



National Report for Canada

ARHC12 meeting September 2022

St. John's Newfoundland



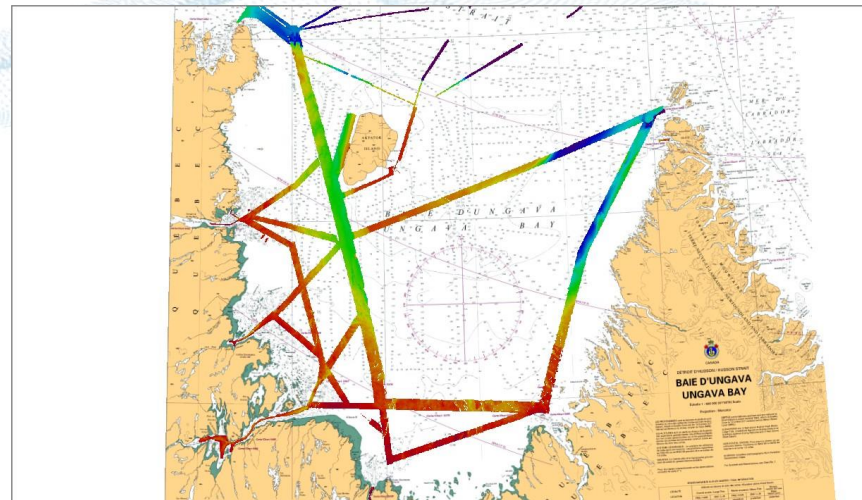
Chris Marshall – Regional Director

Ontario and Prairie, and Arctic Regions



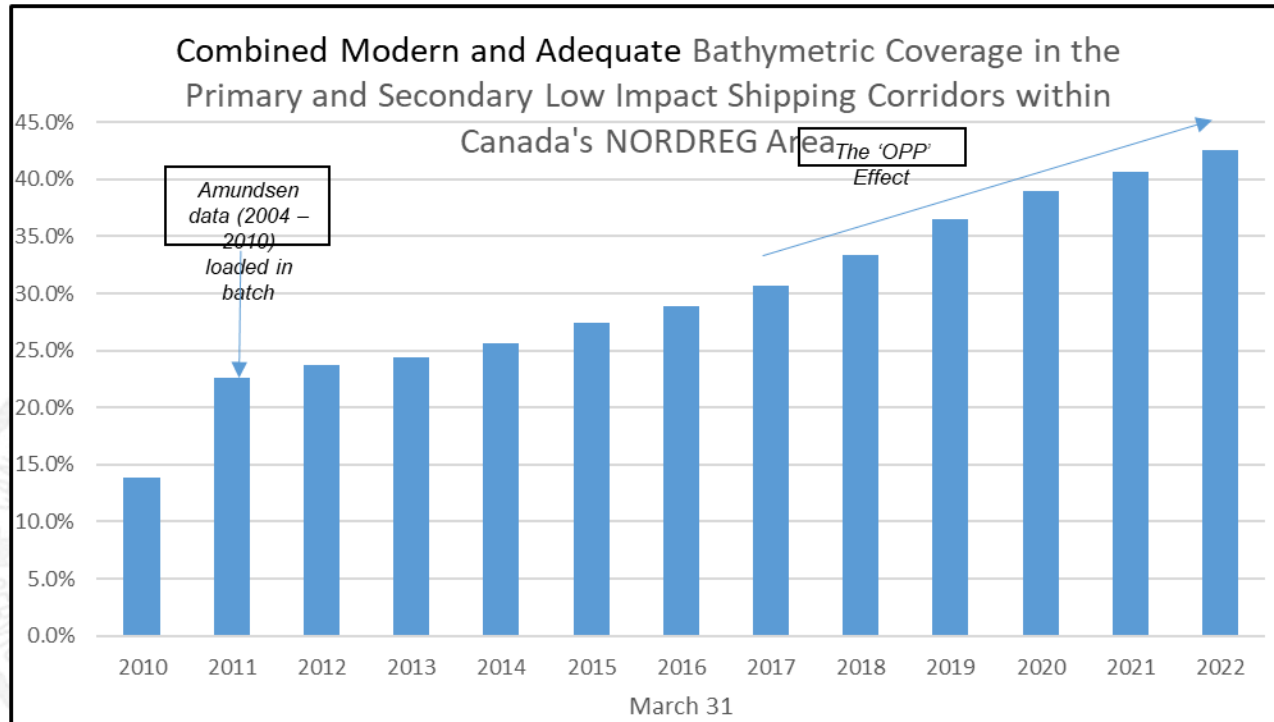
Overview

- Overview of 2022 Arctic survey and chart production
- Renewal of Canada's Ocean Protection Plan
- Strategy for the years ahead
- Innovation





Status of Hydrography in the Canadian Arctic



Modern = CATZOC A1 & A2

Adequate = CATZOC B

Modern and Adequate data in combined Primary and Secondary corridors has increased from 30.5% in 2017 to **42.6% as of March 2022.**

Data collected this summer will be included by March of 2023.



