Nunavut Search and Rescue Roundtable

Kitikmeot 2020: General Report and Findings



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KITIKMEOT
SEARCH AND RESCUE

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KITIKMEOT
SEARCH AND RESCUE

Executive Summary

The Kitikmeot Roundtable on Search and Rescue (SAR) brought together 55 members of community-based organizations from Kugluktuk, Cambridge Bay, Gjoa Haven, Taloyoak, and Kugaaruk; academics; and representatives of federal and territorial departments and agencies to discuss best practices, lessons learned, challenges, and future requirements for search and rescue in the Kitikmeot region. Participants discussed how to organize, coordinate, and conduct searches, with a focus on training and skills, response procedures, leadership, equipment, and inter-organization and inter-community cooperation. While most of the roundtable focused on community-level searches, the culminating activity (a Mass Rescue Operation Tabletop Exercise) centred on an adventure cruise ship running aground in the waters of the Kitikmeot.

Roundtable participants highlighted the following SAR challenges:

- Equipment shortages
- Gaps in and lack of access to training
- Inability to recruit new members, particularly young adults
- Effectively tracking community-level capabilities
- Coordination and cooperation between the community organizations involved in SAR and their territorial and federal partners
- Lack of accounting and administrative skills amongst SAR volunteers
- Fundraising problems
- Difficulties establishing relationships and attaining the support of private industry/resources
- Issues posed by disorganized and uncoordinated community searchers who do not work with community SAR organizations
- The number of SAR cases caused by people who are unprepared to go out on the land, along with inexperienced newcomers to communities and tourists
- Problems created by social media (although it also creates opportunities)
- Organizational mandates from the South that limit operations in the North
- The need to establish what roles community groups would play during a Mass Rescue Operation
- The need to secure SAR tasking number and air support in a faster, more efficient manner
- Difficulties communicating effectively with the Joint Rescue Coordination Centre

- Lack of access to trauma counselling and mental health supports

Representative quotes:

"[Y]ou would never send a firefighter out to fight a fire with bad equipment or without any protective gear, yet we are asked to do this when doing searches on the land? Is this not also dangerous work?"

"This is the real challenge, getting people involved. If we had more volunteers, we would have more people willing to respond. It would take the burden off. It might even encourage people to train more together if the burden was spread around a bit more. We need people who are willing to put the time in and learn how to do SAR."

Roundtable participants shared the following best practices and lessons learned:

- Each community requires multiple well trained and experienced SAR coordinators and unit leaders – they make the entire system work.
- Clear plans and procedures that lay out contact information, the different responsibilities of community SAR responders, and the steps to be taken before, during, and after a search. Everyone should know what they have to do to prepare for a search and complete their tasks immediately (e.g. buying food, checking the weather, preparing a kamotik, getting information from the missing person's family).
- During a search, GSAR teams should be separated into pairs. Each pair should consist of an experienced searcher/elder and a new recruit to facilitate the transmission of knowledge and skills. Each pair should have an inReach device or GPS that is hooked up to the community command post. In each pair, one searcher should be responsible for keeping track of the time and for regularly checking in with the SAR command post, while the other remains completely focused on looking for tracks or other signs of the missing person. Base camps should be established on the land during extended searches to save the searchers from having to travel to the community for resupply.
- Discussing challenges and solutions after a search can lead to significant improvements – turning lessons observed into lessons learned can have a major impact.
- Hamlet offices and the RCMP can offer significant assistance before, during, and after a search, but often they are not involved in community SAR efforts.
- There should be a focus on preventative SAR and providing community members with survival training at an early age.
- Recent expansion of the Coast Guard Auxiliary, including the training and equipment that this process has provided, has had a positive impact and should be expanded to Taloyoak and Kugaaruk as soon as possible.

- After every search there should be a sharing circle, led by elders, to allow for debriefing and critical incident stress management.
- Community meetings should be convened after every search to: (a) explain the search to the whole community, (b) share lessons learned, and (c) educate community members.
- The new "Nunavutized" GSAR training offered by Nunavut Emergency Management is a great initiative, and NEM should incorporate community responder feedback into the program.
- SAR works most effectively when the JRCC/CAF/Coast Guard view community groups as force multipliers – they should practice how to best employ these local assets during searches.
- The TTX Mass Rescue Exercise highlighted the sophistication of community-level understandings of, and plans for, MROs; it also reinforced the value of community-level perspectives and local information in planning, preparing for, and executing an MRO.
- Community groups can play essential and diverse roles in an MRO. Participants listed a series of potential responses for Coast Guard Auxiliary units, community GSAR teams, and/or Ranger patrols, including:
    - put eyes on the situation;
    - provide updates to the JRCC;
    - on-scene coordinator;
    - provide intel on where passengers could be evacuated to on the land;
    - shepherd lifeboats or zodiacs to safe havens or the community;
    - help in offloading and tracking passengers;
    - search for missing passengers;
    - establish a camp to provide warmth and shelter;
    - give first aid;
    - provide predator control;
    - reassure evacuees that the situation is under control;
    - assist in setting up accommodations for evacuees in their communities;
    - be the points of contact between evacuees and the community, etc.

Representative quotes:

"All of it is very stressful, very tiring. When you have two dozen searches a year, it takes so much out of you. It's easy to get exhausted. Sometimes you want to quit. Sometimes you are searching for people you love. Sometimes you don't find them or find them too late. It's all hard."

"Because people in these groups often know one another and there is usually a lot of crossover between them with all the hats people wear, there might be an idea that they can work together no problem. But in an emergency, when groups have different ways of communicating, different ways of doing things, different mandates from the South, we can quickly run into trouble. We need to practice cooperating. We need to practice working together. And it's not just SAR – think about helpful this would be during other emergencies that we might face in the community."

Roundtable participants suggested the following improvements and future requirements:

- Develop plan and procedures for community SAR, complete with contact information, and the skills, training, equipment, and competencies possessed by community responders – these should be distributed to territorial and federal agencies
- Regular training, meetings, and exercises to facilitate cooperation and coordination between community groups and their federal and territorial partners
- Create memorandums of understanding between community groups and the RCMP for use of snowmachines and other equipment
- Municipal, territorial, and federal governments should provide time off with pay to allow their employees to pursue SAR training opportunities
- Incentives for participation in community SAR organizations
- Community groups should have access to lessons learned from previous searches
- Increased funding to support preventative SAR efforts and educational materials, and a mandatory survival course as part of school curriculum
- NEM should consider making playing cards with tips on how to survive on the land
- Equipment and training suggestions: caribou skin clothing, dry suits, Wilderness First Aid, offering a new course on "community side of a search" (administration, organization), standardized radios between groups, more inReach devices for GSAR teams, permanent markers on the land to act as wayfinders, SAR cabins between communities, and detailed SAR maps
- Each community should have a dedicated SAR building where they can store supplies, equipment, and fuel; hold meetings; and which can serve as a command post during SAR missions.
- Each GSAR team should have access to two snowmobiles and two ATVs to be used only during searches, training, and exercises; or to an equipment fund that people could spend on their own equipment and machines
- Expand the Coast Guard Auxiliary and Indigenous Community Boat Volunteer Pilot Program to Taloyoak and Kugaaruk.
- Establish a paid SAR coordinator position in each community
- Push cell service further out with repeater towers as a preventative SAR measure
- Deploy more federal SAR assets to the Kitikmeot on a permanent or seasonal basis

Roundtable participants suggested the following functions for kitikmeotsar.ca:

- Collect, present, and explain best practices, lessons learned, challenges, suggestions, and SAR stories on an ongoing basis
- Track all community groups, federal, and territorial agencies involved in SAR in the Kitikmeot and their capabilities, provide contact information
- Display an interactive map showing where SAR cases happen in the Kitikmeot
- Publicize preventative SAR/education services
- House SAR plans and procedures for each community
- Collect stories of past SAR operations

"The federal government just gave the Coast Guard Auxiliary units in the Kitikmeot brand new SAR boats and equipment, at a cost well over $200,000 a piece. That's great program. I'm a member of the Auxiliary and it has had a huge impact. But, what about GSAR? If the reason for the new boats is that communities don't always have safe equipment, that more outside boats are coming in, that more marine SARs will happen, couldn't the same be said about GSAR? What about those Norwegian tourists between Cam Bay and Gjoa? Volunteer GSAR rescued them. What if they had died out there on the ice – that would not be a good result for Canada. We have to stop treating the ice differently than the water. What I'm saying is that if the Coast Guard can buy new boats for the Auxiliary, can't the feds provide funding for GSAR equipment, so we don't use our own?"

Roundtable Overview

The Kitikmeot Roundtable on Search and Rescue (KRSAR), co-organized by Peter Kikkert, Angulalik Pedersen, and P. Whitney Lackenbauer, was held at the Canadian High Arctic Research Station (CHARS) in Cambridge Bay, Nunavut, from 31 January – 1 February 2020. It brought together 55 members of community-based organizations from Kugluktuk, Cambridge Bay, Gjoa Haven, Taloyoak, and Kugaaruk, as well as academics and representatives of federal and territorial departments/agencies, to discuss best practices, lessons learned, and future requirements for search and rescue in the Kitikmeot region.

The idea for this roundtable came out of conversations that the organizers had with members of the community-based organizations involved in SAR in the Kitikmeot. These individuals highlighted the need to: 1) share their knowledge with and learn from practitioners in other communities; and 2) share their experiences with and develop relationships with the territorial and federal agencies involved in SAR in Nunavut.



