



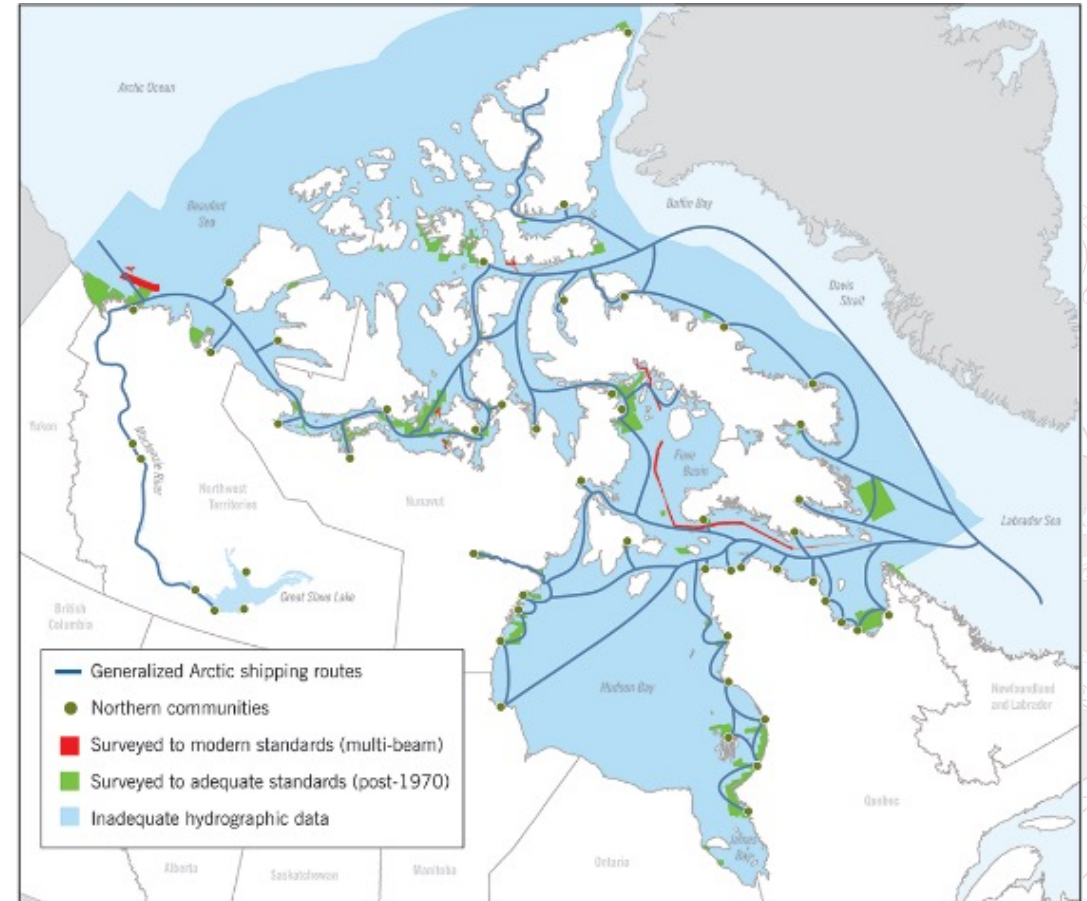
Overview of the Canadian Coast Guard in the Arctic

Neil O'Rourke, Assistant Commissioner, Arctic Region



Canadian Arctic

- Size and vastness of the Canadian Arctic:
 - 162,000 km coastline / over 60% of Canada's coast within Inuit Nunangat
- Over 80 Indigenous communities with over 80,000 people (2016 Census)
- Approx. 15% of the Arctic's total navigable waters surveyed to modern standards
- Climate change is having important impacts on navigation
- More vessel traffic increases the risk of incidents in remote locations with limited response capabilities