Review of the 2022 Arctic Survey Work

Multi-beam Sonar Equipped Icebreakers

CCGS Pierre Radisson



CCGS Louis S. St. Laurent



CCGS Amundsen



CCGS Des Groseilliers



CCGS Henry Larsen



CCGS Sir Wilfrid Laurier



Important Hydrographic and Ocean mapping capacity --- MBES installed and operating on 6 Canadian Coast Guard vessels



Summary of 2022 Survey Program

- CHS Survey Operations onboard 4 of the 5 CCG icebreakers, opportunistic data from CCGS Amundsen
- Partnerships with Students on Ice (M/V Polar Prince) and DFO Arctic Science (R/V Frosti)
- All **5 permanent** tide gauge stations visited and operational, 2 temporary gauges.





Arctic OPP Contract Surveys 2022

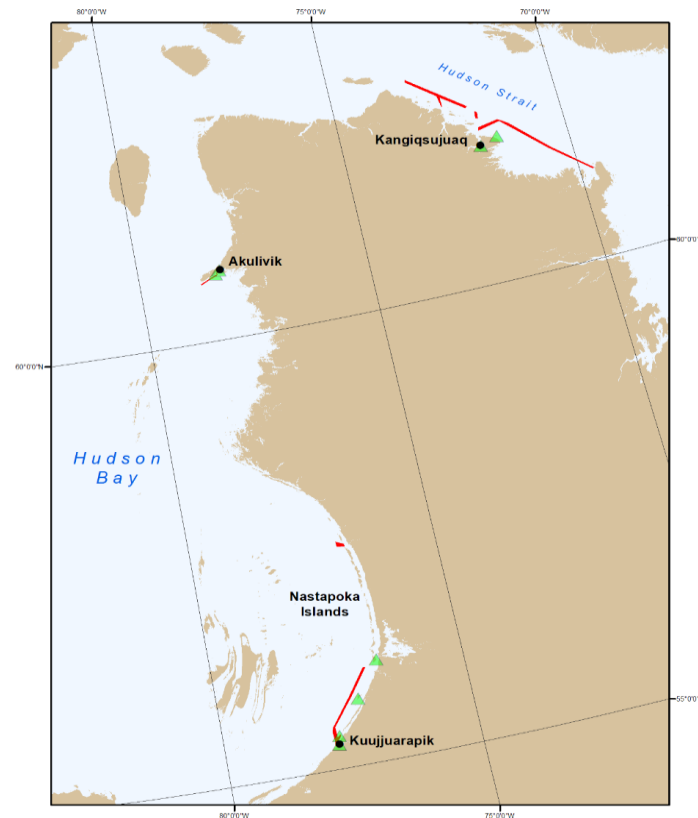
Survey area:

***Hudson Strait and South Eastern
Hudson Bay***

Contract awarded via Hydrographic
Services Supply Arrangement

IIC Technologies was selected as
contractor following competitive
procurement process