The roundtable allowed participants from the Kitikmeot region's Ground SAR (GSAR) teams, Canadian Coast Guard (CCG) Auxiliary units, CASARA volunteers, and Canadian Ranger patrols to explain how they organize, coordinate, and conduct searches, with a focus on training and skills, response procedures, leadership, equipment, and inter-organization and inter-community cooperation. Participants also discussed SAR operations with representatives from the territorial and federal agencies involved (e.g. the Canadian Coast Guard, Emergency Management Nunavut, and the Department of National Defence/Canadian Armed Forces), with a particular emphasis on how to best utilize community-based assets as force multipliers. To facilitate this process, officers from the Canadian Coast Guard held a Mass Rescue Operation Tabletop Exercise as a culminating activity that centred on an adventure cruise ship running aground in the waters of the Kitikmeot.

The roundtable brought together practitioners with tremendous experience conducting SAR operations in their communities. The main objective of this roundtable was to collect their knowledge and produce a list of lessons learned and best practices for all individuals, groups, and agencies involved with SAR in the Kitikmeot. At the same time, the roundtable offered a forum in which community members could ask their federal and territorial partners for clarity on policy, procedural, and operational issues, highlight what resources they require to be even more effective, and identify capability gaps that exist in communities and the region more broadly.

A roundtable with a focus on northern search and rescue and emergency management is not a new concept. Starting in 2010, the National Search and Rescue Secretariat instituted the Northern Search and Rescue Roundtable (NSARR), which held regular meetings until 2016. These meetings brought together policymakers and practitioners from the three territories, Nunavik, Nunatsiavut, and (on occasion) the provinces. The meetings of the NSARR provided a platform for direct communication between JRCC staff, federal and territorial/provincial partners, and community groups, which allowed them to discuss common operating challenges and solutions. In 2013, the Munk-Gordon Arctic Security Program also held three roundtables on emergency preparedness in Yukon, the Northwest Territories, and Nunavut,

followed by a National Roundtable on Arctic Emergency Preparedness in Ottawa in February 2014.[1] These roundtables, as well as recent academic[2] and government reports,[3] have come to the same general conclusion – the amount of SAR cases is likely to increase in the Canadian North and community response capabilities must be strengthened.

The KRSAR seeks to address these observations by highlighting best practices, lessons learned, and suggestions for improvement that have broad applicability to other communities in Canada's North. At the same time, the roundtable adopted a unique regional focus and framed discussions with the resources and capabilities of the Kitikmeot communities firmly in mind. This allowed participants to discuss region- and community-specific issues and challenges, identify local gaps, and suggest community-specific improvements.

Session Descriptions

The organizers designed this roundtable to be as collaborative and informal as possible – it was about starting conversations and sharing ideas. Although they created an agenda with general topics and timings, they designed the roundtable to be flexible and responsive to what participants wished to discuss.

The Kitikmeot Roundtable on SAR started with an opening dinner, during which the organizers provided a **general introduction** and a **short overview of the state of search and rescue and emergency management in the Kitikmeot**. Next, to frame subsequent discussions, a session explored **SAR Challenges and Opportunities: What do you want to talk about?** Participants had the opportunity to lay out the major themes, questions, and challenges that they wished to examine in more detail. The issues

[1] Munk-Gordon Arctic Security Program, *National Roundtable on Arctic Emergency Preparedness: Report of Proceedings, Munk-Gordon Arctic Security Program*, Munk-Gordon Arctic Security Program (2014), https://gordonfoundation.ca/resource/national-roundtable-on-arctic-emergency-preparedness-report-on-proceedings/.

[2] Bernard Funston, "Emergency Preparedness in Canada's North: An Examination of Community Capacity," *Northern Canada Consulting* (2014), http://www.mun.ca/harriscentre/Emergency_Preparedness.pdf; J.D. Ford and D.G. Clark, "Preparing for the impacts of climate change along Canada's Arctic coast: The importance of search and rescue," Marine Policy 108 (2019): 1-4; D.G. Clark and J.D. Ford, "Emergency response in a rapidly changing Arctic.," CMAJ 189 (2017): 135-136; D.G. Clark, J.D. Ford, T. Tabish, "What role can unmanned aerial vehicles play in emergency response in the Arctic: a case study from Canada," *PLoS One* 13 (12) (2018); D.G. Clark, J.D. Ford, L. Berrang-Ford, T. Pearce, W.A. Gough, S. Kowal, "The role of environmental factors in search and rescue incidents in Nunavut, Canada," *Public Health* 137 (2016) 44–49. Kitikmeot community requirements around marine SAR have been highlighted in the Arctic Corridors Research project. See N. Carter, J. Dawson, J. Knopp, J. Joyce, M. Weber, Z. Kochanowicz and O. Mussells, *Arctic Corridors and Northern Voices: Governing marine transportation in the Canadian Arctic (Cambridge Bay, Nunavut community report)* (Ottawa: University of Ottawa, 2018) and N. Carter, J. Dawson, J. Joyce, A. Ogilvie, *Arctic Corridors and Northern Voices: Governing marine transportation in the Canadian Arctic (Gjoa Haven, Nunavut community report)* (Ottawa: University of Ottawa, 2017) at http://www.arcticcorridors.ca/reports/.

[3] Standing Committee on Fisheries and Oceans, *When Every Minute Counts: Maritime Search and Rescue*, Senate Canada (November 201), https://sencanada.ca/content/sen/committee/421/POFO/reports/MaritimeSARReport_e(forweb)_e.pdf

and topics that they highlighted laid the foundation for the roundtable's subsequent activities and discussions.

The next day started with a session on **Nunavut's New SAR Training**, presented by Mike Kendall from Nunavut Emergency Management. Kendall laid out ongoing efforts to "Nunavutize" GSAR training in the territory and to provide communities with the support that they require. This served as an ideal transition to the next session, **Working Together: Q and A with Emergency Management Nunavut, Canadian Coast Guard, and Canadian Armed Forces**, in which members of the territorial and federal agencies involved in SAR in the Kitikmeot answered questions and heard suggestions from community participants in the roundtable.

The session on **Sharing Best Practices, Discussing Lessons Learned, and Talking About Challenges** was the heart of the morning's conversations – and, in many respects, of the entire roundtable. During this session, roundtable participants broke into smaller groups with representatives from each community, while federal and territorial officials distributed themselves evenly between the tables. In these small groups, participants shared how SAR operations worked in their community, what they did well, and the challenges that they faced. They were able to exchange ideas, offer possible solutions, and problem solve with one another. The organizers invited someone to facilitate and record the discussions in each group. This session went far longer than scheduled and evolved into a working lunch.

After lunch, the roundtable re-convened and groups shared some of their key findings. During their small group discussions of lessons learned, best practices, and challenges, community participants started to focus on equipment and training requirements. These conversations carried over into the next session, **Improving the SAR System: What do you need? What would you like?** Participants were encouraged to think about what they absolutely required to successfully conduct SAR operations in their communities. What equipment, training, organization, relationships, and other assets does a community-based organization need to carry out the wide variety of SAR missions that it might be assigned? Participants were then asked to reflect on what they would like to have, particularly in terms of equipment, if they had an unlimited budget.

Finally, the organizers asked participants what they would like to do with the website established for the roundtable (**kitikmeotsar.ca**). How could this website be used to facilitate more effective SAR operations in the Kitikmeot? What kind of information might it provide? What would be most helpful from a community perspective?

The remainder of the roundtable involved a **Mass Rescue Operation (MRO) Tabletop Exercise** carried out by MRO officers and SAR specialists from CCG Arctic Region. To encourage the sharing of location-specific perspectives and responses to the incident scenario, the Roundtable broke into six groups arranged generally by community. Facilitator Chris Bianco from the Coast Guard laid out the initial incident, which involved a cruise ship running aground off Unahitak Island close to Cambridge Bay. He asked that each community apply the scenario to their community's own unique context. Bianco than moved through a series of scenario "injects" that gradually increased the complexity and difficulty of the rescue operation.



At its core, the Kitikmeot Roundtable on Search and Rescue was **about relationship-building**, particularly between community members and the federal and territorial agencies with which they work. Given this objective, **the sharing of meals, coffee and tea, and conversation were as important as the actual sessions**. The roundtable concluded with a **dinner and informal story sharing** on Saturday night.

Search and Rescue in the Kitikmeot: An Overview

In the North, community-based groups such as the Canadian Coast Guard Auxiliary, Ground Search and Rescue (GSAR), Marine SAR Societies, Civil Air Search and Rescue Association (CASARA), and Canadian Rangers play an essential role in SAR. Given the distances involved, the lack of federal resources in the region, and their extensive knowledge of local geography, sea and ice conditions, the environment, and potential challenges and risks, these groups are the foundation of Canada's Arctic SAR system.

Each community in the Kitikmeot has an all-volunteer GSAR team, often supported by a formal SAR Committee. All of the Kitikmeot community SAR groups have been registered as non-profit societies under Nunavut's Societies Act to facilitate fundraising efforts and financial support from NEM, although the administrative requirements have made it difficult for many of them to consistently maintain this status. While team members volunteer their time and generally use personal equipment, Nunavut Emergency Management (NEM) provides funding to cover expenses such as training, fuel, lubricants, emergency supplies, food, and equipment repair. NEM orchestrates GSAR training opportunities through the Nunavut Municipal Training Organization, providing a basic SAR course and a coordinator course. Volunteer community SAR coordinators assist with arranging training opportunities, organizing searchers, and coordinating with NEM. A SAR tasking usually begins in the community when someone on the GSAR team is told of a missing person or party and they report the case to NEM. If a person in need of assistance is using one of the SPOT devices that NEM had provided to each community, however, the initial notification will go to the NEM personnel on duty and they will contact the local SAR team to activate a search.[4]







Top: Photo of new Gjoa Haven Coast Guard Auxiliary SAR boat courtesy of Winnie Hatkaittuq. Middle: Photo of the shore station constructed by the Cambridge Bay Coast Guard Auxiliary unit courtesy of Peter Kikkert. Bottom: M.V. *Kruger*, the unit's new rescue boat secured under the Ocean Protection Plan's Indigenous Community Boat Volunteer Pilot Program from John Thompson, "Ready to Rescue," *Nunatsiaq News*, 20 September 2019.