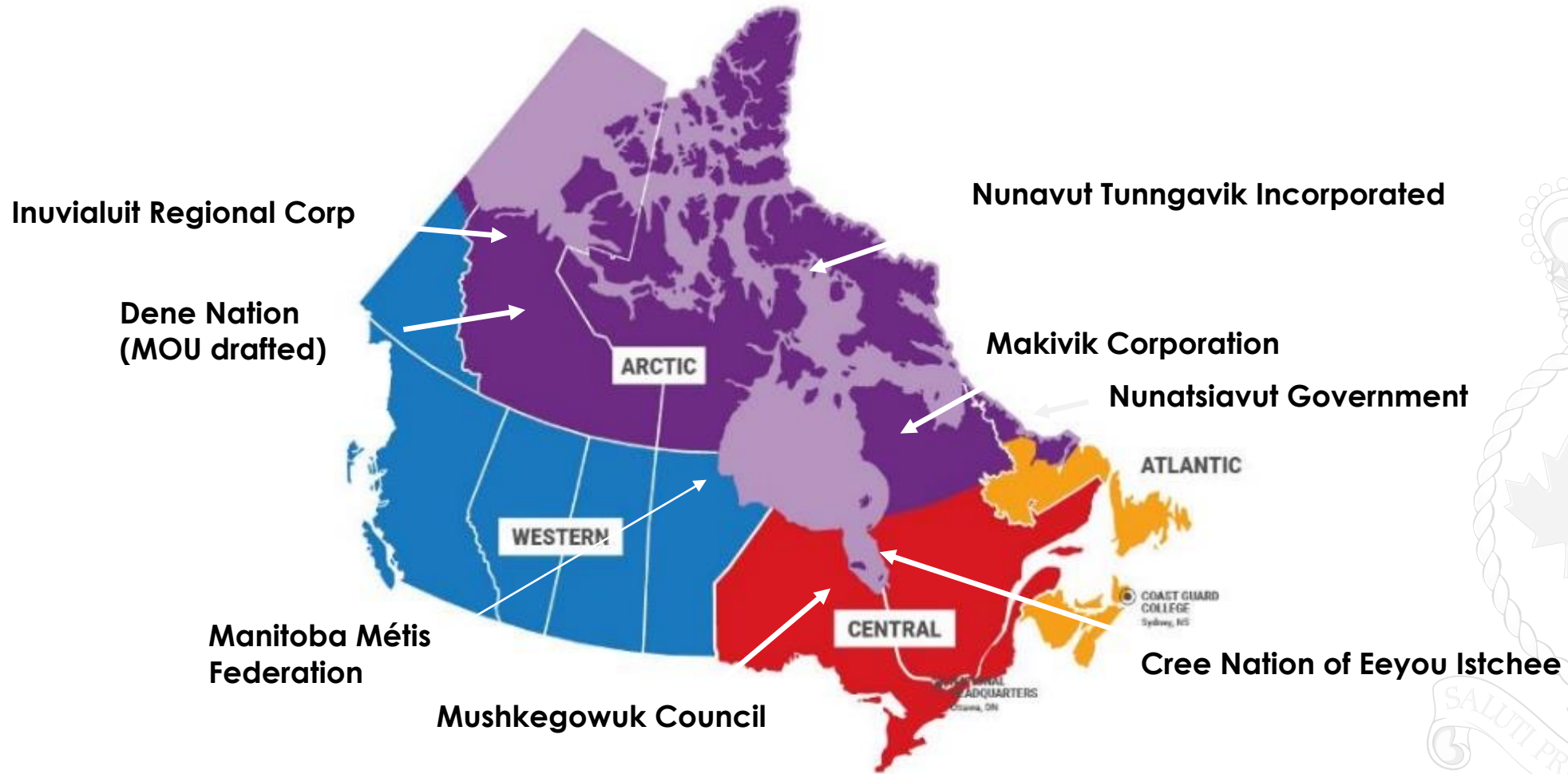


Advancing Priorities Through Governance

- Advancing reconciliation through distinction-based approach to engagement & collaboration
- Arctic and Northern Policy Framework (2019) – guides federal approach to address Arctic & Northern issues, activities, & investments through 2030
- Inuit Crown Partnership Committee (ICPC) – advances shared priorities between Inuit and GoC
- Regional Governance Frameworks with Land Claim Organizations & Inuit, First Nations and Métis governments and organizations
- Regional Governance Frameworks:
 - Approved Terms of Reference with Inuit Tapiriit Kanatami (ITK) and ICPC for Inuit Nunangat Regional Governance Framework



Governance in the Arctic Region



Arctic Region Key Priorities

- Advance reconciliation
- Improve operational readiness & marine safety
- Establish regional governance frameworks
- Continue engagement & collaboration with Indigenous governments and organizations, and with northern partners
- Increase staff complement in the North by developing a departmental, northern HR strategy
- Continue recruiting Inuit, First Nations & Métis members



Advancing the Arctic Region 2019-2021

2019

- 2+ years of engagement with Inuit, First Nation & Métis governments & organizations, provinces & territories & internally
- Provided What We Heard report to Inuit, First Nations and Métis governments and organizations
- \$750K in Contribution Agreements to support community priorities (FY 2019-20)