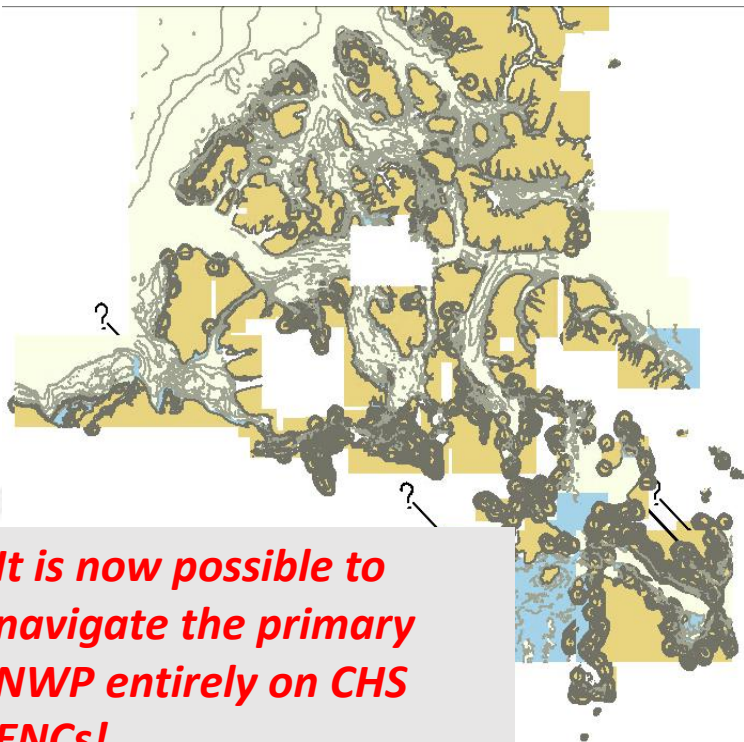
Includes shore-based GNSS occupations



*Note – 2022 surveys did not include
deployment of a USV



Filling Arctic ENC Gaps



***It is now possible to
navigate the primary
NWP entirely on CHS
ENCs!***

Over the past year, **12** new ENC's produced, and **18** new editions released, **22** new edition Paper Charts published.

CHS Strategy - Prioritize and focus on the Proposed Low Impact Shipping Corridors

- Continue to build up digital/vector ***foundational data***
- **Phase 1:** Create first edition ENC to match Paper Chart limits – currently ~ 90% complete.
- **Phase 2:** prepare legacy bathymetry (load into Bathy db) and update ENC with new bathymetry on priority basis.
- **Phase 3:** Produce new charts on S100 grid (one of 3 scale bands) – 500+ ENC's just for Corridors!
- **Phase 4:** Move to “Continuous Maintenance” model, ENC's updated with new data on ongoing basis.

Renewal of Canada's Ocean Protection Plan

- In August of this year, the Government of Canada announced a renewal of the Ocean Protection Plan.
- Significant investment for the CHS to improve Hydrographic Services in the Arctic - **\$84M over 9 years**.
- OPP2 will include 2 initiatives for CHS:
 - Modern Hydrographic Services in the Arctic
 - A new Community Hydrography Program
- 2022 is the first year of this funding

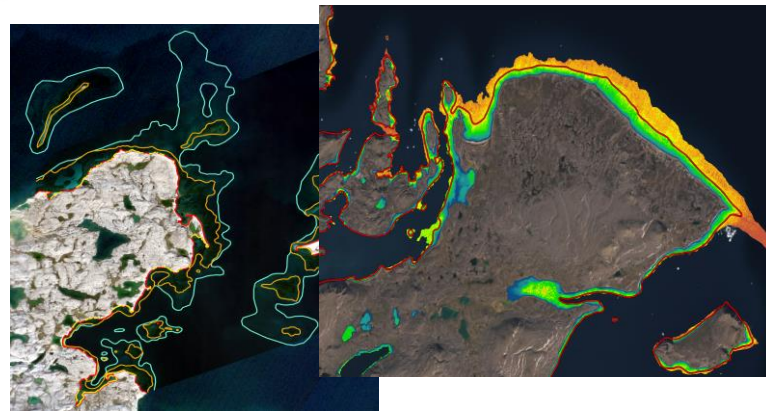


The Honourable Joyce Murray, Minister of Fisheries, Oceans and the Canadian Coast Guard visited Rankin Inlet Nunavut Wednesday August 10 2022 to announce funding to improve charting in Arctic waters. Minister Murray met with the DFO's Regional Director of the Canadian Hydrographic Service Chris Marshall (pictured). New funding under the Oceans Protection Plan will expand charting of Canadian Arctic waters and boost the Canadian Coast Guard's response capabilities in the North.

OPP2 – Highlights of what CHS will deliver

Significant investment, building upon work CHS achieved over the past 5 years OPP1

- **Accelerate bathymetric data collection.** Maximize existing CCG survey assets, contract to private sector, and funding for dedicated survey vessel. Leverage new technologies (USV, UAV etc.)
- **Dedicated Arctic Data Integration and Chart Production Team** – Incremental funding, focused effort.
- **Develop and test new services** to communicate risk of Arctic navigation. Better information in dynamic and remote regions – Remote sensing.
- **Implement a Community Hydrography program** for Canada's Coastal Communities



Scale and operationalize use of remote sensing and SDB



Inshore Rescue Boat – Rankin Inlet, NU – CSB data collection.



Summary of CHS' Arctic Strategy

Within the Low Impact Shipping Corridors:

- Focus survey assets on LISC (still ~60% to complete)
- Maximize use of trusted source and third-party data collection.
- Fill charting gaps – prioritize the LISC with ENC at the appropriate scale with transition to new ENC grid and continuous maintenance
- ENCs will provide “Digital Foundation” for future S100 suite of services.

Outside the Low Impact Shipping Corridors:

- Fully leverage remote sensing technologies (target detection and SDB)
- Work with industry, International partners (IHO) on innovative ways to communicate risk and inform planning
- Collaborate with third parties and Arctic communities on data collection (CSB).



Thank-you Merci

For further information and questions please contact:

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<http://www.charts.gc.ca>