

3rd SESSION OF THE IHO ASSEMBLY**Monaco, 2-5 May 2023****REPORT OF THE
Arctic Regional Hydrographic Commission (ARHC)****1. Chair:**

Ms. Pia Dahl Højgaard (Denmark) from September 16, 2022 to present
Ms. Dr. Geneviève Béchard (Canada) from November 10, 2021 to September 16, 2022
Radm Shepard Smith, Radm Rick Brennan (US) from September 16, 2019 to November 10, 2021

Vice-Chair:

Ms. Birte Borrevik (Norway) from September 16, 2022 to present
Ms. Pia Dahl Højgaard (Denmark) from November 10, 2021 to September 16, 2022
Ms. Dr. Geneviève Béchard (Canada) from September 16, 2019 to November 10, 2021

2. Membership:

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

Associate Members: Finland, Iceland, Italy, United Kingdom

Observers: IHO Secretariat

3. Meetings:

For purposes of this report, the period is considered from IHO Assembly 2 (November 2020) through IHO Assembly-3 (May 2023) with information as of December 2022

ARHC 11, 09-10 November 2021 – VTC, hosted by CA

ARHC 12, 12-16 September 2022 – St. John's, Newfoundland and Labrador, Canada

4. Agenda Items:

- a) National Report updates addressing charting, survey, science and technology, personnel and national interagency coordination and policy developments
- b) Progress with new innovative technologies and techniques to acquire hydrographic data, such as autonomous vehicles, drone projects, crowd sourced bathymetry, and satellite derived bathymetry
- c) External outreach to the EU, UN, the Arctic Council and others 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 EU, Arctic Council PAME Working Group, the Arctic SDI, the UNGGIM and its marine working group, and most recently the IMO Polar Maritime Seminar.
- d) Engaging on the readiness of S-101 data within the region. Through the AICCWG, ARHC members discuss difficulties of S-100 implementation in the Arctic. The AICCWG

is chaired by Norway who also serves as S-100 Implementation Coordinator of the region.

- e) Open discussion on gridding in the Arctic through and with the Arctic Grid Study Project Team. Different ideas and solutions have been presented in the past and are being debated both in ARHC member institutions as well as among IHO members states at large.
- f) Additional working groups and coordinators with the ARHC currently operating include a) Arctic Marine Spatial Data Infrastructure Working Group (ARMSDIWG), b) Operational and Technical Working Group (OTWG), and c) Crowd Source Bathymetry/Seabed 2030 Coordinator.

5. **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 by testing and sharing news of technological solutions and enhancing partnerships. Topics such as satellite derived bathymetry, crowd sourced bathymetry, autonomous vessel operations will continue to be important topics of ARHC agenda in the future

6. **Achievements/outputs/conclusions:**

- ARHC Strategic Plan Gap Analysis: A project team to implement the IHO SP including the reporting of strategic performance indicators.
- ARHC & PAME Cooperation – With US as liaison under the ARHC & PAME MoU, cooperation is continuing to progress. In May 2021, the Arctic Council and the ARHC issued a joint policy statement on “Hydrography in the Arctic Region” (available online).
- Collecting information to update the ARHC's 2018 Arctic Chart Adequacy Assessment – conducted every five years by the ARHC OTWG partnering with PAME to develop a report mapping Arctic vessel traffic locations and the current state of Arctic Charting. The new report will be published in 2023.
- Information on, experiences with, and the critical assessment of technologies, such as crowd sourced bathymetry, satellite derived bathymetry, drone projects, and community hydrography projects are being discussed and shared.
- Open forums meaning scientific exchange, workshops and open input by external actors were organized by respective host nations. These one-day meetings preceded the formal ARHC sessions and encouraged local scientific, governmental, academic, and community representatives to contribute perspectives regarding hydrographic matters related to community development. 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.
- Update of ARHC Statutes. The new Statutes 3.0 were adopted in November 2021 in accordance with article 10.c of the Statutes 2.2 of 2017.

- Suspension of all ARHC-Related Activities by Canada, Denmark, Norway, and the United States of America with the Russian Federation. ARHC full Members Canada, Denmark, Norway, and the United States of America each decided that technical collaboration with the Russian Federation is no longer possible within ARHC at this stage.
- Following the process for Associate Membership, the United Kingdom formally joined ARHC as Associate Member in November 2022.

7. Actions required of the Assembly:

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