[4] Department of Community and Government Services, "Community Based Search and Rescue: How it Works," Government of Nunavut, https://www.gov.nu.ca/sites/default/files/website_sar_003_0.pdf
Department of Community and Government Services, "Community Based Search and Rescue Contributions Policy," Government of Nunavut, https://www.gov.nu.ca/sites/default/files/sar_policy_eia_edits_01_30_17_2_2.pdf

In the Kitikmeot, marine SAR is carried out by Coast Guard Auxiliary units in Cambridge Bay, Kugluktuk, and Gjoa Haven, and facilitated by the SAR Committees in Taloyoak and Kugaaruk. Canadian Coast Guard Auxiliary units are made up of local volunteers who use their own vessels or a community vessel to respond to emergencies. Members of the auxiliary receive specialized training, insurance coverage and reimbursement of certain operational costs, but often must fundraise to purchase additional required equipment (e.g. Personal Flotation Devices, GPS, Radios). The Coast Guard has also transferred surplus assets to several Arctic units (e.g. it transferred a 17-foot Boston Whaler and 90 HP outboard motor to the Cambridge Bay Auxiliary in 2014).[5] Authorization to respond to SAR tasking activities in the Kitikmeot generally comes from the Joint Rescue Coordination Centre Trenton, although the RCMP can also authorize a tasking if required.[6] While Cambridge Bay and Kugluktuk have long-established Auxiliary units, Gjoa Haven's was only stood-up in 2017 as part of the federal government's Oceans Protection Plan (OPP) which seeks to expand the CGA throughout the Arctic. The groundwork to establish a unit in Taloyoak has been ongoing and it should be operational in the immediate future. The focus

of the OPP on improving marine safety in the Arctic has also led to new training and equipment opportunities for Auxiliary units in the Kitikmeot. Through the Indigenous Community Boat Volunteer Pilot Program, Cambridge Bay ($270,311), Gjoa Haven ($222,187), and Kugluktuk ($246,417) have been able to purchase new SAR boats and related equipment.[7]



Each Kitikmeot community also has an active Canadian Ranger patrol that can be called up to assist with SAR both as volunteers who know how to work effectively as a group and, when called upon, as an official military tasking for which they are paid. Some of the training provided to the Rangers by the Canadian Armed Forces is directly related to their SAR capabilities: GPS skills, constructing austere airstrips on the land and ice, effective communications, First Aid, and Wilderness

[5] Randy Strandt, National Chair, Canadian Coast Guard Auxiliary, Proceedings of the Standing Senate Committee on Fisheries and Oceans Issue No. 5 - Evidence – 31 May 2016.
[6] Canadian Coast Guard, *Canadian Coast Guard Auxiliary National Guidelines*, (April 2016), https://ccga-gcac.ca/library/?action=category&lcid=35
[7] Government of Canada, "The Public Accounts of Canada, Volume III, Section 6—Transfer payments (2018," https://www.tpsgc-pwgsc.gc.ca/recgen/cpc-pac/2018/vol3/ds6/index-eng.html#wds6en_tbl_r18863

First (although the latter has not been offered on a regular basis to the patrols in the Kitikmeot). Ranger patrols often practice their SAR skills during training exercises, which often involve simulated searches. More generally, patrols are taught how to work together as a cohesive unit, which can be a valuable skillset during a search. Each patrol is also issued, on average, two satellite (SAT) phones and two Track 24 devices (an Iridium satellite system that facilitates the monitoring and tracking of on the land movements). Rangers are encouraged to use both pieces of equipment during searches.

Civilian Air Search and Rescue Association (CASARA) volunteers have also been trained in Gjoa Haven and Cambridge Bay. CASARA is a non-profit national volunteer organization funded by the Department of National Defence. Across the country, CASARA volunteers consist of private aircraft owners and pilots, ground crew, navigators, and trained spotters (air observers) who provide air search support to Canada's SAR system.[8] CASARA spotters in Gjoa Haven and Cambridge Bay are trained to observe from chartered Twin Otters and other local private aircraft, as well as from a Royal Canadian Air Force Hercules (CC-130). They are expected to "spot objects half a mile away from 500 feet above the ground, one mile away from 1,000 feet up, and two miles away from 1,500 feet in the air." [9]

In 2016, a new group emerged on the Kitikmeot SAR scene: the Gjoa Haven Guardians. Inuit community members on the Franklin Interim Advisory Committee suggested the creation of an Inuit Guardians program to protect and monitor the Wrecks of HMS *Erebus* and HMS *Terror* National Historic Site. From the end of July to freeze-up, Guardians camp near the sites to safeguard the ships and the environment, and they notify vessels that get too close to the protected waters. While on-site, the Guardians also facilitate research, conservation, and tourism activities, and offer an emergency response capability to any accidents or SAR activities that occur in the surrounding area.[10] As the number of visitors travelling to the Franklin ships increases, the SAR responsibilities of the Guardians may grow accordingly.

Community-based SAR organizations in the Kitikmeot have drawn upon a range of other local assets in previous searches, including aircraft servicing private industry and the North Warning System (NWS), volunteer fire department personnel, hamlet offices, and the RCMP. They also work with a range of federal agencies, particularly the Canadian Coast Guard and the Canadian Armed Forces (which is explained in the next section of this report).

Together, community-based groups involved in SAR in the Kitikmeot face a challenging task: providing 24/7 response capabilities, 365 days a year. As the community participants involved in the Kitikmeot Roundtable on SAR made clear, the vast majority of their searches involve community members traveling

[8] CASARA, "About," https://www.casara.ca/en/about
[9] Thomas Rohner, "Spotting trouble on the tundra: air search and rescue in Nunavut," Nunatsiaq News, 17 October 2014, https://nunatsiaq.com/stories/article/65674spotting_trouble_from_the_air_search_and_rescue_in_nunavut/
[10] Nunavut Field Unit, Parks Canada, "Project Description: HMS Erebus and HMS Terror Inuit Guardian Program (Wrecks of HMS Erebus and HMS Terror NHS), 28 May 2018," lupit.nunavut.ca/app/dms/script/dms_download.

on the ice and tundra as they transit between communities or as they engage in hunting, fishing, and gathering activities. These journeys often involve snow-machines or all-terrain vehicles traveling for hundreds of kilometres across ice and land that is often rough and can be dangerous, leading to accidents, equipment malfunctions, and people getting lost. The number of searches is generally highest during the "shoulder" or turning seasons in the Kitikmeot, when ice conditions are unpredictable and often dangerous. Roundtable participants highlighted that every year seems to bring dramatic changes in the ice that increase the risks of accident, injury, and death.

The impacts of climate change and the loss of traditional skills (particularly amongst younger community members), coupled with the failure of some travelers to take the necessary fuel and equipment when on the land, has increased the number of SAR cases in the Kitikmeot over the last two decades. Certainly, the number of public SAR cases in the region (as opposed to private ones that are not elevated beyond the community-level) has remained consistently high over the last five years, particularly in Gjoa Haven and Taloyoak (as the chart below recounts). Roundtable participants were quick to point out that these numbers are not reflective of the actual situation – the chart represents the public searches that involve Nunavut Emergency Management or the Joint Rescue Coordination Centre, and does not account for community SAR members responding to private searches, breakdowns, and when people run out of fuel.

	2015	2016	2017	2018	2019
Cambridge Bay	4	1	2	2	7
Kugluktuk	2	0	0	1	6
Kugaaruk	4	6	11	5	7
Taloyoak	17	11	14	11	27
Gjoa Haven	22	33	22	20	24
Nunavut	251	282	233	216	245

Public SAR cases in the Kitikmeot by community. Nunavut Emergency Management, *Annual Reports 2015-2019*

New SAR challenges also related to adventurers and tourists visiting the Kitikmeot. In 2014, Taloyoak Search and Rescue had to rescue a French adventurer when he developed frostbite on his feet nine days after he left the community on the start of a planned 80-day unassisted and unsupported expedition to Qaanaaq, Greenland.[11] The successful search took twelve hours. In early 2019, the Norwegian adventure tourism company Ousland Polar Exploration took a group of tourists on a 400-km trek over the sea ice

[11] David Murphy, "Frozen toes force trekker to turn back from Arctic journey," *Nunatsiaq News*, 14 March 2014.

from Cambridge Bay to Gjoa Haven. Over the course of the journey, the Cambridge Bay GSAR team had to pick up and transport several of the expedition members back to the community after they complained of exhaustion and other minor injuries. On the marine side, over the Labour Day weekend in 2010, the Cambridge Bay Coast Guard Auxiliary and a member of the RCMP detachment had to rescue a French adventurer after he floundered in rough and icy waters about 90 kilometres east of the community during his attempt to transit the Northwest Passage by rowboat.

