

**13<sup>th</sup> MEETING OF THE IHO INTER-REGIONAL COORDINATING COMMITTEE  
IHO-IRCC13  
VTC, 23-25 June 2021**

**Report of the Arctic Regional Hydrographic Commission**

<b>Submitted by:</b>	Chair, ARHC
<b>Related Documents:</b>	Arctic Council-ARHC Joint Statement on Hydrography Arctic Science Ministerial Mapping Proposal
<b>Related Projects:</b>	Saildrone reconnaissance demonstration project <sup>1</sup>

<b>Chair:</b>	<i>Pending, US<sup>2</sup></i>  RDML Richard T. Brennan, US (April 20-May 13, 2021) RDML Shepard M. Smith, US (2019-April 20, 2021)
<b>Vice-Chair:</b>	Dr. Geneviève Béchar, CA
<b>Secretary:</b>	Douglas Brunt, CA and Jonathan Justi, US
<b>Member States:</b>	Full Members: Canada, Denmark, Norway, Russian Federation, United States of America  Associate Members: Finland, Iceland, Italy
<b>Expert Contributors:</b>	See ARHC_SF_2020_1 “Participants list” in the “Stakeholder Forum”(2020) <sup>3</sup>  Arctic and North Pacific Ocean Regional Center (Seabed 2030) (University of Stockholm and University of New Hampshire)  Arctic Council Protection of Arctic Marine Environment WG Arctic Shipping Best Practices Information Forum Arctic Spatial Data Infrastructure Project
<i>See Annex A for full details</i>	

## 1. Meetings Held During Reporting Period

For purposes of this report, the Reporting Period is considered from IRCC-12 (October 2020) to the current IRCC13 meeting (June 2021) with information as of May 2021. Due to the COVID-19 pandemic, all meeting and discussions of the ARHC were conducted via video teleconferencing (VTC).

### Convened

2020 August 11            10th ARHC-sponsored Arctic Virtual Science Forum (VTC)  
2020 August 13-14        10<sup>th</sup> ARHC (VTC)  
2020 June 18 & Nov 10 ARHC Statutes review meetings (Full Members with IHO Secretariat) (VTC)

### Upcoming

Summer/Fall 2021        Autonomous survey scoping meeting (VTC)

<sup>1</sup> [https://iho.int/uploads/user/Inter-Regional%20Coordination/RHC/ARHC/ARHC10/ARHC\\_SF\\_2020\\_8\\_ARHC-Saildrone.pdf](https://iho.int/uploads/user/Inter-Regional%20Coordination/RHC/ARHC/ARHC10/ARHC_SF_2020_8_ARHC-Saildrone.pdf)

<sup>2</sup> The ARHC Chair is based on a country-by-country rotation per the ARHC Statutes. As of this reporting, the US is the Chair of the ARHC.

<sup>3</sup> <https://iho.int/en/arhc10-2020>

2021 Fall 11<sup>th</sup> ARHC (VTC)  
 2022 Fall 12<sup>th</sup> ARHC planned in person in Canada

**2. Work Program**

Highlight the important issues and activities during the reporting period.

1. Endorsement of a Joint Policy Statement between the Arctic Council and the Arctic Regional Hydrographic Commission on hydrography in the Arctic, which encourages the governments of the Arctic States to improve bathymetric and hydrographic surveying, collection of data and charting in the Arctic region.<sup>4</sup> Endorsement of the call for hydrographic mapping cooperation at the 3<sup>rd</sup> Arctic Science Ministerial<sup>5</sup>
2. Mr. Evert Flier named Seabed 2030/Crowdsourced Bathymetry ambassador for the ARHC
3. Arctic Region (IHO INT Region N) bathymetric contributions to the IHO DCDB in 2020:
  - a. 6 surveys from 2016-2019 (4: USCGS Healy, 2: R/V Sikuliaq)
  - b. Two layers from the Canadian Hydrographic Service were ingested as web services: Navigational (NONNA) bathymetric products NONNA-10 and NONNA-100 at approximately 10 and 100-meter resolution respectively
4. Conducted [initial study](#) into options for pan-Arctic ENC grids.
5. Exploration of feasibility of transboundary arctic hydrographic survey campaign
6. Stakeholder engagement and activities planning
7. Consideration and evaluation of the adoption of the new IHO Strategic Plan and implications specific to the ARHC
8. Support to identified IHO program priorities

