries commented on national plans to release somewhat similar products.

NOAA ends production of paper charts in 2014. Both paper charts (Print on Demand) as well as ENC's will be available through commercial vendors. Portable Document Format (PDF) Nautical Charts are available for downloading, also for private persons.

ENC direct to GIS: OCS has translated the data from S57 to a GIS-friendly format.

US chart no 1 show paper chart (INT1) symbols side-by-side with the corresponding ECDIS (S-52) symbols.

The report was noted by the ARHC4.

3 Reporting of Working Groups

3.1 Report of ARHC strategic WG

Reference document ARHC4-3.1

After some discussions of different proposals it was agreed to name the document *Strategic Directions*. The proposed vision and mission will be replaced by a statement reflecting who we are and what we intend to do. Safety of navigation will be the main focus of the document.

Action item ARHC4-01. The SPWG to incorporate the conclusions from the discussions at ARHC4 and circulate to the members. Responsible: NO

An outreach to be prepared that reflects main issues from the Strategic Directions.

Action item ARHC4-02: A one page communication paper to be prepared. Responsible NO

3.1.1 - 3.1.3 US Arctic Strategy papers

Reference documents ARHC4-3.1.1 INF, ARHC4-3.1.2 INF, ARHC4-3.1.3 INF

The INF papers were not presented and included just for information exchange.

3.2 Report of Operational and Technical WG

Reference documents ARHC4-3.2

The acting chair Jonathan Justi presented the report from the Operational and Technical Working Group (OTWG). A list of topical interests identified by OTWG members was included in the report.

The meeting supported the idea of having a webpage for sharing information and documents. The proposal of a meeting during 2014 was also supported. Member States should report any changes in membership of the group.

Michael Gonsalves was elected as the Chair of OTWG.

3.2.1 A continuous Vertical Datum Solution in Canadian's Arctic

Reference document ARHC4-3.2.1_INF2

Michael Hecimovich gave an overview of the work done, results achieved and future work, included installation of additional tide gauges and GPS stations.

3.2.2 Innovative data collection program delivery techniques in the Canadian Arctic

Reference document ARHC4-3.2.2 INF1

Michael Hecimovich gave an overview of recent initiatives to facilitate the acquisition of hydrographic data in the Canadian Arctic. In addition to traditional Hydrographic Survey Campaigns, several other parties have contributed with bathymetric data. On the list were private companies, the Geological Survey, Defence agencies, university and other researchers. In most cases a hydrographer from CHS was participating on the ships of opportunity.

3.2.3 Gap Analysis for Hydrography in Canadian Arctic

Reference document ARHC4-3.2.3 INF1

Sean Hinds gave the background for the work. A traffic density analysis was done and the hydrographic gap was identified. Spatial visualization tools have been applied for presenting the outcome. The CHS considers there is great potential in the use of GIS technology interfaced with interactive web mapping technology to bring complex layers of data onto the desk-tops of decision makers.

3.3. Harmonization of Arctic Voyage Planning Guides for Pan Arctic Coverage

Reference document ARHC4-3.3

Sean Hinds gave a presentation of the report prepared by CA in cooperation with DK and the US. CA looks at the voyage planning to be a strategic navigation tool, not for tactical navigation. The guide is not intended to be a carriage requirement. Seven practical themes to be include in a Planning Guide were recommended.

The ARHC4 support the recommendations for the formation of AVPG. The progress of the work is up to each Member State (or on bilateral cooperation).

The idea is to have a common access to different Planning Guides. Different ideas of how to inform users was discussed. IMO could be one of the channels.

Action item ARHC4-03. DK, NO and RU to inform US about links to documents and web sites offering relevant voyage planning information.

Action item ARHC4-04. US to liaise with IHB for hosting a web site location for the Voyage Planning documents

Canada publicly released their national Arctic Voyage Planning Guide in April 2013. The product is an interactive web mapping service. No feedback on any lacking information is received. With respect to Canada's report of the release of its web-based Voyage Planning Guide, the United States supports the objectives of the Northern Canadian Vessel Traffic Regulations but believes the

regulations are inconsistent with international law and has practical concerns whether the regulations enhance safe navigation. The United States continues to urge Canada to submit its regulations to the International Maritime Organization for consideration and adoption.

3.4 Status of the Arctic International Charting Coordination WG

Reference document ARHC4-3.4

Evert Flier presented the report

The WG is still not fully operational. ARHC4 support the proposal of arranging a meeting in 2014 and suggest linking it to another meeting if feasible. DK is willing to host the meeting.

Action item ARHC4- 04. The AICCWG to propose a framework and principles for ENC scheme and provide status.