As climate change continues to make the waters of the Kitikmeot more accessible in the summer months, marine traffic has increased substantially. In recent years, Cambridge Bay has witnessed the third highest increase in vessel traffic in Nunavut. Resource development in Slave Geological Province around Bathurst Inlet, cruise tourism, localized maritime activity, and the possible creation of a low-impact shipping corridor are anticipated to bring more vessels to the waters of Dolphin and Union Strait, Coronation Gulf, Dease Strait, Bathurst Inlet, Victoria Strait, Queen Maud Gulf, Simpson Strait, Rae Strait, Bellot Strait, and the Gulf of Boothia.[12]

As roundtable participants highlighted, a longer operating season and increased accessibility is encouraging community members to travel further in their boats, which could lead to more marine SAR cases in the future. The increasing number of private pleasure craft that transit through the Kitikmeot also concerns them and they anticipate future rescues involving these vessels. In late August 2018, for instance, an 11-metre-long sailboat, *Anahita*, with two Argentineans on board, sank in Bellot Strait. While the crew managed to activate the vessel's emergency beacon, they were forced to evacuate onto an ice floe and await rescue. JRCC Trenton responded by deploying a Hercules aircraft and the icebreaker CCGS *Henry Larsen* to the scene, where the ship's helicopter managed to rescue the two crewmember from the ice floe.[13]



August 2010 photo showing *Clipper Adventurer* under tow by the Canadian Coast Guard (*Nunatsiaq News*, 13 February 2017, https://nunatsiaq.com/stories/article/65674federal_judge_raps_clipper_adventurer_oner_for_nunavut_grounding/)

[12] Carter et al, *Arctic Corridors and Northern Voices: Governing marine transportation in the Canadian Arctic (Cambridge Bay, Nunavut community report)*; Carter et al., *Arctic Corridors and Northern Voices: Governing marine transportation in the Canadian Arctic (Gjoa Haven, Nunavut community report)* at http://www.arcticcorridors.ca/reports/.
[13] CBC North, "Coast Guard rescues 2 passengers of sinking sailboat stranded on ice floe," *CBC News*, 29 August 2018, https://www.cbc.ca/news/canada/north/coast-guard-sail-boat-rescue-1.4804102

The last decade has also witnessed three incidents in the Kitikmeot that could have spiralled into major maritime disasters and Mass Rescue Operations. In 2010, an adventure cruise ship, MV *Clipper Adventurer*, ran aground 100 km east of Kugluktuk, Nunavut. The accident strained local emergency response systems, with 128 passengers safely evacuated, but only after the cruise ship waited two days for a Canadian Coast Guard icebreaker to come to the rescue. Although this accident did not result in any causalities, it did raise concerns about regional capacity to respond to a larger-scale rescue operation.[14] Also in 2010, the tanker *MV Nanny*, which was delivering fuel to Taloyoak and had 9.5 million litres of diesel on board, ran aground on a sand and mud shoal in Simpson Strait, about 50 km southwest of Gjoa Haven. Luckily, there was no fuel spill and, after several days, *Nanny* managed to dislodge from the shoal by offloading cargo with the help of a sister ship.[15] On 24 August 2018, the 364-foot Russian cruise ship *Akademik Ioffe*, with 102 passengers and 24 crew members on board, ran aground on a shoal about 72 km north of Kugaaruk.[16] Ioffe's sister ship, *Akademik Sergey Vavilov*, was able to make it to the stricken vessel in sixteen hours and transfer passengers via zodiacs. It subsequently brought the passengers to Kugaaruk to await a plane ride south. In each incident, good conditions prevailed. Had the weather or sea conditions been worse, each could have demanded a complicated mass rescue operation.

Canada's SAR System[17]

In Canada, search and rescue (SAR) is a shared responsibility. Many partners (government, military, volunteer and industry groups) are involved in the National Search and Rescue Program due to the country's immense size, range of terrain and weather.

Territorial and provincial governments are responsible for searches for missing persons including those who are lost or overdue on land or inland waters - commonly known as Ground Search and Rescue (GSAR). Generally, they delegate the authority for ground SAR response to the police services in the area. In northern communities, however, the RCMP often take on a secondary role in SAR, allowing community GSAR committees/teams to take the lead, with support from Emergency Management Nunavut. Parks Canada leads ground SAR in federal parks and preserves.

The Canadian Armed Forces (CAF) has the main responsibility for providing SAR from the air. It also coordinates the national response for air and maritime SAR. CAF assets are tasked to respond to about

[14] Transportation Safety Board, *Marine Investigation Report M10H0006*, Government of Canada, http://www.bst-tsb.gc.ca/eng/rapports-reports/marine/2010/m10h0006/m10h0006.html; Emma Stewart and Jackie Dawson, "A Matter of Good Fortune? The Grounding of the Clipper Adventurer in the Northwest Passage, Arctic Canada," *Arctic* 64 (2) (June 2011): 263-267.
[15] CBC News, "2nd Tanker to Assist MV Nanny Stuck in Northwest Passage," *Radio-Canada*, https://www.rcinet.ca/eye-on-the-arctic/2010/09/08/2nd-tanker-to-assist-mv-nanny-stuck-in-northwest-passage/
[16] Ed Struzik, "In the Melting Arctic, a Harrowing Account from a Stranded Ship," *Environment 360*, https://e360.yale.edu/features/in-the-melting-arctic-harrowing-account-from-a-stranded-ship
[17] This section is drawn from "SAR in Canada: A Partnered Response," https://www.canada.ca/en/department-national-defence/services/operations/military-operations/types/search-rescue/about.html unless otherwise noted.

1000 SAR missions across Canada every year. The CAF may also help with ground SAR efforts, medical evacuations, and other incidents where people are in distress. Furthermore, the Canadian Rangers often help with ground and coastal SAR in sparsely settled regions of Canada, either informally as community member volunteers or when officially tasked as a unit.

The CAF sponsors and funds the Civil Air Search and Rescue Association (CASARA), a volunteer organization established in 1985. CASARA helps the CAF respond to incidents that involve air SAR. It makes private aircraft and trained volunteer crews available for SAR missions, and provides both search and communications services.

The primary responsibility for the provision of the maritime component of the federal search and rescue (SAR) program rests with the Department of Fisheries and Oceans (DFO) and the Canadian Coast Guard (CCG). This responsibility is assigned to DFO through the *Oceans Act*. The SAR activities of the CCG are:

- the provision of and participation in the maritime component of the joint rescue coordination centres (JRCCs) as well as the provision, operation and equipping of the Quebec Maritime Rescue Sub-Centres (MRSC) and other SAR installations, in cooperation with the Canadian Armed Forces (CAF);
- in collaboration with the CAF, the coordination, control and conduct of maritime SAR operations within the Canadian area of responsibility (AOR);
- the provision of maritime advice and assistance to the CAF in the coordination of aeronautical SAR and other emergencies which may require the use of maritime facilities;
- the provision of maritime SAR units (SRUs) in response to SAR incidents within the Canadian AOR, the activities of which SRUs are coordinated by JRCCs and Quebec MRSC;
- the provision of humanitarian assistance, as a secondary task, when such is deemed best provided by CCG SRUs;
- the formulation and promulgation of federal SAR policy (in collaboration with the Interdepartmental Committee on Search and Rescue);
- the establishment of levels of service, performance and operating standards;
- the provision of maritime SAR training for the coordinated SAR system in collaboration (when appropriate) with the CAF;
- the organization, coordination and administration of Canadian Coast Guard Auxiliary activities;
- the evaluation of SAR services, equipment and procedures, in collaboration with the CAF;
- the review of SAR services, installations and units, in collaboration with the CAF; and
- the provision of maritime distress and safety communications and alerting services.[18]

[18] DND and DFO, Canadian Aeronautical and Maritime Search and Rescue Manual, Combined Edition, General System Concept. B-GA-209-001/FP-001, CAMSAR I – Organization and Management, DFO 5449 Version: Final 2014, Effective

Session 1
SAR Challenges and Opportunities: What do you want to talk about?

After an overview describing search and rescue in the Kitikmeot during the roundtable's opening dinner, the organizers asked participants to relay the major questions, challenges, themes, and issues they wanted to discuss for the remainder of the meeting. They came up with a comprehensive list that fell into the following major themes.

Recruitment and Sustainability

Participants highlighted the problems posed by the lack of SAR volunteers and volunteer burnout in their communities. Many of the community participants wear multiple hats and are involved in multiple groups responsible for SAR – some are GSAR members, Coast Guard Auxiliary, Rangers, *and* CASARA volunteers. The level of community involvement differs across the Kitikmeot with some reporting a high degree of involvement and others suggesting that it was hard to recruit volunteers. Under this broader theme of recruitment and sustainability, participants highlighted the following issues and questions for the Roundtable to explore:

- People are often willing to go out on rescues, but it is harder to get them out for meetings, training, practice, and fundraising efforts.
- Can we brainstorm additional incentives to offer volunteers who are actively engaged in SAR in a community?
- How can we encourage young people to participate in community-based SAR organizations?
- To ensure that the same people are not on call all summer, Coast Guard Auxiliary units aim to have well over a dozen members. This has proven difficult in practice, particularly for Gjoa Haven's new unit. How can we encourage community members to volunteer for the Auxiliary?

Equipment

GSAR teams in the Kitikmeot generally use their own equipment and resources to respond to SAR cases. At times, there may only be a few members of a GSAR team or SAR Committee that have the necessary equipment and supplies to safely conduct a search. One participant noted that "you would never send a

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Date: 2014-09-30 , Section: I-1.07(E), pages 1-2. In 1948, Canada signed the *Convention for the Safety of Life at Sea*, wherein, under *Chapter 5, Regulation 15*, each contracting state is required to undertake and ensure necessary arrangements for coast watching and for the rescue of persons in distress at sea. In 1958, Canada became a signatory to the *Convention on the High Seas*, wherein, under *Article 12 (2)*, every coastal state is required to maintain an adequate and effective SAR service regarding safety on and over the sea. These responsibilities are further reflected and amplified in subsequent Cabinet decisions, and legislation such as the *Canada Shipping Act, 2001* and the *Oceans Act*. The *International Convention on Maritime Search and Rescue, 1979*, further defines these responsibilities.

firefighter out to fight a fire with bad equipment or without any protective gear, yet we are asked to do this when doing searches on the land? Is this not also dangerous work."