In response to A-1 Decision No 22, [the ARHC] to identify and recommend on whatever actions may be required to incorporate the Statement of Shared Guiding Principles for Geospatial Information Management in the work programmes, the IHO Member States to the ARHC can report the following:

Goal 2	Increasing the use of hydrographic data for the benefit of society	
Target	Apply UN shared guiding principles for geospatial information management <sup>6</sup> in order to ensure interoperability and extended use of hydrographic data in combination with other marine-related data	
SPI	Number of HOs reporting success applying the principles in their national contexts	
Member State Hydrographic Office (unofficial) preliminary report against Selected IHO SPI	CANADA	Ongoing
	DENMARK	Ongoing
	NORWAY	Yes
	RUSSIAN FEDERATION	TBD
	UNITED STATES	Yes

Note: the IRCC and its subordinated bodies were tasked by A-1 (see A-1 Decision N° 22).

<sup>4</sup> <https://pame.is/document-library/pame-reports-new/pame-ministerial-deliverables/2021-12th-arctic-council-ministerial-meeting-reykjavik-iceland/785-hydrography-in-the-arctic-joint-policy-statement-by-the-arctic-council-and-arhc/file>

<sup>5</sup> <https://asm3.org/library/Files/ASM3%20Joint%20Statement.pdf>

<sup>6</sup> <https://ggim.un.org/documents/statement%20of%20shared%20guiding%20principles%20flyer.pdf>

### **3. Progress on IRCC Action Items**

IRCC-12 was convened by VTC October 2020 where a list of actions were developed.<sup>7</sup> Despite global dislocations stemming from the COVID-19 pandemic, the ARHC continues to take steps to advancing IRCC priorities in the region, including MSDI and the UNGGIM initiatives, capacity building, crowd sourced bathymetry, Seabed 2030 and ocean mapping.

At ARHC-10 (2020), the Arctic and Pacific Ocean Regional Center (RDACC) co-directors, Dr. Larry Mayer and Dr. Martin Jakobsonn and IHO Data Center for Digital Bathymetry (DCDB) Director and Crowd Sourced Bathymetry Working Group Chair, Jennifer Jencks, participated and contributed at the ARHC meetings and stakeholder forum.

The ARHC and the Arctic Spatial Data Infrastructure project adopted the Joint Statement of Intent:

*The Arctic National Mapping Agencies of the Arctic SDI Board and the Member State Representatives of the Arctic Regional Hydrographic Commission (ARHC) are committed to maintain a collaborative partnership in order to provide both the terrestrial and marine foundations in a regional SDI. The collaboration will facilitate bringing land and marine data together in an infrastructure that connects users across domains to the spatial data valued to support research, planning, and decision making in the Arctic.*

### **4. Problems Encountered**

The COVID pandemic has prevented in-person meetings and generally impacted national hydrographic activities in the region. However, innovative solutions have included the use of video teleconferencing and a national demonstration of autonomous remote hydrographic data collection activities in the Arctic.

### **5. Any Other Items of Note**

The ARHC Statutes, first developed in 2010 and updated in 2017 following the establishment of the IHO Council, are under review. This is being undertaken in light of the evolution of the working relationship among the Members to the RHC, the continuing maturation of the Commission, IHO Resolution 2/1997, and the adoption of the IHO Strategic Plan and decadal initiatives (including adoption of the S-100 Roadmap, the IOC-IHO Decade of Ocean Science, the adoption of the IHO Strategic Plan, etc...)

The ARHC is evaluating specific opportunities to contribute to the goals IHO Strategic Plan and the UN Ocean Decade Implementation Plan.

With the retirement of Rear Admiral Shepard M. Smith (US), RDML Richard T. Brennan (US) succeeded as Chair of ARHC on April 20, 2021. With sadness, RDML Brennan unexpectedly passed away on May 13, 2021.<sup>8</sup>

Other: Member State Notable Developments (national level)

- The United States Senate (Congress) is evaluating legislation for National Ocean Exploration Act.<sup>9</sup> This follows the establishment of the National Ocean Mapping, Exploration and Characterization Council (NOMECC) in 2020.