2020

- Re-naming of CCG & DFO regions; internal realignment of resources; transfer of MCTS & Aids to Navigation
- Hired new Northern staff including 7 Inuit Community Engagement Coordinators
- Advanced relationships & agreements with circumpolar countries

- Signed Cooperation Plan between CCG and Danish Defense Forces JACO

2021

- Boundary announcement
- Transfer of programs reporting to Arctic Region
- Completion of first season using new operational reporting model
- CCG Central Region's ROC & Ice Desk maintained roles in collaboration with AR - ER, MCTS, AtoN
- IM and Fleet-service delivery agreement with Atlantic, Central & Western Region
- MOU signed with CCG and UK RN
- On-water exercise with CCGAR and USCG D17
- In process of hiring 6 ER staff in Hay River & Iqaluit



Operating in the Arctic Region

- Disproportionate climate change impact:
 - Unpredictable climate and ice conditions
 - Culturally & ecologically sensitive areas increasingly accessible
- Region inaccessible by water for much of the year, but that is changing
- Reliance on CG fleet to access remote areas / CG is the Government of Canada's civilian fleet
- Limited connectivity & infrastructure to support operations



The Future Fleet

Large Ships



Polar Icebreakers



Program Icebreakers



Multi-Purpose Vessels



AOPS (CCG Variant)