While the Coast Guard Auxiliary units in the region have been provided new boats and equipment to use, they still need fundraise to purchase additional resources. In discussing equipment needs, community participants raised the following issues and questions:

- What gear are community groups currently lacking that could be of the most help during a search?
- What are possible resources we could use to secure funding or equipment? How can we leverage support from private industry? From the tourism industry?
- What equipment or resources could have a major impact on the effectiveness of community-based SAR operations but would cost the contributing agency very little?
- How much does the military spend to send a Hercules (CC-130) or Cormorant (CH-149) up to execute a rescue in the Kitikmeot? By providing community groups with additional equipment, could some of these costs be avoided?

Tracking Capabilities

Several GSAR coordinators and Auxiliary unit leaders highlighted the importance of tracking the training, equipment, and safety gear of those who regularly go out on searches. They also explained that this can be a difficult task to keep up with on a consistent basis. Roundtable participants asked to discuss:

- How do groups in different communities keep track of their capabilities?

Coordination and Cooperation

Community participants highlighted the need for coordination and cooperation between the various organizations responsible for SAR at the community-level, between groups from different communities, and between local responders and the territorial and federal agencies with which they work. While some people are part of every group involved in SAR in a community, which could facilitate coordination, this was not always the case. Even when community groups share several members, this does not automatically mean that these groups can work together in a meaningful way. There is confusion about the different missions, roles, and responsibilities between the different community-based groups, and a limited awareness about respective capacities and policies. Community participants were also eager to discuss how they might work more effectively with their partners in Emergency Management Nunavut, the Canadian Coast Guard, the Canadian Armed Forces, and the Joint Rescue Coordination Centres. Participants asked to discuss:

- Effective cooperation between community groups from the start of a rescue would improve the likelihood of a successful result in many cases. How can we best facilitate this cooperation? How

can we work together as a search unfolds – particular if it is something like a shoreline search that could involve ground and marine elements?

- Could community groups be given the opportunity to work through jurisdictional issues and build relationships through exercises or tabletops – both with each other, and with federal and territorial agencies?
- How can community responders best communicate with NEM or the JRCC? What information is most useful?
- On the flip side, participants also wished to use the roundtable to discuss how the JRCC can work better with their communities. For instance, while on searches, many community responders refer to geographical features in Inuinnaqtun and Inuktitut – how might traditional place names be integrated in the SAR system?

Mandates and Missions

Several participants (particularly those in the Coast Guard Auxiliary and the Canadian Rangers) raised questions and concerns about the official mandates and missions of their community-based groups.

- Could the Coast Guard Auxiliary be tasked to execute a ground search and rescue, if it is suspected the missing people are near the coast?
- Participants noted confusion over how, when, and why a Ranger patrol can be officially activated to help with SAR. What is the threshold for their official involvement? Does the request have to be made through Nunavut Emergency Management? How is this done?

Training

Community participants emphasized the need for up-to-date and accessible training. They wanted to discuss how to improve Nunavut Emergency Management's basic GSAR training. On a positive side, participants wanted to hear more about the ongoing efforts to train the Coast Guard Auxiliary units in the Kitikmeot, which includes in-community training, annual meetings in Yellowknife, and a focus on train-the-trainer programming.

- What are Nunavut Emergency Management's plans in terms of offering basic GSAR training and coordinator training?
- The Coast Guard has been very active in training the Kitikmeot's Auxiliary units over the last few years. Will the rate of training and engagement continue moving forward?

Role in Disaster/Mass Rescue Operations

Every participant at the roundtable was concerned about what would happen if a cruise ship were to run into trouble in the waters of the Kitikmeot. Members of the community-based organizations – Auxiliary,

GSAR, Rangers – said they would try to offer assistance in a Mass Rescue Operation, but they have not received direction on how they might help.

- What roles could community-based organizations play in a Mass Rescue Operation?
- How might the unique skillset and knowledge of community members be mobilized throughout a Mass Rescue Operation?

Federal Capabilities

Community participants were curious about the different resources and capabilities that the Canadian Armed Forces and the Coast Guard could bring to bear in community SAR operations and in large-scale disasters and Mass Rescue Operations.

- What kind of equipment, technology, and capabilities do federal agencies possess that could provide support during a SAR or any other emergency?

Best Practices and Procedures / Lessons Learned

Many participants identified the need to collect best practices and lessons learned. Community groups organize and function in different ways and all agreed that the roundtable provided an excellent opportunity to learn from one another. To ensure a good response, an organization requires clear procedures that everyone on the team understands and can act upon. Participants suggested that the roundtable should try to establish what these should look like at the community-level.

- There have been many SAR cases over the last few years in the Kitikmeot, but is anyone learning from them – both how to prevent future cases and how to improve responses?
- Is there a mechanism to turn lessons observed into lessons learned? Who is responsible for this?
- Does every community have a set of basic procedures that it follows during a search?
- Can we have the chance to share SAR stories? Stories might be the best way to help with problem-solving.

Accounting and Administration Skills

Many of the coordinators and unit leaders at the roundtable highlighted that the accounting and administration side of coordinating a search and rescue organization is a real struggle. Completing invoices, after-action reports, and all of the paperwork required for non-profit society status is difficult and time consuming.

- Could additional administrative training be provided?
- Can we brainstorm ideas on how to relieve some of these administrative pressures?

Fundraising

Community fundraising initiatives are essential to secure financial support for community-based SAR efforts. There is concern that this support might prove insufficient to cover the high costs of required equipment in the North.

- How do communities fundraise for their SAR efforts?
- How can community-based organizations improve their fundraising efforts?
- What are potential supports for funding and equipment donations beyond the community-level? Are there federal programs that might offer more support?

Leveraging Private Resources

The community groups in the Kitikmeot have had some success in securing support from private industry or corporations. Cambridge Bay has used the North Warning System helicopter on several occasions. Sabina donated refurbished laptops to the SAR Committees in Kugluktuk, Gjoa Haven, Taloyoak, and Kugaaruk.

- Moving forward, how might we better leverage private industry resources during SAR operations?
- How can we build relationships with the private sector that might foster more financial or logistical support?

Mental Health and Trauma Counseling

"When we go out on searches, we know the people. They are friends even family. It can be hard," one community responder explained. In certain incidents, members of community SAR organizations have been asked to assist the RCMP with body recovery. All of this can have an impact on the mental health of community responders.

- Are there mechanisms in place to provide mental health support/services to people involved in searches?
- Do community groups practice any de-briefing on their own initiative?

Education / Preventative SAR

"Education is the key for search and rescue," one participant concluded. Community members must be educated on how to move and work on the land, and, if they do run into trouble, how to respond. Everyone identified a tremendous need to educate youth and young adults, and to get people from these demographics more involved in SAR.

- What preventative SAR programming does each community offer?
- How might we improve preventative SAR training and education at the community-level?
- How can we better engage youth in SAR?

By the end of the first session, participants had provided the Kitikmeot Roundtable with a significant list of issues and questions to address. Although many of these topics were discussed during the sessions the following day, time constraints meant that not all could be explored as thoroughly as participants would have hoped. Accordingly, these questions offer a foundation for future research, meetings, and discussions on Kitikmeot search and rescue.

Session 2
Nunavut's New SAR Training

The morning started with a presentation on the launch of Nunavut's revised GSAR training by Nunavut Emergency Management SAR specialist Mike Kendall. NEM listened to feedback from Nunavummiut and worked with Arctic Response Canada to "Nunavutize" the territory's basic and coordinator GSAR courses. Previous versions of the training program had been far too "southern focused" or involved too many components geared towards SAR practices below the treeline, with little emphasis on Nunavut-specific content. Kendall explained that the new courses that have been developed focus on the realities of SAR operations in Nunavut, consider the specific environmental and geographical characteristics of each community, and provide space for the incorporation of local, community-specific Inuit Qaujimajatuqangit. The courses also include a significant Garmin inReach component, given that these devices are intended to become a main tool used by Nunavut's GSAR teams. The basic GSAR course was first offered in January 2020 and is four days in length – two days in class and two days in the field. It also includes:

- The Nunavut GSAR Plan
- Jurisdiction
- Northern search team structures
- Overview of Northern Lost Person Behaviour
- Initial Response Tactics
- Search Tactics with a special emphasis on tracking
- GPS navigation
- Documentation

The coordinator-level course also includes a substantial GPS and inReach component, along with search coordination, administrative skills (report writing, invoice preparation), and instruction on how to work with territorial and federal departments and agencies.

"We've heard your concerns about the GSAR training. For too long the training has been 'southern based' – better for below the tree line. Learning how to build a lean-to using branches isn't going to help you very much [in Nunavut]. We agree. So we've been working to 'Nunavutize' the GSAR training. We've gathered input from community GSAR teams, from elders, from a wide array of knowledge holders, and have put a course together that will address many of the past issues – designed for Nunavut by Nunavummiut, that incorporates traditional knowledge. That said, you know, this is a work in progress. We've just started rolling the training out. Just had the first session in Iqaluit, but it's coming to Kugluktuk and Cambridge Bay in the next few weeks. You don't like something, tell us. You think something is missing, tell us. We have experts in every community and we have a lot to learn. We will build this thing together."

– Mike Kendall, Emergency Management Nunavut.

