Proposal to USCHC47:

Testing Arctic Hydrographic Risk Assessment Methodology

Submitted by: United States of America and Canada

Executive Summary: The Operations and Technology Working Group (OTWG) Arctic Regional Hydrographic Commission (ARHC) has periodically assessed hydrographic risks in the Arctic in limited geographic areas. At ARHC 13, the Canadian Hydrographic Service (CHS) expressed an interest to expand these assessments into other areas of the Canadian Arctic. With support from the OTWG, Canada intends to apply this methodology using its own data holdings in parts of select parts of the Canadian Arctic in Region A. Points of contact have been identified for future collaboration.

Related Documents: ARHC13-C1 "Arctic Hydrographic Risk Assessment 2023 Update & Revised Baseline"

Related Projects: ARHC Arctic Hydrographic Risk Assessment periodic update (ongoing)

Arctic Council Protection Arctic Marine Environment Working Group and the Arctic Ship Transportation Database (ASTD)

Introduction/Background

Since 2013, the Arctic Regional Hydrographic Commission (ARHC), led by the Operations and Technology Working Group (OTWG), has periodically assessed hydrographic risk in the Arctic. This assessment was conducted through an analysis of bathymetric data using CATZOC, depth, sea-bottom type and vessel traffic. In three evolutions of the assessment (2013, 2017, and 2023), the methodology has evolved and has been conducted in limited, selected regions. At ARHC13, the Canadian Hydrographic Service (CHS) expressed a desire to test the methodology in selected waters of the Arctic that have been outside the region studied by ARHC. Accordingly, CHS offers to conduct the assessment with its data holdings and consult with the OTWG team on experiences with the assessment, prior procedures and protocols.

Please see ARHC13-C1 for detailed exposition of the prior study scope, parameters and logic framework.

Analysis/Discussion

The ARHC (2023) study and assessment update centered upon the following footprint:

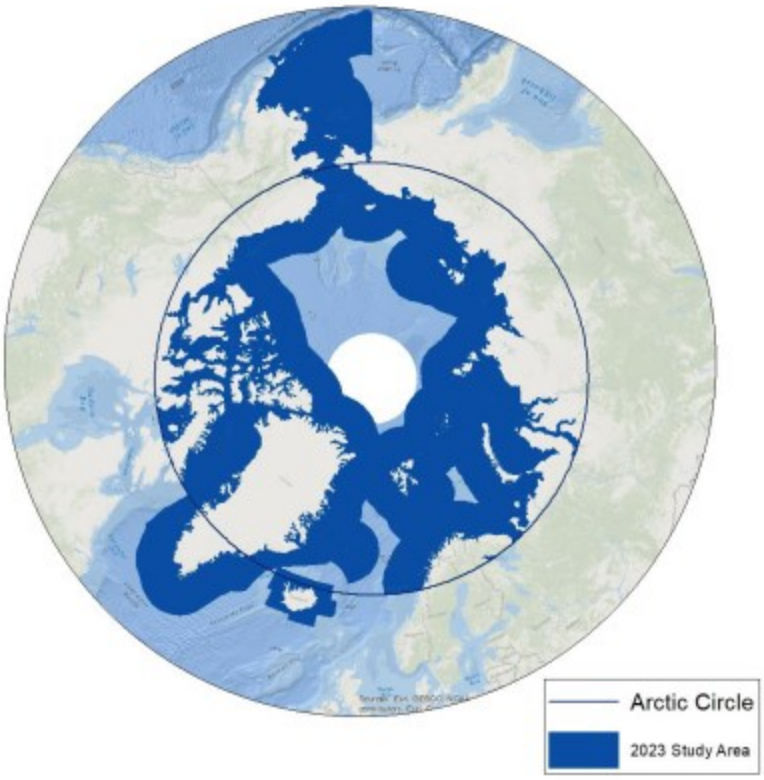

Figure 1: The 2023 study area with the inclusion of Iceland and all of Greenland.

At ARHC13, participants expressed interest to expand the geographic scope based on various interest groups and needs that may be more tailored toward a) domestic audiences of the member states and b) areas outside the geographic scope (above), potentially in partnership with other Regional Hydrographic Commissions of which there are 13 worldwide.

Canada's interest and desire to apply the methodology and compare to its existing methodology represents an important opportunity to test the assessment and expand awareness of hydrographic risk in waters of attention to USCHC, i.e. INT region "A".

For purposes of this activity, CA and US have identified points of contact to work through the effort, with others to be included as appropriate:

CHS	Laura Colombe	Laura.colombe@dfo-mpo.gc.ca
	René Chenier	Rene.chenier@dfo-mpo.gc.ca
NOAA	LCDR Bart Buesseler	bart.o.buesseler@noaa.gov
	Daniel Devereux	daniel.r.devereaux@noaa.gov
	Jessica Murphy	jessica.murphy@noaa.gov

For purposes of this proposal, the points of contact (above) have assessed there are no resource constraints identified. Technical expertise and data holdings are available to Canada. The National Oceanic and Atmospheric Administration (NOAA) experts who have led the analysis in the Arctic are available and willing to share their lessons learned and experiences.

The points of contact believe the effort is feasible, if USCHC Chair and co-Chair feel appropriate.

Conclusions

The proposed activity has considerable potential benefit by validating and further testing the assessment methodology in new waters. The resources are available to test the concept.

Recommendations

The authors of this paper recommend USCHC endorse the effort and report back no later than USCHC48 (2025) and, as appropriate, to ARHC 14 (September 2024).

Action Required of USCHC

USCHC is invited to

a. Note and discuss this paper
b. Consider, decide, issue guidance (as warranted) on this activity