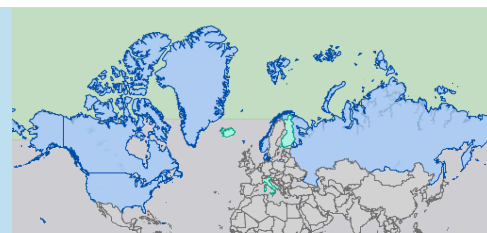


# ARCTIC REGIONAL HYDROGRAPHIC COMMISSION (ARHC)

## 2020 YEAR IN REVIEW

**ARHC has maintained momentum during unprecedented times, with continued collaboration in the interest of hydrographic knowledge and navigational products and services on a pan-Arctic scale in 2020.**



The [Arctic Regional Hydrographic Commission](#) (ARHC), is one of 15 (RHCs) of the [International Hydrographic Organization](#) (IHO). RHCs coordinate hydrographic activity and cooperation at the regional level. At the 10th ARHC Conference hosted virtually by the U.S. on 13-14 August, 2020, Member States shared National Reports summarizing activities and points of interest since the 9th ARHC Conference.\*

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

**Associate Members:** Finland, Iceland, Italy

**Chair:** Admiral Shepard Smith (U.S.), **Vice-Chair:** Dr. Geneviève Bèchard (Canada)



The [ARHC Science Forum](#) met virtually on August 11 from 7:30am to 11:30am EDT, with an exciting and robust agenda, including 13 speakers.

The virtual nature of the 2020 Forum dramatically expanded the normal reach to those in the community who are interested in Arctic issues from a hydrographic perspective, and the Forum gathered approximately 120 participants out of 170 registrants, spanning across the Arctic region.

### ARHC Responding to Global Ocean Initiatives:

- ARHC and PAME sign an MOU to foster greater communication and enhance coordination on strategies to improve hydrographic data in the Arctic between the organizations
- ARHC will contribute to the [UN Decade of Ocean Science for Sustainable Development](#)--a map of the ocean is a crucial starting point for all desired outcomes of the UN Decade, and mapping the Arctic has important implications for such areas as ecosystems, hydrography, shipping, national security, food security, Blue Economy, and indigenous peoples
- ARHC will explore submitting a coordinated proposal to the [Third Arctic Science Ministerial](#) (Tokyo, Japan, May, 2021)
- NO co-chairing a [High Level Panel for a Sustainable Ocean Economy](#), which includes 14 serving world leaders
- Seismic Survey Company, PGS, will support Seabed 2030 through a **signed agreement**
- **Seabed 2030 engaging with RevOcean** to build a 180 meter research vessel, the largest such vessel in the world
- DK initiates the **Greenland Chart Ambassadors**, a partnership with the Greenland Government and local partners, which seeks to strengthen and increase awareness of navigational safety among small leisure craft users, fishermen and hunters

**Autonomous Survey Technology Applications:** [Saildrone](#), an impressive, robust autonomous surface vehicle spent a total of 700 days collection data in the Arctic in 2019. Saildrone offers an attractive alternative to the traditional way of collecting data, and could help fill gaps in the Arctic to contribute to Seabed 2030



\*Review is not exhaustive, but a selective review of ARHC updates in 2020

## Ongoing Efforts

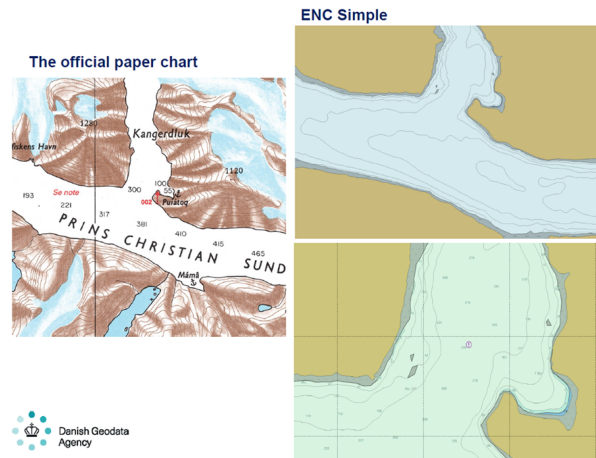
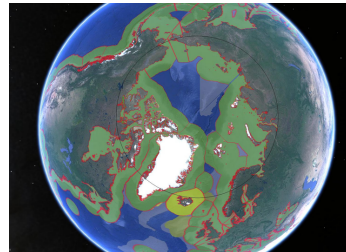
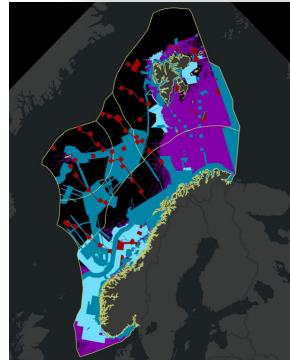
—CA's [Marine Spatial Data Infrastructure](#) went live in late 2019 and offers over 325 data services (of which 291 are publicly available) and 30 value-added GIS web applications