At the end of basic GSAR training, each GSAR team will receive a new GPS and inReach device. These tools are not just for SAR operations but can be used everyday by people while traveling or hunting on the land to record frequently travelled routes, which could prove useful during a search. NEM is also in the process of working with Nunavummiut, including elders, to produce set of "Go Bags" for each GSAR team. The NEM "Go Bags" include: sleeping bag, sleeping mat, water proof matches, single burner Colman stove, camp pot set, headlamp, signal mirror, tarps, snow knife, survival shovel, thermos, spare mittens, and hat. The "Go-Bags" offer each GSAR team ready-to-use basic necessities that they can quickly access during SAR operations, and which are intended to supplement their own equipment and resources. Kendall stressed that Nunavut's GSAR training program and the "Go Bags" would continue to evolve based on the feedback that NEM received from the real experts – the community responders themselves. He urged anyone at the Roundtable who has any suggestions or comments, particularly after they take part in the new training courses, to please contact NEM.

To end his presentation, Kendall highlighted that Nunavut Emergency Management personnel are on call 24/7, 365 days/year. At all times, they are ready to answer community questions, issue tasking numbers, support SAR operations, and coordinate with federal agencies.

Session 3
Working Together: Question and Answer (Q&A) with Nunavut Emergency Management, Canadian Coast Guard, and Canadian Armed Forces

At this point in the roundtable, community participants had the opportunity to ask any questions or table any concerns that they wished to address to their territorial and federal partners. This also provided participants with a chance to discuss some of the issues raised during the brainstorming session held the previous night. The participating territorial and federal partners included:

- Nunavut Emergency Management: Mike Kendall, Manager Emergency Response and Recovery
- Joint Task Force North: Captain Daniel Wilkinson, J9-Ops, Joint Task Force (North)
- Royal Canadian Air Force: Major Wesley Cromwell, Staff Officer Search and Rescue Readiness, 1 Canadian Air Division Headquarters
- Canadian Coast Guard: Chris Bianco, Mass Rescue Operations Officer, Arctic Region; Jay Collins, Deputy Superintendent SAR, Arctic Region; Darlene Langdon, Arctic Administrative Assistant, Canadian Coast Guard Auxiliary, Alana Swales, Canadian Coast Guard, Arctic Region

Question: Who can take the new training being offered by Nunavut Emergency Management?

- Answer: The GSAR training is available to anyone in the community. We want there to be many trained people in a community. We want elders to come out the course to share their knowledge and we want youth to come out to learn. We need more young people to be involved in GSAR, to expand our volunteer pool, so we want them to take the course. It will also teach people how to be safer on the land more generally, and how to use GPS and inReach. Keep an eye out for announcements from your SAR Committees and from the Nunavut Municipal Training Organization for when the training will be offered in your communities.

Question: Will we have to travel to take the GSAR training or will it be offered in our communities? What is the cycle for the training?

- Answer: NEM's hope is to offer the basic GSAR training in every community on a two-year cycle – so every two years a community would host the course. We would like to offer more training opportunities, but it is all funding dependent. Weather can also play a pretty big role in whether or not the trainers can get into the community. Since fewer people take the coordinator training course, we generally offer this at the regional level, so some travel is required.

Question: The GSAR training is helpful, but is there any way that we could bring in responders from adjacent communities so that we can learn from one another and practice with each other? Could we have Kitikmeot-wide training?

- Answer: Grouping communities together is a great suggestion and something that we will examine in the future. In some ways, the coordinators course does offer the opportunity for this kind of exchange – it brings together team leaders who can learn from one another.

Question: Obviously winter and summer searches are completely different. So are marine and ground searches. They pose different challenges. It seems like the new training is focused on winter GSAR training. Will other training be provided?

- Answer: While many of the skills you learn in a basic GSAR course will be useful in all situations, summer and winter SAR operations are very different. We see the need to train community GSAR teams in winter operations as more pressing, which is why we have prepared and rolled out this

course first. We are working on rolling out summer SAR training in the future. As far as marine SAR is concerned, the Coast Guard is expanding its efforts to provide training to the communities and to establish more Coast Guard Auxiliary units.

Question: A couple of years ago during a search we tried to call Nunavut Emergency Management to arrange a tasking and get support, but no one picked up our call. What happened? Several participants noted that it could take between 3-4 hours to get a tasking number from NEM before. Why does it take so long?

- Answer: NEM staff are on call 24/7, so this situation should not have occurred. The NEM office in Iqaluit will have to investigate this particular case. We are on call and work to respond immediately to any request for assistance. Tasking numbers are provided as quickly as possible. This question highlights the need to have clear and accessible contact information – we have to ensure that every GSAR team has the correct phone number to call.

Question: Can the "Go Bags" being developed by Nunavut Emergency Management include traditional tools?

- Answer: The NEM "Go Bags" were developed by Nunavummiut for Nunavummiut. We consulted with elders and other community responders. We are still looking for input, however, about what should be included. GSAR teams and SAR Committees should also consider supplementing what is in the bags with their own materials and supplies, such as traditional tools that reflect local traditional knowledge.

Question: How can community-based groups access any local helicopters as quickly as possible? How can they order in aircraft support from another community? This needs to happen quickly because it is a life or death situation. Cambridge Bay can get a helicopter from Raytheon very quickly, but process slowed down by the need to wait for approval.

- Answer: Community GSAR teams are the first response and they decide whether to make a request for air support. This request can come from the community's SAR coordinator or the community council. Requests can be made verbally, but need to include details on the missing person, length of time missing, weather conditions, survival equipment possessed by the missing person, justification for the request, and community responders who can serve as spotters (the request is later followed up in writing). When a search is ongoing, we are usually already sourcing out potential local aircraft to provide support, but we wait for the request from the community. If we cannot locate local air support, then we ask the military for assistance. It can be very difficult to track down aircraft to support a search – they might be unavailable, but sometimes we do not know who to call, what the up-to-date phone number is. As for the speed with which all of this occurs, it can take some time. Almost every search, NEM gets requests for air support, but we simply cannot afford that – so NEM does have to consider weather conditions, the need for an aircraft considering the age and resources available to the missing person or group, the length of

time the search has been going on. All of this must go up the chain of command for the necessary approvals.

Question: How can GSAR teams, Coast Guard Auxiliary units, and Canadian Rangers help the Joint Rescue Coordination Centres to do their jobs?

- Answer: The biggest thing that community groups can do during a search that involves Canadian Coast Guard or Canadian Armed Forces assets is provide a steady stream of accurate information. Anything you can tell us about the missing person, where they hunt, their proficiency on the land, and their equipment, is absolutely vital. Any information on local geographical and environmental conditions is also vital, as is where a search might begin. Community groups should pass along whatever information they think is important to the JRCC – these personnel can than filter the intelligence. This is also where SAR coordinators can be so valuable – having one individual collecting and sharing all of this information, having one main point of contact at the community-level to keep things clear and organized is very helpful. More generally, anything that community-based SAR organizations can do to prevent the need for SAR would be beneficial. Prevention is still the best tool to save lives.

Question: Can those searching on the ground be in direct contact with the military aircraft used in a search? Can we talk directly to the Hercules pilots? What if our radios are not compatible?

- Answer: This kind of direct contact between the searchers on the ground and the pilots in the sky can be essential during a search. If the radios carried by each are not interoperable, the Hercules can always drop a radio to the searchers to enable this communication.

Question: Sometimes when a CAF plane assists in a local search it does not land in the community to pick up CASARA spotters. These spotters have a lot of helpful information and they have been trained as spotters. Can JRCC Trenton ensure that these spotters are used in future searches?

- Answer: This is valuable information to feed back to the JRCC. CASARA spotters can play a valuable role in searches and should be used if possible and if required.

Question: What resources can federal agencies deploy into the Kitikmeot to support community SAR operations and larger Mass Rescue Operations?

- Answer: The Coast Guard has its icebreakers and ship-borne helicopters in Canada's Arctic waters when they are open in the summer months, and the length of this deployment has recently been increased.

- CAF assets are tasked to respond to about 1000 SAR missions every year. CAF SAR crews are on standby 24 hours a day, 7 days a week. The backbone of the program are the 140 SAR Techs that respond to people in distress in hard-to-reach places, extract them, and provide advanced medical care. The CAF has a significant response capability for SAR response and for larger Mass Rescue Operations. You are all familiar with the Hercules, which often deploys for Northern SAR operations, and with 440 Squadron's Twin Otters. With the Hercules, we can deploy to the Kitikmeot in about 5 hours. The CC-295 is also in the process of coming online. The CH-149 Cormorant and CH-146 Griffon helicopters can also be deployed to the North for SAR. In case of a marine or air disaster, the CAF could deploy the Major Air Disaster (MAJAID) kit, which is rigged to be transported in a Hercules. If the situation called for it, we could also quickly deploy an Arctic Response Company Group, to provide additional support.





Photos of MAJAID Kit deployment during Operation NANOOK-Exercise READY SOTERIA 2018. From Richard Lawrence, "OPERATION NANOOK - EXERCISE SOTERIA (MAJOR AIR DISASTER - MAJAID)," Esprit de Corps, 11 October 2018, http://espritdecorps.ca/richard-lawrence/operation-nanook-exercise-soteria-major-air-disaster-majaid

- The CAF's SAR aircraft can also drop supplies, clothing, shelter, and equipment to people who are in distress on the land. The CAF has sets of arctic clothing, for instance, that it is always ready to be air-dropped to those who might require it.

The MAJAID Kit

The CAF's MAJAID kit is on standby 24/7 365 days a year. While MAJAID is short for Major Air Disaster, the kit is intended to serve as rapid response to any disaster or emergency that demands the swift deployment of survival supplies. The kit can support up to 320 people for 72 hours.

The kit is permanently stored on pallets designed to be loaded into a CC-130J Hercules or CC-177 Globemaster transport aircraft and parachuted on the scene of a disaster. When deployed, the kit is accompanied by SAR Techs and a security team to provide predator control. These teams carry with them 24 hours of personal supplies. The kit consists of tents, sleeping bags, clothing, medical supplies, heaters, generators, water, rations, and several Argos (all terrain vehicles).

