Work Item G

Trusted Node Support

Report to CSBWG15

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Work Item Lead

Work Item Update

International Hydrographic Organization

Update of current listed sub work items plus any changes/additions/deletions to those items

Work Item	Title	Priority *H-high* *M-medium* *L-low*	Next milestone	Start Date	End Date	Status *P-planned O-ongoing* *C-completed* *S-Superseded*	Contact Person(s)	Related Pubs / Standard	Remarks
G	Capture known issues identified by current Trusted Nodes	M	Develop guidance for current and future Trusted Nodes	2023	August 2023	O	CIDCO/G Morissette	B-12 Edition 3.0.0	

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Key Activities

Consultations with current Trusted Nodes

Key Conclusions:

- Lack of standardisation in tools and processing methods (ties into Work Item H)
- Lack of quantifiable uncertainty models for adoption of CSB by HOs
- Lack of visibility for CSB projects and the value proposition of CSB
- Lack of large scale hardware/software development-oriented projects at the international level

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Key Activities

Lack of standardisation in tools and processing methods

Key Action: CIDCO's hydrographic toolbox and Work Item H

Work Item H has provided the opportunity to gather people with common hardware and software objectives into a single discussion, which is yielding interesting outcomes for current and future Trusted Nodes, with its objective of providing "Trusted Node In A Box" solutions.

More specifically, hydrographic models from CIDCO's toolbox are to be published under an open-source license to facilitate the following:

- Georeferencing of soundings
- Motion compensation
- Advanced raytracing using sound velocity profiles

This toolbox will be integrated with the OpenVBI project.

Key Activities

Lack of quantifiable uncertainty models for adoption of CSB by HOs

Key Action: Creation and publication of an open-source uncertainty model

A collaborative effort by CIDCO and CCOM has yielded a combined uncertainty model that will be integrated into CIDCO's open-source toolbox. An article is currently being written and is aimed at being published in the International Hydrographic Review. An open-source reference implementation will be published under an open-source license and made available into CIDCO's hydrographic toolbox, and OpenVBI (Work Item H).

This provides a quantifiable uncertainty model for plug-and-play use by Trusted Nodes.

Key Activities

Lack of visibility for CSB projects and the value proposition of CSB

Key Action: Creation and maintenance of a free portal to showcase CSB partners and projects

A free portal was created to highlight the value proposition of the different CSB partners that take part in the actions of CSBWG. In the spirit of creating momentum, CIDCO has created and hosted this portal for the time being.

Key Activities

International Hydrographic Organization

Lack of large scale hardware/software development-oriented projects at the international level

Key Action: Create an international open-source R&D project through CIDCO

Through its “Smart Ocean : Connected Boats” project, CIDCO is bringing together major actors of the CSB world to develop open solutions, use-cases and business opportunities. This large-scale project includes international partners such as the University of New-Hampshire’s Centre for Coastal and Ocean Mapping, the Danish Geodata Agency, the Canadian Hydrographic Service, Orange Force Marine, Memorial University, the Nanwakolas Council Nations, Arctus, and many more.

CIDCO

Center for Coastal & Ocean Mapping Joint Hydrographic Center CCOM JHC University of New Hampshire