Action item ARHC4- 05 The AICCWG to suggest an INT chart coverage for the Arctic

John Nyberg (john.nyberg@noaa.gov) is appointed as the new member from US. The Danish member will be Peter Ladegaard Sørensen. A Russian member is still no nominated.

3.4.1 Grid for Greenlandic ENCs

Reference document ARHC4-3.4.1

The new production tools have enabled Denmark to produce the ENCs prior to the paper charts. DK has decided to use a grid-based approach to the ENC cells in Greenland. The grid is based on a latitude-longitude coordinate system with a maximum size of 8° x 8°. This grid might be subdivided into a finer grid, by dividing each cell into 2x2 sub-cells.

4. International cooperation - IHO, IMO, IALA...

4.1 IHB report

Reference document ARHC4-4.1 IHB report

The President of IHO, Robert Ward, presented the report on relevant IHB issues.

RU informed that the documents related to the Approval of Amendments to the IHO Convention have been signed by the minister of Defence. The final governmental approval is pending. Nine more approvals are needed for the new Convention to come into effect.

Montenegro recently became a member of IHO.

Some ARHC members have not indicated positive support to the 3 states applying for membership of IHO.

UNESCO has prepared International Polar Initiative (IPI) to address the emerging challenges identified within the International Polar Year 2007-2008. The IPI is linked to the International Polar

Decade Initiative (IPD)

Ward mention HCA Declaration on cooperation on Antarctica (see paper ARHC4-7.1) that encourages the development of collaborative survey activities. The declaration has great relevance to the Arctic region as well.

The development of the IHO GIS data base is progressing. The country and organization data base part, including the Yearbook module, will soon be launched. The pilot project for Antarctica related to the Regional data base is under evaluation. <http://hca.iho.int/>

Topics and Agenda for EIHC5:

- next year work plan and budget, CBSC strategy, Technical capacity of IHB.....

An Information and Update Seminar to be arranged during the Conference (2 half days) with participation from private companies and other stakeholders.

IMO Polar Code: The IHO proposed text for Sources of Hazards in Part 1-A is agreed upon. Text in Preamble and Part 1-B Safety of Navigation has not been considered. IHB will continue to liaise with the drafting group of the Polar Code

Ward raised a question related to an overview of the surveying in the Arctic. The consecutive discussion ended in the following Action Items:

Action item ARHC4-07. The OTWG to cooperate with IBCAO to come up with an overview of the availability of survey data.

Action item ARHC4-07a. The OTWG be tasked to investigate the technical feasibility of a GIS and/or database that could be used by ARHC, similar to HCA, to assemble and monitor hydrography and charting in the Arctic Region. A report at the next meeting of the ARHC would be welcome.

4.2 The progress of the WEND WG

Sean Hinds gave a report from the latest meeting. The main discussions at the meeting were related to critical gaps, overlapping ENCs, inconsistencies and licence and distribution models. The efforts to welcome and leverage RENC databases to advance IHO monitoring and encourage ENC access was addressed

Evert Flier commented on RENC harmonization. A proposal on minimum requirements of operating a RENC has been prepared. On the Primar RENC side everyone supported the proposal but IC-ENC felt harmonization had extra layer of bureaucracy and did not support it. IHB regretted the decision of not to harmonize the RENCs and join the Management Boards.

4.3 Associate Membership and Observers of ARHC

Reference document ARHC4-4.3

Evert Flier presented the main topics of the document and asked for comments from everyone.

All the Members were in favor of welcoming Finland and Iceland as Associate Members. Most countries would like ARHC to be more inclusive to states that expressed interest to contribute to improvements in the Arctic.

Post meeting comment: [Article 8 d\) of the ARHC Statutes states the following:](#)

An invitation to attend the Conferences and a Provisional Agenda is also sent to the President of the IHB who could attend in person or nominate one of the two Directors of the IHB. The President of the IHB enjoys the same status as an Associate Member.

[It may be prudent to consider and confirm IHB as Associate Member in conjunction with recognizing Finland and Iceland as Associate Members.](#)

Action item ARHC4-08. The Chair to inform Finland and Iceland that they should request to apply for Associate Membership

The Associate Membership will be effective on signing of the Statutes. The Chair is authorized to approve any application.

US referred to the statement at ARHC1 and the unanimous agreement that it would be beneficial for ARHC to establish collaboration with Members of the Arctic Council. US suggested inviting Sweden to apply for Associate Membership.

Action item ARHC4-09. The Chair to send a letter to Sweden inviting them to apply for Associate Membership

Action item ARHC4-10. The Chair of OTWG to invite Finland and Iceland to become a member of the Working Group

4.4. Topics for discussion at EIHC5

No proposal

4.5 Communication with the Arctic Council's PAME

Reference document ARHC4-4.5

Jonathan Justi explained the background for the paper to PAMEII-2013. An enquiry from PAME was distributed prior to the meeting.