During Operation NANOOK 2014, the MAJAID kit was airdropped for the first time in the Canadian Arctic. The scenario simulated a 50-passenger cruise ship grounding due to mechanical issues in York Sound, on the south shore of Frobisher Bay, Baffin Island. The exercise included twelve CAF members who parachuted onto the scene to unpack the kit and establish a functional camp.

The CAF again tested the MAJAID Kit in the North during Operation NANOOK-Exercise READY SOTERIA 2018 near Yellowknife. The exercise simulated a major air disaster on Banks Island, NWT, involving 199 people on board.

As observer Richard Lawrence noted: "BGen. Anderson [then Deputy Chief of Staff – CJOC], talked about some of the take-aways from this exercise with his first comment regarding the amount of time it takes to reset the MAJAID Kit once it has been deployed. In short, it takes 90 days before the MAJAID Kit can be used again and should another disaster occur during that period, the kit is not available. The easiest fix to this is to have a second MAJAID Kit ready to go. As well, the tactical operators are looking at the kit during this exercise to make sure its components are appropriate to the job, especially if the CAF is going to purchase a backup kit."

See Department of National Defence, "Operation Nanook," https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-nanook.html Richard Lawrence, "OPERATION NANOOK - EXERCISE SOTERIA (MAJOR AIR DISASTER - MAJAID)," *Esprit de Corps*, 11 October 2018, http://espritdecorps.ca/richard-lawrence/operation-nanook-exercise-soteria-major-air-disaster-majaid

Question: How can we return that expensive equipment (dropped radios) to you in a timely manner?

- Answer: When we drop equipment during a SAR operation, we operate under the assumption that it will not be returned in a timely manner, if at all. As we drop equipment, we are already in the process of replacing these materials and getting ready for a future drop.

Question: Is there a common database that stores the information from every previous search, including where they occurred, who they involved, and how the searches went?

- Answer: There are territorial and federal databases that track this information.
- Comment: "Who goes through these reports to identify past problems and possible solutions? Would it be possible to share this information with community SAR group? This information could be very helpful, but it is not provided to the communities."

Comment: "The Taloyoak Ranger Patrol has taken part in many SAR operations around the community, with Kugaaruk, and Gjoa Haven. Rangers called up when there are not enough volunteers or the search goes long. They should be involved in SAR discussions. Sometimes it takes too long for the Rangers to be activated in SAR situations. It is a very confusing process and sometimes people don't seem to know how it works. This slows everything down and when someone's life is in danger, it doesn't make sense. The Rangers can make a big difference and search and rescue. We are organized and trained. We know how to work together. It should be made easier to use us."

Comment: "What is expected of community GSAR crews when someone walks angrily away from a community needs to be clarified? This shouldn't be a SAR role. Perhaps we need to learn how to work with the RCMP more in cases like this."

Comment: "It can take hours for the Coast Guard to reach an area during a marine search. This can be too long. More Coast Guard ships should be located in the Kitikmeot during the summer, maybe have them stationed in Cambridge Bay. Maybe there are other solutions to improve response times."

Comment: "During one search, we knew that we required an emergency medical response. We had a tasking number already. Weather did not permit the air force to respond, we couldn't get to the area by ATV, so we needed to the send the Auxiliary. The same tasking number could no longer be used, it couldn't be transferred between NEM and the Coast Guard. Getting a new tasking number took time. All of this was confusing and seems unnecessary."

KITIKMEOT
SEARCH AND RESCUE

Session 4
Sharing Best Practices, Discussing Lessons Learned, and Talking About Challenges

Sharing best practices, discussing lessons learned, and talking about challenges lay at the heart of the entire roundtable. At this point, roundtable participants broke into smaller groups with representatives from each community to facilitate the sharing of best practices, challenges, and solutions. Many of the conversations delved more deeply into some of the questions asked in the previous session. Federal and territorial officials distributed themselves evenly between the tables. After a working lunch, the roundtable re-convened and groups shared some of their key findings.

The organizers placed someone in each group to facilitate and record the discussions. The following provides a summary of the ideas and suggestions that emerged from each small-group and from the general roundtable conversation that followed.

Challenges

Lack of Equipment: During community GSAR operations, responders have to use their own snow machines, all-terrain vehicles, and other personal equipment. Often times, searchers have to go out on rough terrain and ice. At one point last spring, one community SAR Committee had only two members capable of responding. Having reliable equipment is essential in ensuring rapid and effective responses. In the past, the Government of Nunavut has donated surplus equipment to select community SAR organizations, but these contributions have been rare.

One community participant explained: “The federal government just gave the Coast Guard Auxiliary units in the Kitikmeot brand new SAR boats and equipment, at a cost well over $200,000 a piece. That’s great program. I’m a member of the Auxiliary and it has had a huge impact. But, what about GSAR? If the reason for the new boats is that communities don’t always have safe equipment, that more outside boats are coming in, that more marine SARs will happen, couldn’t the same be said about GSAR? What about those Norwegian tourists between Cam Bay and Gjoa? Volunteer GSAR rescued them. What if they had died out there on the ice – that would not be a good result for Canada. We have to stop treating the ice differently than the water. What I’m saying is that if the Coast Guard can buy new boats for the Auxiliary, can’t the feds provide funding for GSAR equipment, so we don’t use our own?”

Some participants suggested that each GSAR team should be provided with at least two snowmachines and ATVs that can be stored in a SAR building and would be ready when they are required – just like an Auxiliary boat.

Several community participants disagreed, however, saying they would never trust an untested, random snowmachine, chosen by the territorial or federal government, to take out on the land. They know that they could trust their own equipment. Instead, they suggested an equipment fund that SAR teams could draw upon to improve or safety their own machines.

Need a Community Boat for Marine SAR: Prior to the establishment of the Gjoa Haven Coast Guard Auxiliary and the delivery of their boat under the Indigenous Community Boat Volunteer Program, the community struggled to respond to marine searches. During one search, the SAR Committee sent a personal vessel out that did not have a functional steering wheel. Kugaaruk and Taloyoak continue to face this problem – they currently have no Coast Guard Auxiliary and finding a suitable vessel for marine SAR can be challenging.

Training Time: For volunteers with jobs and families, it can be difficult to get the time off required to complete training. Many people have to use their holidays to participate in SAR training. It would be great to have the chance to train and practice as a group, even beyond the basic training offered by NEM or the Coast Guard, but this often proves impossible. The overall effectiveness of SAR operations would be strengthened if the members of community groups had more opportunity to train with each other and if exercises could be held between the organizations in a community. Community GSAR teams and Coast Guard Auxiliaries should have the opportunity to train and practice with one another. Groups should also share their training schedules to maximize the amount of people who receive the training. For example, if someone is coming in to provide Wilderness First Aid training to the Rangers, the other community groups should be invited.

Recruitment: In many of the communities, finding enough volunteers can be a challenge. As a result, the same people are on call all the time and the same small group of people respond to all of the searches. This is unsustainable and can lead to burnout and ineffectiveness. The Gjoa Haven Coast Guard Auxiliary unit was hoping to recruit 20 people, but this has proven difficult. As it stands, the same people will be on call for most of the summer, which will hinder their ability to get on the land and hunt and fish for their families. Across the communities, it is a challenge to get young adults engaged in SAR. Even those who are interested might not have adequate on the land experience/skills or suitable equipment. As one participant noted: “This is the real challenge, getting people involved. If we had more volunteers, we would have more people willing to respond. It would take the burden off. It might even encourage people to train more together if the burden was spread around a bit more. We need people who are willing to put the time in and learn how to do SAR. But we have no incentives, no perks, except that you are saving peoples lives.” Roundtable participants also highlighted that community groups do not only require volunteers who can go out on the land, they also need people who can handle the administrative and community side of a search.

Burnout: Searches are not easy. Maintaining a SAR team is not easy. SAR Committees have regular meetings, organize fundraisers, and have to take care of all the administrative work that is required to maintain non-profit society status. During a search, GSAR members might have to organize searchers, get the message out, gather more volunteers, inform the RCMP and/or hamlet, gather information, communicate to the community, go on the radio, get groceries, gas, and supplies – and all of this does not even include searching on the land, often in challenging conditions. The heavy workload, combined with the lack of volunteers and the fact that missing persons are often friends and family, leads to burn out. "All of it is very stressful, very tiring," one participant explained. "When you have two dozen searches a year, it takes so much out of you. It's easy to get exhausted. Sometimes you want to quit. Sometimes you are searching for people you love. Sometimes you don't find them or find them too late. It's all hard."

Communication and Coordination: Community groups need to be able to communicate and coordinate with one another at the community-level, but also with territorial and federal responders. Coast Guard Auxiliary, GSAR, Rangers, CASARA, and other groups in the community need to be able to work together as effectively as possible. Without the opportunity for joint training and exercises, however, this is difficult. "Because people in these groups often know one another and there is usually a lot of crossover between them with all the hats people wear, there might be an idea that they can work together no problem," one participant noted. "But in an emergency, when groups have different ways of communicating, different ways of doing things, different mandates from the South, we can quickly run into trouble. We need to practice cooperating. We need to practice working together. And it's not just SAR – think about helpful this would be during other emergencies that we might face in the community." Opportunities to practice more with southern organizations, particularly the JRCC, would be helpful. It can be a challenge for some community responders to speak effectively to the JRCC and to understand southern SAR partners more generally, given specialized jargon (particularly with the military). More community responders need to be taught how to effectively communicate over radio.

C**hanges to Supporting Agencies:** Changes in the staffing at Nunavut Emergency Management, Canadian Coast Guard, and other southern agencies means that when you are able to develop a good relationship with an individual contact, it might not last long. Constantly dealing with new people – whether trainers, administrators, or those involved in SAR missions – disrupts continuity and can inhibit SAR operations.