Danish Geodata Agency

Canadian Hydrographic Service Service hydrographique du Canada

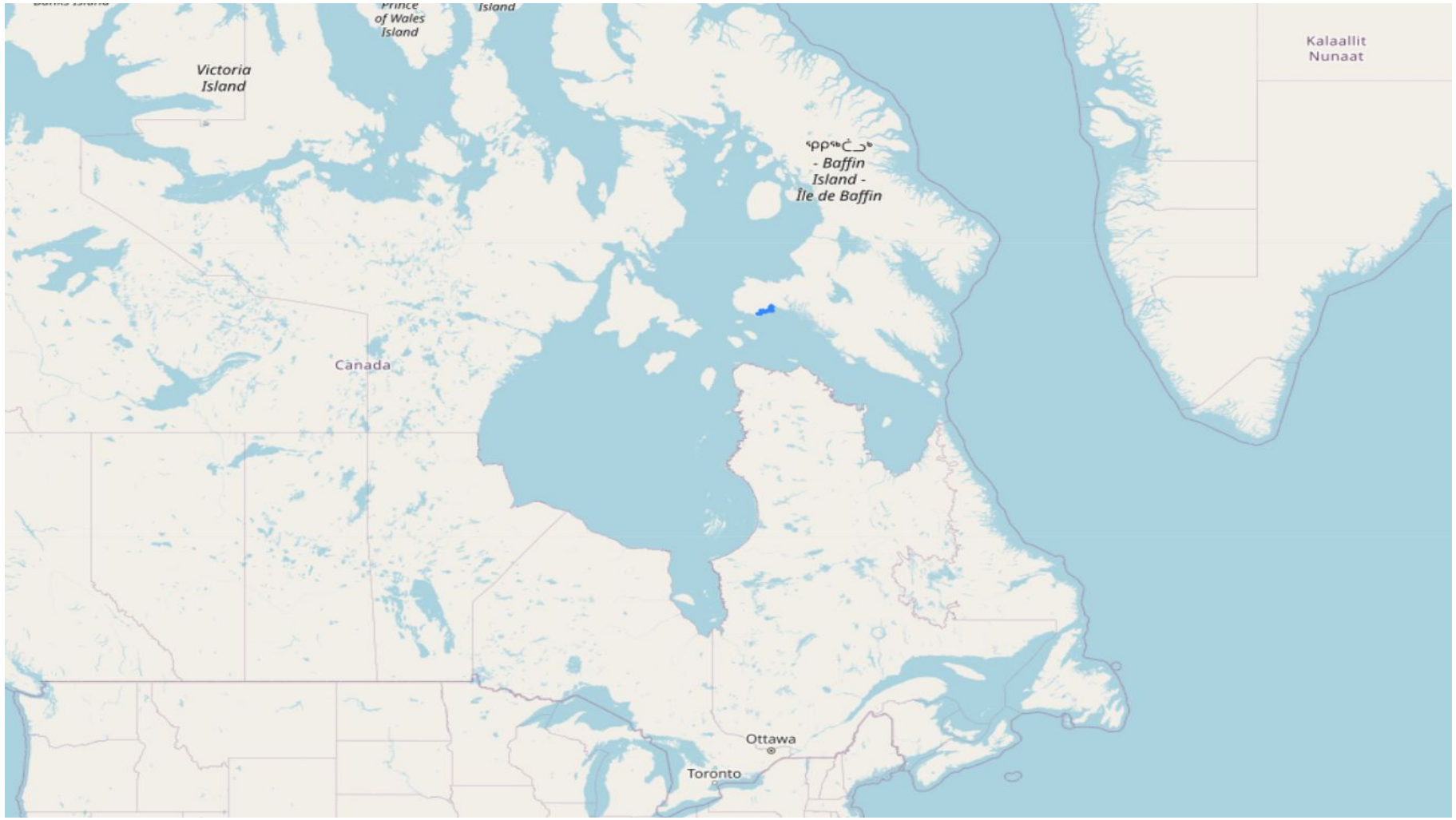
ORANGE FORCE MARINE

Arctus

Key Activities

International Hydrographic Organization

Project action: Mapping the Great North in collaboration with Indigenous Communities