Offshore Oceanographic Science Vessels



Offshore Fisheries Science Vessels

Small Ships



Mid-Shore Multi-Mission



Mid-Shore Patrol Vessels



Search and Rescue Lifeboats



Channel Survey and Sounding Vessels



Near-Shore Fishery Research Vessels



Special NavAids Vessels

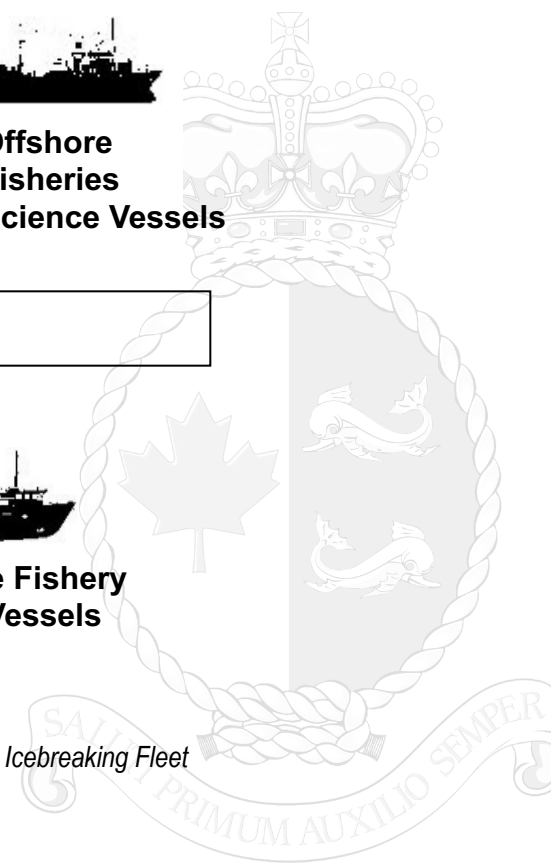


Air Cushion Vehicles



Specialty Vessels

Icebreaking Fleet



Fleet Supported Missions



Icebreaking



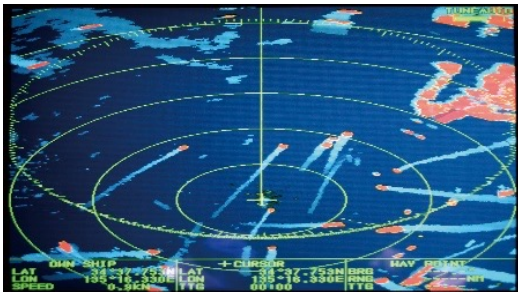
Search and Rescue



Environmental Response



Aids to Navigation



Marine Traffic Management



Shipping Channel Maintenance



Ocean and Fisheries Science

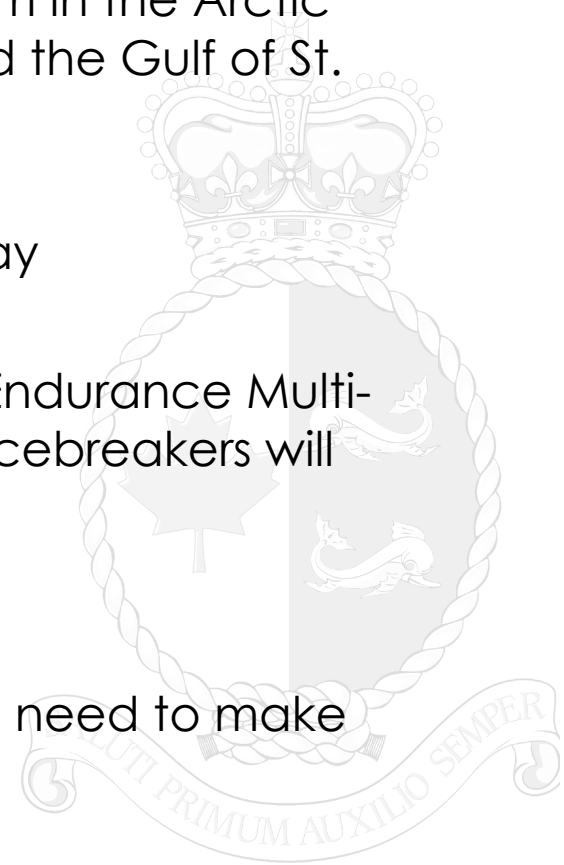


Support to other Government Missions

Coast Guard services are critical to the Canadian economy, the marine environment and maritime safety.

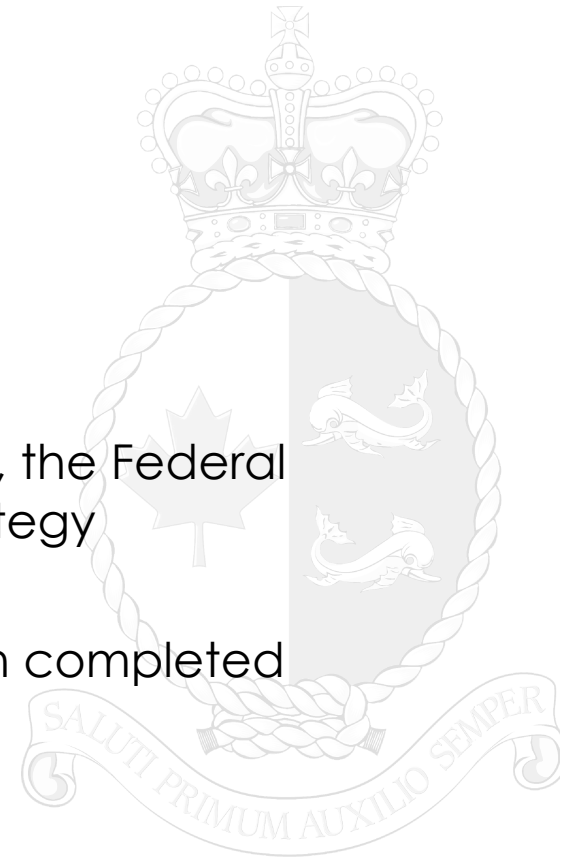
Fleet Renewal

- Coast Guard is working to acquire the 6 Program Icebreakers announced in August 2019
 - These vessels will primarily assist in the delivery of the icebreaking program in the Arctic during the summer and the Atlantic, Great Lakes, St. Lawrence River and the Gulf of St. Lawrence during the winter
- CCG is making progress on getting the Multi-Purpose Vessel project underway
 - In time, up to 16 new vessels will replace High-Endurance and Medium-Endurance Multi-tasked Vessels, Offshore Patrol Vessels, and one Specialty Vessel. These icebreakers will form the backbone of the modern CCG fleet
- Polar Icebreakers
- We continue to consider what infrastructure, training and HR investments we need to make to bring all these vessels into service effectively and efficiently



Coast Guard – Environmental Considerations

- Coast Guard is committed to reducing emissions and environmental impacts in the areas of:
 - fuel procurement;
 - fleet procurement;
 - operational efficiency; and
 - net-zero research and innovation
- Canada has a target goal of net-zero emissions by 2050
- CCG's contributions will include:
 - innovative projects, research groups and task forces; and
 - assessment of alternate power, e.g. the United Nations Paris Agreement, the Federal Sustainable Development Strategy, and the Greening Government Strategy
- A study on the operational impacts of Liquefied Natural Gas (LNG) has been completed and is now in review
- A study on low-emission fuels is in the planning stages