—Bathymetric data from CCGS Amundsen (CA, active since 2003) represents >50% of all of CHS' modern hydrography in the Arctic, and has been incorporated into 83 charts. There are several planned multi-beam installations to be completed by March 31, 2021

—The 'Projection of Maritime Activity in the U.S. Arctic, 2020-2030' final report was released in September 2019

—Seabed 2030 data in NO waters (based on NHS data): 63% of NO waters have been mapped and provided to DCDB, with 33% made publicly available (a 5% increase)

—DK has continued work on the 'Base ENCS' concept following a 2018 'ENC Simple' pilot project. Base ENCS could help fill significant ENC product gaps in Greenland to release the best quality bathymetric data available more quickly to mariners for safe navigation. Base ENCs will serve as a foundation layer for full ENCs and paper chart products



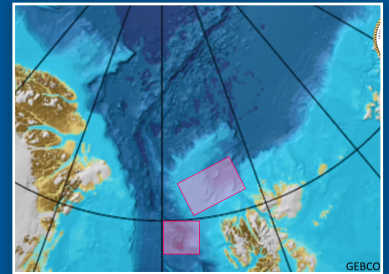
Photos: 1) CCGS Amundsen 2) NO charting graphic 3) IC in the Arctic 4) DK ENC simple

## Italy's High North 20 Expedition (2017-2019)

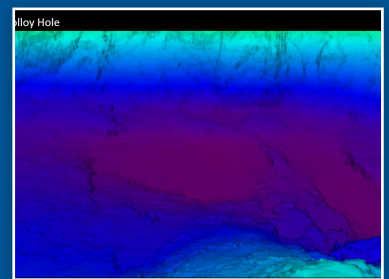
Focused on the Svalbard island (Norske Banken and Molloy Hole)

Achieved its main goal of fully surveying, charting and 3D modeling the target areas

**High North was renewed for three more years (2020-2022)**



The deepest point of Molloy Hole is over 5,000 meters making it the deepest point of the Arctic ocean now known



## New and Noteworthy

—CA (CHS) launches 10-year transformational plan to accelerate digital transformation, with early action focused on its databases. This will include an S-100 federal government working group, established to bring together all agencies involved in S-100 implementation

—U.S., CA and DK submitted a paper to the IHO Hydrographic Services and Standards Committee titled 'Unified S-100 symbology to enable direct paper chart output from Electronic Navigational Charts (ENC)'

—A new data management and chart production system just became operational in Finland

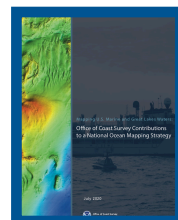
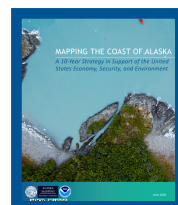
## Release of three mapping strategies by the U.S.:

1) [Mapping the Coast of Alaska: A Ten-Year Strategy](#) will:

- Build on Existing Mapping Partnerships to Meet Alaska's Coastal Mapping Needs
- Expand Coastal Data Collection, Delivering Priority Geospatial Products that Stakeholders Require
- Leverage Innovation in Mapping Technology Development
- Conduct Strategic Communications to Promote Widespread Stakeholder Engagement

2) [OCS National Mapping Strategy](#)

3) [National Strategy for Mapping, Exploring and Characterizing the US EEZ](#)



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NGA

NOAA

Navy