It was consensus to respond positively to the PAME initiative. Due to the short period until the next meeting the main feedback should be prepared to the PAME II meeting in September 2014. A draft letter for the preliminary feedback to PAME to be circulated to the Members of ARHC as soon as possible.

An overview of surveying and charting needs to be prepared. As Iceland is a member of the Arctic Council and PAME, it was suggested to cooperate with Iceland in order to prepare a complete

overview of the status in the Arctic.

Action item ARHC4- 11. The recipient of the letter (Chair) from the PAME to respond to the invitation before PAME I-2014. Responsible: **Norway**

Action item ARHC4-12. **Canada** to clarify the possibility of supporting ARHC in its efforts to provide a working tool for an overview of hydrography and charting status in the Arctic based on input from all Member States and Iceland

4.5.1. related document. PAME II-2013 Agenda Item 4.1(c)

Taken into consideration

4.6. TSMAD report on polar projection issues

US and DK have given excellent contribution to this item. The subject has been thoroughly analyzed and described by the relevant groups. There is nothing more to add and the case is closed.

5. Marine Spatial data Infrastructure (MSDI)

5.1. Report of the Marine Spatial Data Infrastructure Working Group (MSDIWG)

Reference document ARHC4-5.1 rev1

Jens Peter made a presentation.

The new Work Plan and the MSDI tasks were discussed at HSSC5. The next meeting of the MSDIWG will take place in early February 2014. The MSDI work done in the Baltic Sea is a very good example for the WG.

The Arctic SDI is an important activity for the Arctic Council but unfortunately little attention is given to the marine dimension so far. The Arctic HOs should contribute to the development of the SDI and ensure the use of provided data. It is in our interest that Arctic SDI becomes a success. The ARHC could be a strong voice for the development of the marine and maritime part of the Arctic SDI.

DK encouraged the ARHC Chair to contact the Arctic SDI chair about the marine dimension.

Action item ARHC4-13. **Denmark** to provide a MSDI report from an Arctic Perspective

5.2 The Mareano project

Evert Flier gave an update of the achievements in the Mareano Programme. The Ministries involved continues the economical support as the programme delivers interesting results. The most of the bathymetric surveying is done by contracted private companies.

5.3 A Coast-Mareano project

Evert Flier gave a short presentation. The partners of the Mareano have started the preparation for a similar project covering the coastal zone. Flier focused on the bathymetric data as the backbone to

the blue economy. The economic benefits of surveying the coastal zone have been documented by studies in US and Ireland. Also the EU has explicitly declared the intention of supporting Blue Growth in the Marine Knowledge 2020 document.

6 Actions arising from IRCC5

Reference document ARHC4-6.1

The list of Action relevant to ARHC was presented and discussed.

7 Any other international activities in nautical charting and hydrographic surveying

7.1. HCA Declaration

Reference document ARHC4-7.1

This item was covered under subject 4.1 (The IHB report)

7.2. Nordic Nautical Publication WG report

Reference document ARHC4-7.2

Jens Peter Hartman gave a short presentation.

A Workshop will be held in 2014. Denmark will ask for participation to ARHC Members plus request MS achievements.

Action item ARHC4-14. Denmark to send out an invitation to ARHC Member for participating in a workshop related to nautical publications

8 Any Other Business

US informed that the Arctic Council has drafted an Arctic Strategic Plan 2015-2025. ARHC is welcomed to comment on the Plan. Deadline is 1 April 2014

Action item ARHC4-15. Norway to distribute the Arctic Council “Arctic Marine Strategic Plan 2015-2025” and request the Member States to send comments to the Chair and Vice-Chair

9 Election of next ARHC Chair

According to the decision at ARHC3 the role of chair should coincide with that of host. The Russian Federation is the next on the list. Leonid Shalnov confirmed the RU readiness to take over the chairmanship. The chair will be Sergey V. Travin.

10 Time and venue for next ARHC meeting

Leonid Shalnov launched the idea of having a side meeting at the EIHC5 and a second ordinary meeting in 2015, most likely in first half of October. The proposal was welcomed and a lunch meeting will take place during the EIHC5 and, if required, a follow up meeting on Friday after the Conference. The new chair will circulate a letter about the two proposed meetings within a short time.

11 Closing formalities

The Chair expressed his appreciation with the course of the ARHC4 and thanked all concerned for their contributions to a very successful conference. He thanked the United States for hosting the meeting and wished everyone a safe return journey.