

**16th MEETING OF THE IHO INTER-REGIONAL COORDINATING COMMITTEE
IHO-IRCC15
Galapagos, Equador, 10-12 June 2024**

ARCTIC REGIONAL HYDROGRAPHIC COMMISSION

ARHC report to IRCC16

1. Chair

Chair: Birte Noer Borrevik (Norway) from Sep.2023
Pia Dahl Højgaard (Denmark) from Sep. 2022
Dr. Geneviève Béchar, (Canada) from Nov. 2021 to Sep. 2022

Vice-Chair: RDML Ben Evans (USA) from Sep. 2023
Birte Borrevik (Norway) from Sep. 2022
Pia Dahl Højgaard (Denmark) from Nov. 2021 to Sep. 2022

2. Membership

Members: Canada, Denmark, Norway, Russian Federation, United States

Associate member(s): Finland, Iceland, Italy, United Kingdom

Permanent Observers: IHO Secretariat

3. Meetings:

Following ARHC meetings have taken place:

12th ARHC Meeting – St.John’s, Canada (12 - 16 Sep. 2022)

13th ARHC Meeting - Nuuk, Greenland (5 - 8 Sep. 2023)

Nest meeting: 14th ARHC Meeting will take place 3 - 5 Sep in Tromsø, Norway

4. Current [RHC] Working Groups:

- a) ARHC Marine Spatial Data Infrastructure Working Group (ARMSDIWG)
- b) ARHC Operations and Technology Working Group (OTWG)
- c) Arctic International Charting Coordination Working Group (AICCCWG)

5. Status of IRCC actions and recommendations to RHCs

ARHC went through the IRCC15 Recommendations and is committed to following them all.

6. Agenda Items:

ARMSDIWG

After years of US leadership, Denmark has now assumed the Chair role in ARMSDIWG At ARHC13, The WG reported of their 3 VTC meetings in the last year. The group presented their communication plan including the aim of engaging further with Arctic SDI. As Arctic SDI gradually resumes activities, ARMSDIWG members are engaging with them both nationally and across nations.

OTWG

The OTWG is chaired by the United States. The group focuses on technical exchange, innovative technologies and collaboration. Additionally, the OTWG, under liaison of NOAA OCS, is in charge of updating the ARHC Arctic Hydrographic Risk Assessment – conducted every five years.

The OTWG presented the Arctic Hydrographic Risk Assessment 2023. The Assessment is a continuation of the study conducted in 2015 and 2018. By analyzing depth, CATZOC data, and vessel traffic, the report is intended to highlight potential risk areas, and thus possibly concerns for navigation. In 2023, the group used complete CATZOC data and US-based Global Maritime Traffic Density Service (GMTDS) traffic data, where 50 hours across the year was the threshold used for the traffic data. OTWG Chair stressed that CATZOC and simplified AIS data via the GMTDS streamlined the assessment and supported a more detailed analysis. Also, it allowed the group to do the assessment more quickly.

The group compared the traffic of 2018 with 2023 traffic and saw the biggest change in low-risk areas. However, there has also been an increase in medium-risk areas of concern. OTWG Chair mentioned that this may also be due to the data input, as the assessment is based on complete CATZOC data.

The group summarized that the assessment showed that there is more traffic in the Arctic waters, but limited to small areas. This may mean that a focused effort can have a large impact. For instance, could single beam data or satellite-derived data be sufficient in areas of low concern and multi beam efforts may thus be concentrated on high-risk areas.

The group also came forward with a number of additional questions that may be of interest in the future (long-term outlook): What vessels are most at risk? Tankers vs. cruise - same or different risks? Currently, the traffic data doesn't capture seasonality and doesn't capture the ice dynamics. The assessment focused on risk, but not on consequences. E.g., high risks compared to local populations, etc.

AICCWG

Norway holds the chair of the AICCWG who takes on the role as S-100 Implementation Coordinator for the Arctic region.

During ARHC13, AICCWG reported that all ENC coverage issues have been treated and solved accordingly. Further, the group focused on their role as S-100 Coordinator in the region. The WG has completed an initial update of the WENDWG IGIF matrix in preparation this year's WENDWG meeting.

PAME PT

With the aim of strengthening collaboration between ARHC and the Arctic Council Working Group Protection of the Arctic Marine Environment (PAME), ARHC has established a PAME Project Team. This team is tasked with guiding ARHC, offering input, and fostering a productive partnership in alignment with the overarching goals of both the ARHC and the Arctic Council. It's important to note that there already exists a Memorandum of Understanding (MoU) between PAME and ARHC.

WENDWG

Norway represents the ARHC in the WEND Working Group, and their role includes reporting to the Commission on various aspects. These include reviewing progress on WEND work items, addressing any overlaps, managing ENC distribution and harmonization, assessing ENC coverage status, monitoring adherence to the WEND principles, and contributing to the development of the new WEND-100 principles. The ARHC receives the annual report and provides additional guidance to the WENDWG representative.

ARHC Implementation of the IHO Strategic Plan

The ARHC project team founded to execute the gap analysis on the approach taken by the SWPHC was dismantled after inquiring that an annual gap analysis was not necessary.

7. ARHC cooperation with stakeholders (organizations, industry, etc.):

External outreach to inform of hydrographic interests and developments bearing on the safe navigation

and marine environmental protection in the Arctic. Primary outreach and collaboration focus on the Arctic Council PAME Working Group, the Arctic SDI, the UNGGIM and its marine working group.

Additionally, open forums meaning scientific exchange, workshops and open input by external actors were organized by respective host nations. In recent years, challenges, innovation, engagement, community hydrography and the engagement with local and/or indigenous communities was of particular focus to the ARHC open forums.

8. Difficulties encountered and challenges yet to be addressed

The Arctic region's vastness, remoteness, and emergence as a unique operating environment present a challenge to the ARHC and the hydrographic offices making progress realizing the goals of the IHO to chart the ocean and protect the marine environment. These challenges are being addressed with tools, such as the Satellite Computed Bathymetry Assessment (SCuBA), are currently being evaluated for use in enhancing other forms of satellite derived bathymetry and as a primary source for some safety of navigation products.

9. Achievements and lessons learned:

Community Engagement

Open forums preceded the formal ARHC sessions and encouraged local scientific, governmental, and community representatives to contribute perspectives regarding hydrographic matters. The ARHC has placed particular emphasis on community hydrography and fostering involvement with local and/or indigenous communities.

Arctic Chart Adequacy Assessment

A new report was published in 2023. See report by OTWG.

10. Conclusions:

The ARHC is a collegial and dynamic group. Based on collaboration and technical exchange, the ARHC addresses challenges across the Arctic region, and works on improving collection and dissemination of hydrographic data and information for the benefit of maritime and other stakeholders in the Arctic.

11. Actions required of IRCC:

The IRCC is invited to:

- a. Note the report of the Arctic Regional Hydrographic Commission
- b. Take any action considered appropriate.

Birte Noer Borrevik

ARHC Chair