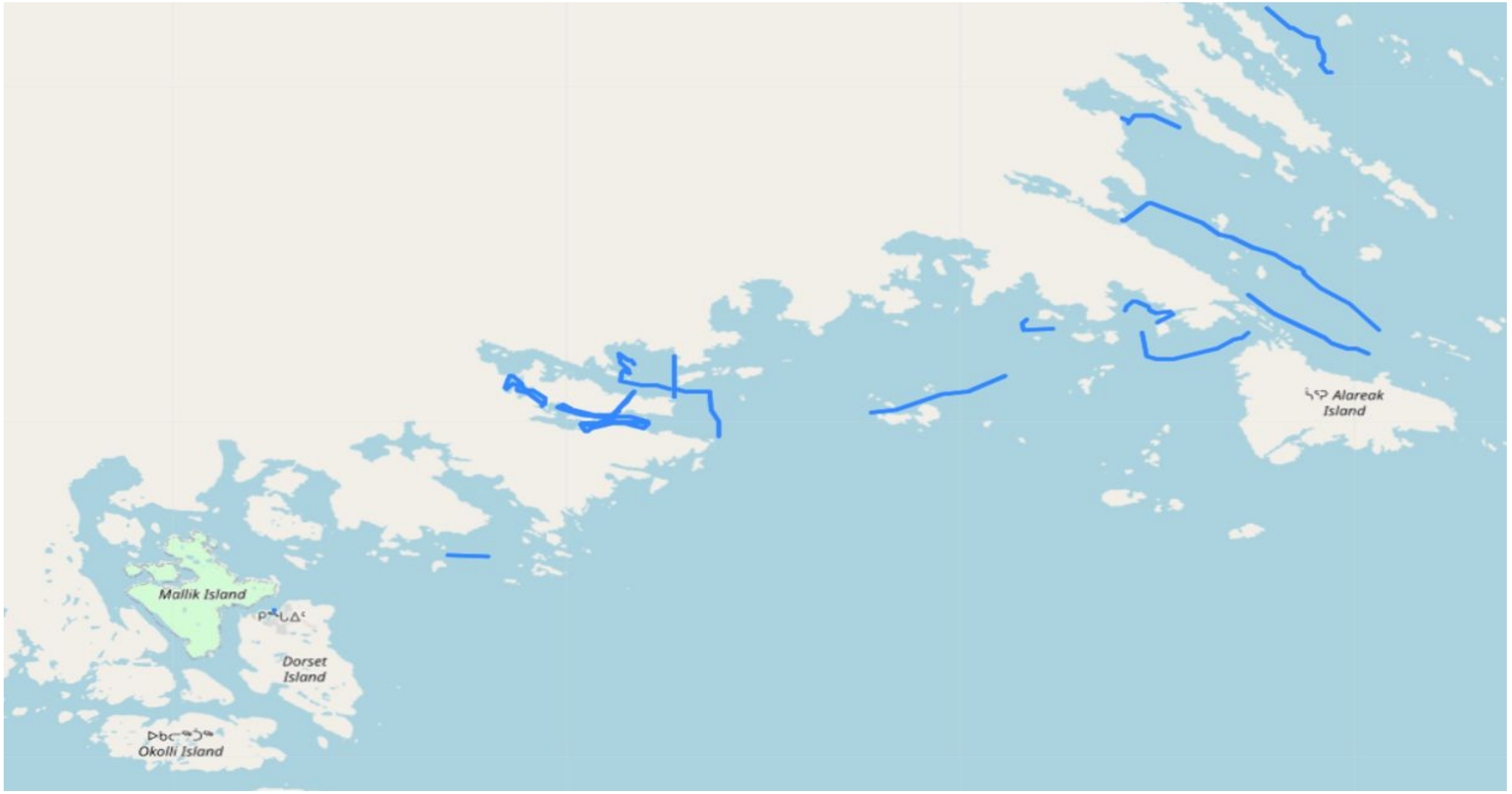
MEMORIAL UNIVERSITY

IHO

International Hydrographic Organization

Key Activities