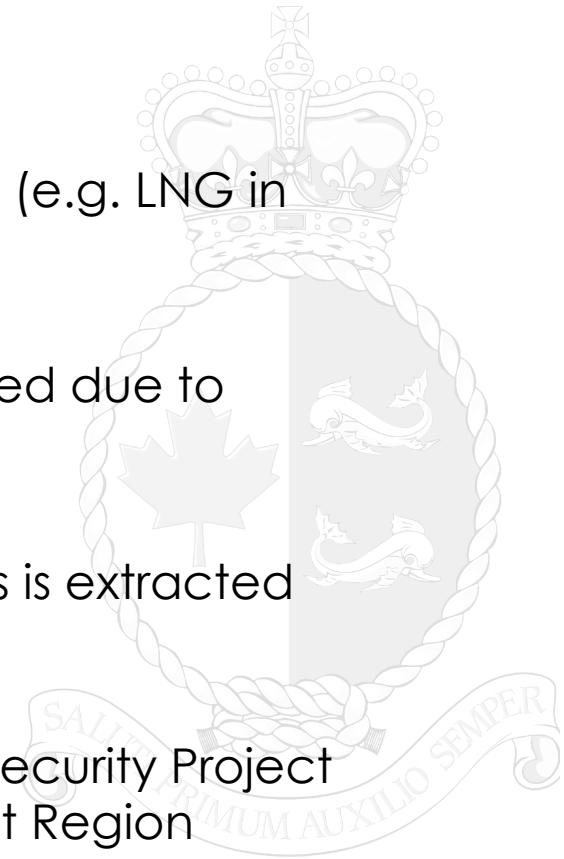
Northern Low-Impact Shipping Corridors

- Corridors initiative announced in 2016 as part of the Oceans Protection Plan
- Co-led by TC and CCG, with support of the CHS
- Two main objectives:
 - Develop governance framework to support implementation and management of shipping corridors in the North
 - Identify sensitive geographic areas to mitigate the socio-environmental impacts of shipping
- Phase I Engagement: TC and CCG met with over 20 partners in 2018-19
 - Common Themes: inclusive governance framework, reflect regional concerns, flexibility to respond quickly
- Phase II engagement to begin winter 2022
- Objectives of Phase II include in-depth discussions on:
 - Assessing governance models and what a governance framework could look like
 - Identifying priority geographic areas using charts and maps with CHS



Liquefied Natural Gas in the Canadian Arctic

- Overall, on the supply chain and production side, Liquefied Natural Gas (LNG) related projects have been relatively (or almost) nonexistent in the Canadian Arctic
- Increasing global importance & demand for LNG
- Preparedness is necessary given future energy requirements & development (e.g. LNG in the Northern Sea Route)
- There have been attempts to develop natural gas projects, which have stalled due to market conditions and potential adverse impacts
- Production of LNG requires natural gas and liquefaction facilities; natural gas is extracted from basins and usually transported by pipeline to liquefaction facilities
- The only current proposed LNG project in the Arctic is the 'Inuvialuit Energy Security Project (IESP)', from Inuvialuit Petroleum Corporation, in the NWT Inuvialuit Settlement Region



Coast Guard Perspective - Liquefied Natural Gas

- LNG is considered as a Hazardous and Noxious Substances (HNS) – for risks/accidents and malfunctions related to the marine shipping of LNG
- OPP initiative on HNS builds on the framework for oil spills in Canada, enhancing response preparedness for marine pollution
- Would apply the Polluter Pays Principle, and would involve the participation of industry and other partners and stakeholders
- Led by Transport Canada (as the main regulator), includes CCG, DFO, and ECCC



Northern Major Resource Project: Inuvialuit Energy Security Project

- Extracting gas from the Tuk M-18 well, converting it to LNG, and transporting along the Inuvik-Tuktoyaktuk highway to customers in the region
- Expected to reduce the region's reliance on fuel transported from the south and create business opportunities in the region
- Design of the plant and cost estimates are expected to be completed by Fall 2020
- Construction of an all-weather road to the well will begin in the spring of 2021 with plant construction occurring in the fall/early winter of that year
- Partners would begin shipping LNG in the spring of 2022 (pending approval)