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<sup>7</sup> [https://iho.int/uploads/user/Inter-Regional%20Coordination/IRCC/IRCC12/IRCC12-AnnexA-List\\_Actions\\_v1.1.pdf](https://iho.int/uploads/user/Inter-Regional%20Coordination/IRCC/IRCC12/IRCC12-AnnexA-List_Actions_v1.1.pdf)

<sup>8</sup> <https://nauticalcharts.noaa.gov/updates/remembering-rear-admiral-richard-t-brennan/>

<sup>9</sup> <https://www.commerce.senate.gov/2021/2/senators-reintroduce-national-ocean-exploration-act>

- The ARHC Chair would like to recognize the passing of Mr. Sean Hinds (1955-2021), a principal and prominent founding contributor to the ARHC and strong supporter of exploration and hydrography in Canada.<sup>10</sup>

### **Conclusions and Recommended Actions**

Despite the lack of ability to meet in person, the hydrographic offices have continued to maintain active and cordial communications through a series of VTC's. The next regular meeting of the ARHC will be held by VTC later in 2021, with the hope of returning to a face-to-face meeting in 2022.

The ARHC looks forward to receiving implementation and SPI reporting guidance from the IHO Program 2, IHO Secretariat, Council or other authority concerning processes in support of the newly launched IHO Strategic Plan.

### **6. Justification and Impacts**

There are no proposed actions or recommendations.

#### **Action Required of IRCC**

The IRCC is invited to:

- a. endorse this summary report;
- b. note the efforts described to support the goals of the IHO and the IRCC within the region; and
- c. provide any feedback to the Chair, Vice Chair and national hydrographers of the ARHC as required.

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<sup>10</sup> [https://www.arbormemorial.ca/en/capital/obituaries/sean-hinds/61902?fbclid=IwAR10tfXf\\_VcgfP6aGHBIX4oJuxEe5Oo8NVxXaFtpPtrb43bXyfgPGThokIuA](https://www.arbormemorial.ca/en/capital/obituaries/sean-hinds/61902?fbclid=IwAR10tfXf_VcgfP6aGHBIX4oJuxEe5Oo8NVxXaFtpPtrb43bXyfgPGThokIuA)

## Membership of ARHC

Derived from ARHC10-A1  
Updated for IRCC13 (2021)

	IHO Member State	Name	Email
1	Canada	Dr. Geneviève Béchard	<a href="mailto:genevieve.bechard@dfo-mpo.gc.ca">genevieve.bechard@dfo-mpo.gc.ca</a>
2	Canada	Douglas Brunt	<a href="mailto:douglas.brunt@dfo-mpo.gc.ca">douglas.brunt@dfo-mpo.gc.ca</a>
3	Canada	Major Peter McRae	<a href="mailto:peter.mcrae@forces.gc.ca">peter.mcrae@forces.gc.ca</a>
4	Canada	Chris Marshall	<a href="mailto:chris.Marshall@dfo-mpo.gc.ca">chris.Marshall@dfo-mpo.gc.ca</a>
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Observer Organization	Name of Delegate	email

## RHC Proposed Work Plan – 2021 to 2021

1. Any remarks relevant to the understanding of the plan to be inserted in here.

## RHC Tasks

- A. Convene ARHC-11 in 2021  
 B. Develop Work plan for the 2022-2023 period to be proposed to IRCC meeting in 2022  
 C. Adopt RHC meeting agenda accordingly to support deliberative processes to support the IHO Work Program and IHO Strategic Plan

Task	Work Item	Priority	Milestones	Start Date	End Date	Status	Contact Person	Affected Pubs/Standard	Remarks
1	RHC support to Seabed 2030 and CSB	H	Annual RHC report out and consensus development			O	Evert.Flier@kartverket.no		ARHC-11 may consider development of an RHC summary plan and directions reference document
2	RHC support to IHO Strategic Plan, including Goals 1, 2, 3	H	Annual RHC report out and consensus development			P	Chair ARHC		ARHC-11 may consider development of an RHC summary plan and directions reference document
3	Other deliverables to be identified	M	Annual RHC report out and consensus development			O	ARHC Chair and Vice Chair		ARHC-11 may consider development of an RHC summary plan and directions reference document. May include joint activities in support of hydrographic surveys, regional MSDI, AC/ARHC Joint Statement, ARHC PAME MOU, and others

## Abbreviations:

- 1) **Priority:** H-high, M-medium and L-low
- 2) **Status:** P-planned, O-ongoing and C-Completed