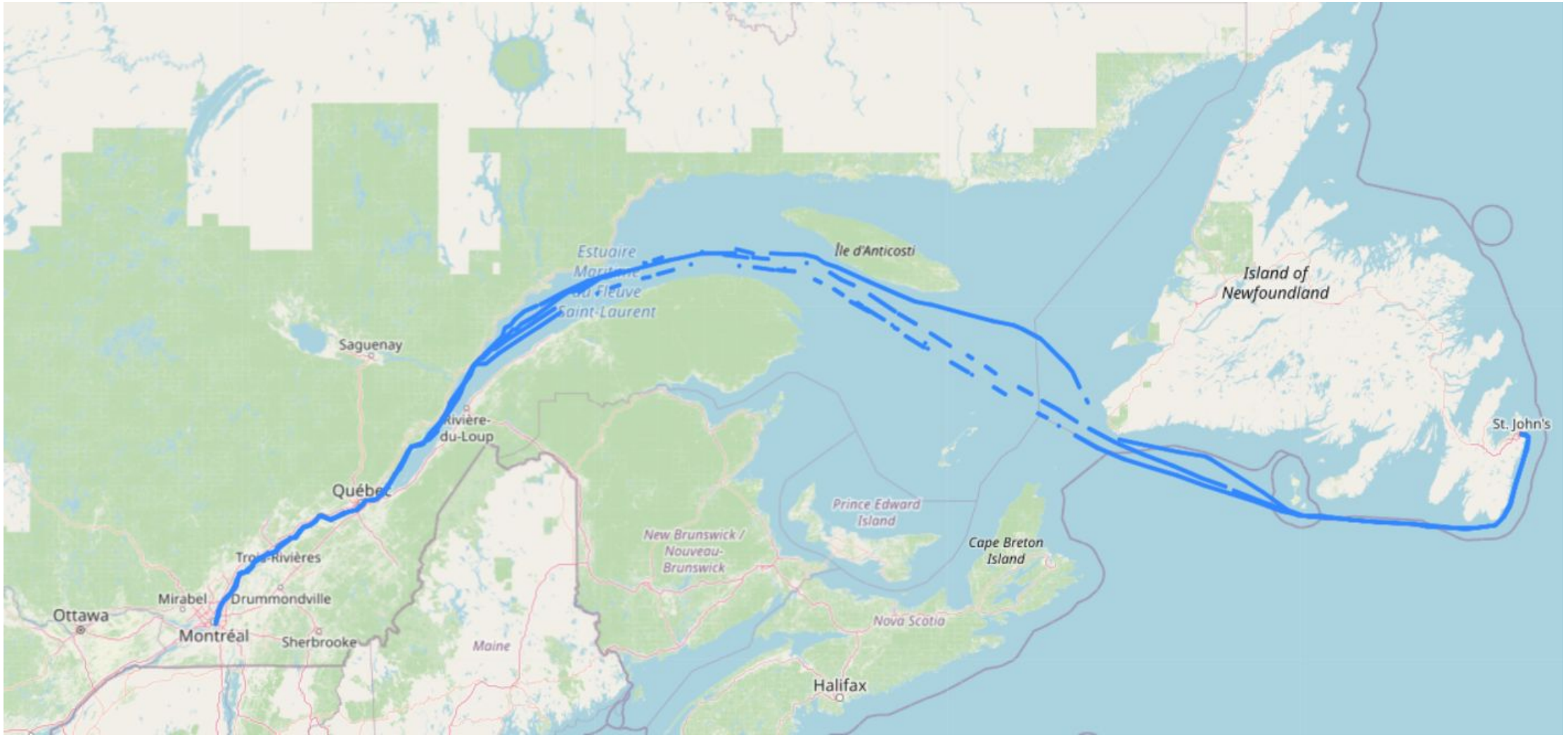
Pushing the limits of ocean mapping by collaborating with Canada's Indigenous Nations