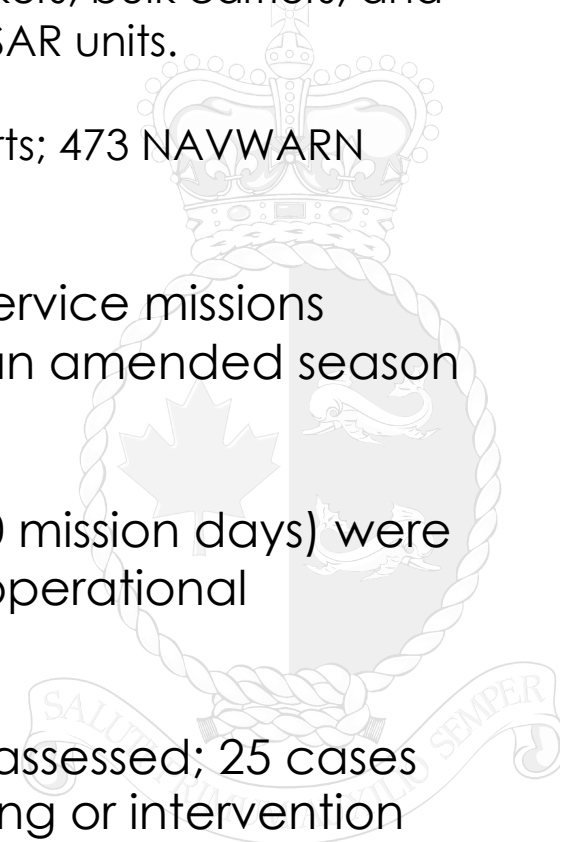
Thank you (English) | Merci (French)

Mársi (Chipewyan) | Kinanāskomitin (Cree), Meegwetch (Cree)
Hajj' (Gwich'in) | Matna (Inuktitut) Quana (Inuinnaqtun)
Qujannamiik (Inuktitut) Nakurmiik (Inuktitut) | Quyanainni (Inuvialuktun)
Māhst (North Slavey) | Máhst (South Slavey)
Mahst (Tlicho) | Gunalchéesh (Tlingit / Tagish) Kwāñdāschis/Shāw níthän
(Southern Tutchone) Máhsin cho (Northern Tutchone)
Tsin'jj choh (Upper Tanana) | Sógá sénlá' (Kaska)



Annex A - 2021 Arctic Operational Season

- SAR: 68 SAR taskings in Arctic waters responded to by CCG or CCG Auxiliary units, and includes 3 SAR responses by IRB North
- Ice: 58 commercial escorts completed
- Inshore Rescue Boat North (Rankin Inlet): from Jun 23 to Sep 7, 4 training exercises, 3 SAR case responses and 854.3 nautical miles patrolled
- 150 vessels completed 1079 voyages: 39 bulkers, 23 fishing vessels, 26 general cargo vessels, 1 navy vessel, 1 private icebreaker, 1 pleasure craft, 10 research vessels, 16 tankers, 17 tugs, 1 exercise vessel
- MCTS Iqaluit: in service from May 25 to Dec 20
 - Provided support to more than 160 vessels including CCG ships, cargo ships, tankers, bulk carriers, and CCG Auxiliaries and RCMP SAR units.
 - 83 marine occurrence reports; 473 NAVWARN issued.
- 6 Canadian Hydrographic Service missions totaling 146 mission days in an amended season using 3 CCG icebreakers
 - 4 additional missions (100 mission days) were cancelled due to CCG operational constraints
- ER: 38 reports received and assessed; 25 cases required enhanced monitoring or intervention



Annex B - Arctic Region - Assets Map

Legend

- Rapid Air Transportable (RAT)
- Inshore Rescue Boat (IRB) Station
- Environmental Response Equipment Cache (EREC)
- Environmental Response (ER) Equipment Depot
- Staffed Environmental Response Depot
- Remote Radio Site
- Marine Communications and Traffic Services (MCTS) Centre
- Coast Guard Auxiliary (CCGA) Unit
- Coast Guard Base



Available Assets

Heavy Icebreakers
 CCGS Terry Fox
 CCGS Louis S. St-Laurent

Medium Icebreakers
 CCGS Amundsen
 CCGS Des Groseilliers
 CCGS Henry Larsen
 CCGS Captain Molly Kool
 CCGS Pierre Radisson
 CCGS Jean Goodwill

High-Endurance Multi-Tasked Vessels
 CCGS Sir Wilfrid Laurier

Aids to Navigation
 Mackenzie River and Great Slave Lake: 1,569 aids
 Western Arctic: 161 aids
 Eastern Arctic, Hudson Bay, James Bay, and Nunavik: 180 aids
 Nunatsiavut: 117

Special Navais Vessels on the Mackenzie River
 CCGS Eckaloo
 CCGS Dumit

Helicopters
 Up to 8 helicopters

MCTS Towers
 11 operated by MCTS Iqaluit