Key Activities

International Hydrographic Organization

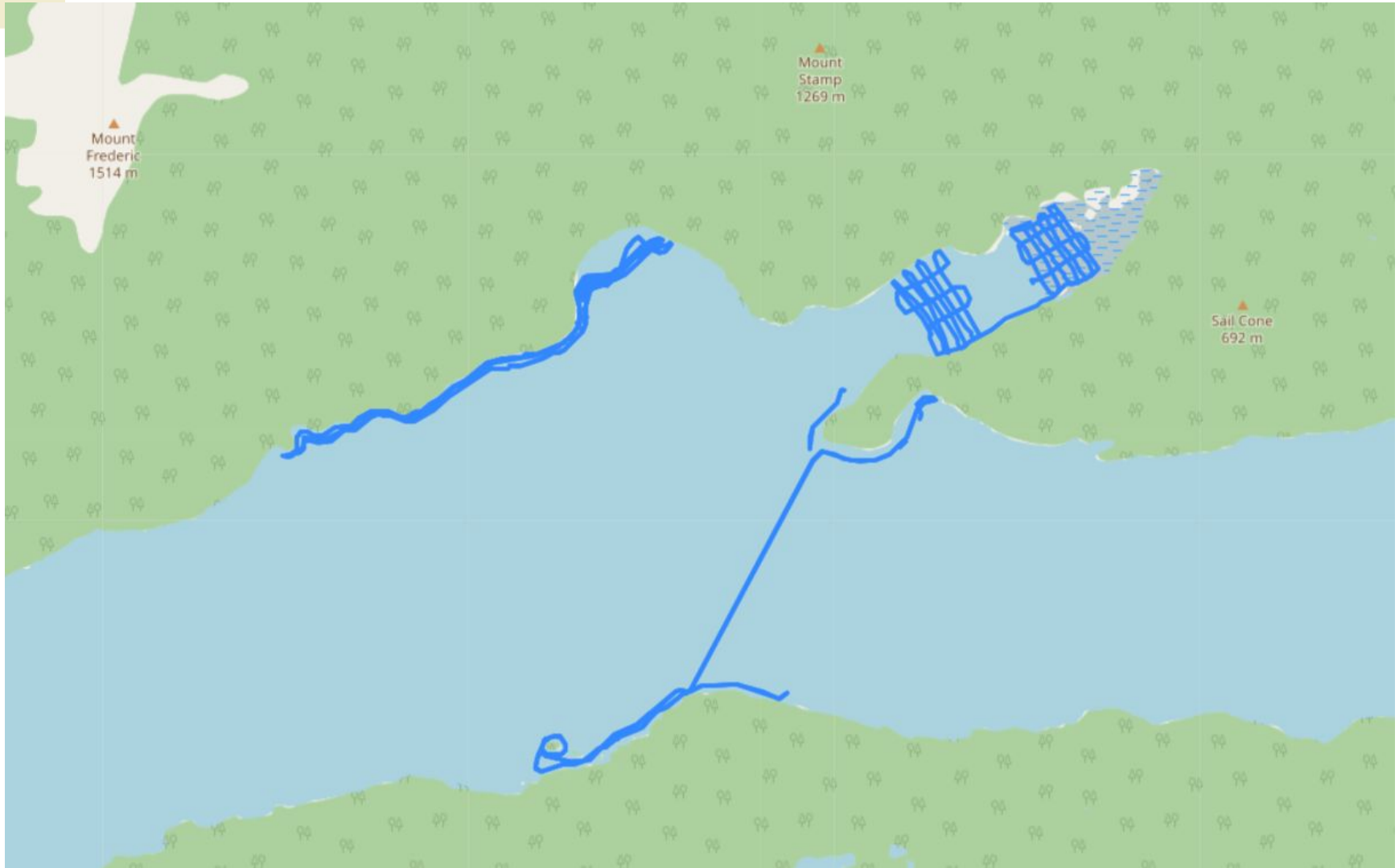
Project action: Leveraging Trusted CSB for seaway monitoring from Montreal to St-John's



Key Activities

International Hydrographic Organization

Project action: Recognizing and empowering ancestral indigenous knowledge of the land



nanwakolas COUNCIL

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

Requests to CSBWG

International Hydrographic Organization

Call for project partners !

Canada's Department of Fisheries and Oceans wants to make an Ocean Decade Action of this project

2021 2030 United Nations Decade of Ocean Science for Sustainable Development