Uncoordinated Responders: Sometimes friends and family of missing people will go out to search without consulting with the community SAR organizations, and will not relay where or how they are searching. It is good that they want to go out – especially in the early stages before NEM launches an official public search. However, constant communication and coordination between everyone involved is essential. People going out on their own, without communicating their plans, wastes time and effort. When SAR teams conduct their searches, they also have to worry about untrained people also searching who might themselves require assistance on the land. "We need to educate community members on the

dangers of this and how they can help from inside the community," one participant emphasized. "We don't want to have to rescue the rescuers." If community SAR organizations put out the call for additional volunteers, all responders must be prepared to work as a group and follow direction.

Social Media: Facebook and other forms of social media can be helpful – they can provide information about missing persons and provide a platform to share tips about where to look for them. At the same time, social media often leads to the spread of false information – both about missing persons and about the efforts of community searchers. Social media can also be a source of criticism for community SAR responders, which can have a devastating impact on morale.

Unprepared People: Unprepared people going out on the land pose one of the biggest challenges to the SAR system in the Kitikmeot. Some people will leave a community to travel or go hunting without shelter, rations, emergency kits, or additional fuel. Some people have a mindset that they are only going 60 kilometres from home so they do not need to take anything with them. This is "a recipe for disaster." Many searches could have been avoided if people had been better prepared. One participant asked, "Should people who simply run out of gas receive GSAR assistance? This happens a lot. We have to respond, but it can be frustrating." These issues are compounded by a general loss of traditional knowledge amongst younger generations of community members.

Visitors and Newcomers: "Everyone thinks they are an explorer when they come up to our communities," one participant noted. "This can lead to trouble." Community responders worry about newcomers who go out the land – whether on foot or on snowmachines – without knowing the dangers or how to survive. "There should be some training or at least warning provided to new teachers, or RCMP, or whoever, to let them know how to be safe or to say, maybe avoid these areas." Even more concerning are the growing number of tourists and adventurers coming to the Kitikmeot – like the Norwegian (mentioned earlier in this report) who got into trouble on their journey between Cambridge Bay and Gjoa Haven. These tourists represent an additional burden on an already overburdened SAR system. Tourists could alleviate much of the danger by hiring local guides. If tourist groups go out on the land, they should be asked to compensate the community SAR responders upon whom they depend if they are lost or in need of rescue.

Lack of Support and Trust: Community members do not always trust the SAR Committee or GSAR teams, and sometimes they can be very critical of the volunteers. People often blame community responders when a search is unsuccessful or something goes wrong. This has a significant negative impact on morale.

Fundraising: Communities are generous and provide significant funding and support to community SAR organizations. In communities with high rates of SAR operations, however, funds raised through bingos

and community dinners can be insufficient to cover costs. It is difficult for community SAR organizations to identify different funding opportunities, let along apply for them.

Private Resources: Private industry can be a source of aerial support during community searches and can donate funds and equipment to community SAR organizations. It can be difficult, however, to form the relationships required to facilitate this kind of resource sharing.

Who knows what?: Participants emphasized that it would be highly beneficial to track who has what training in a community. Community groups often struggle to track the competencies of their own members. Furthermore, a GSAR team would benefit from knowing who in the Rangers has current training in competencies like wilderness first aid and airstrip construction, or who in the Coast Guard Auxiliary has radio operator training.

Southern mandates: At times, searchers have been frustrated with the JRCC for not allowing them to go on a search owing to poor weather conditions. Community participants insisted that if they know they can go out on the land safely, based on their knowledge and assessment of local conditions, they should be allowed to do so. Participants also expressed concern about the mandate of the Canadian Coast Guard Auxiliary, which is focused on marine SAR. What about hunters or fishers who go up the shoreline on ATVs and go missing? Would the Auxiliary be allowed to respond to this kind of search? What if it is faster to make it to a ground search location via boat – could the Auxiliary be tasked? The national guidelines for the CCG Auxiliary say that units may use patrols for placing a suitable response closer to where it is likely to be needed, as well as for searching for persons/vessels that might be in difficulty but did not communicate a distress alert. What kind of leeway do auxiliary units have for this kind of preventative action? Could an Auxiliary unit and boat, for instance, pre-deploy to a popular fishing or hunting spot during the busiest period to be closer if it needed to respond to potential emergencies?

Mental health: Searchers in Northern communities are usually family, friends, or acquaintances with the people for whom they are looking. This makes searching incredibly stressful. Searchers have found missing people who have died from accidents and the elements, and whose bodies are in poor condition. In certain incidents, members of community SAR organizations have been asked to assist the RCMP with body recovery. These situations are very traumatic. Searchers have little to no access to trauma counselling or mental health supports after they complete a search.

Dedicated SAR Buildings: A participant from Kugaaruk explained that, “during a search, we often have to run back and forth between different places gathering food and supplies, getting fuel, coordinating volunteers, and getting ready. This can take a lot of time, which we do not have during a search. It can also mean we forget important things. Having a building with storage and an office for a command centre or even just a seacan in which to store our supplies would be very helpful. That way we could all just meet at the building, get our supplies, and take-off. Maybe we could even store military rations in the

building, which we can take right away during a search. All of this would save time." Many participants highlighted the need for a common SAR building which could be used by GSAR and Auxiliary groups for equipment, supplies, training, and meetings.

Administration: The administrative side of community SAR organizations is a challenge. NEM provides financial support to assist GSAR teams and SAR Committees with the annual costs associated with maintaining readiness and fundraising activities for their organization. To receive this funding, however, NEM must receive proof from Nunavut's Legal Registries that the community SAR organization is registered as a non-profit society and has provided annual financial statements. The organization must also provide a detailed budget outlining anticipated expenditures and revenues, as well as a schedule of activities for the year. It can be difficult for community SAR organizations to maintain their good standing with the Territory's Registrar of Societies because they struggle to meet the reporting requirements set by the Government of Nunavut. This, in turn, makes them ineligible for government funding. The administrative burden is also heavy during and after a search: summarizing expenditures with supporting receipts, reporting on the status of any equipment provided by NEM, reporting on damages to any personal equipment, along with completing all of the actual search paperwork. The amount of administrative work can be overwhelming.

> "My community doesn't have enough satellite phones, or a place to keep equipment, or enough equipment. I've been living in here for 20 years, have had lack of ATV, boats, snowmobiles, skidoos, equipment and volunteers for years. We need help. SAR always running out of money. Fundraising can't get enough. Me and my husband are the only ones who try to find volunteers to search for others, and it can be hard sometimes. In the old days, they didn't wait for anything, not tasking number or anything, they just went. Now we need to buy things, we need paperwork and it's too time consuming when lives are on the line. These are our families. Every minute, every second is precious when someone is in danger."
>
> - Community Participant, Kitikmeot Roundtable on SAR.

Best Practices and Lessons Learned

The Benefits of Hamlet Office Support: Cambridge Bay SAR organizations receive generous support from the community's Assistant Senior Administrative Officer Jim MacEachern, who also manages the hamlet's SAR command post during searches. MacEachern helps with the organization and administrative side of a search, coordinates the response, and acts as a conduit for information sharing and communication between the GSAR team, the RCMP, and other agencies. He calls NEM for a tasking number, pays for gas and distributes it to the searchers, and takes care of all reimbursements. He fills out damaged equipment forms and facilitates compensation. Even though this is not technically part of his job description as Assistant SAO, MacEachern has been involved in SAR for years and considers it one of his

essential roles. “Before Jim there was no one to help us,” one participant noted. MacEachern’s involvement allows the GSAR coordinators and Auxiliary unit leaders in Cambridge Bay to focus on getting their teams ready to respond and alleviates much of the administrative burden. In short, this example shows how a hamlet office can be an important source of assistance during and after a search; accordingly, it should be integrated in community SAR plans.



Well-Trained and Experienced Coordinators and Unit Leaders: SAR coordinators and Coast Guard Auxiliary unit leaders play an essential role in preparing their teams and executing community searches. These leaders must:

- facilitate training opportunities for their teams
- sustain relationships with the Hunters and Trappers Organization, the RCMP, and other local groups
- ensure that SAR volunteers are on standby at all times, and ready to participate in a search if required
- contact all individuals who might be involved with a search at the community level
- facilitate the gathering of information about missing persons, and working with their family members
- organize SAR teams and get them ready to deploy
- organize the purchase of supplies and fuel for the SAR teams
- ensure that proper procedures are followed
- liaise with the Coast Guard/JRCC or with Nunavut Emergency Management

Given these responsibilities, each community should have multiple coordinators and unit leaders. If a search occurs over an extended period of time, a community will require multiple coordinators. In cases where a coordinator is closely related (a family member or friend) to the person who is missing, additional coordinators should be available and able to take over a mission.

Clear Plans and Procedures: In a search, fast action is essential. To achieve this, everyone must have a clear understanding and grasp of their responsibilities. Community SAR organizations need to have clear plans and procedures that lay out the steps taken during a search, complete with the contact information of all individuals and agencies involved. When visiting communities, NEM could work with the SAR teams to ensure that this information is in place and up to date.

Organizing and Executing Searches: Clear organization and procedures are essential during searches. Although each community executes searches a little differently, there is a great deal of overlap.

- Cambridge Bay GSAR has 10-12 members who are always ready and willing to go out on searches. The team has two four-man groups on standby with another two four-man groups that can be called upon quickly. Cambridge Bay also has a pool of trained guides, all of whom have extensive experience on the land, wilderness first aid training, and are well-equipped. These guides represent a tremendous resource during searches. If a search is extending and/or expanding and the core GSAR team requires support, they turn to the guides first. After that, the team will put a call out for community volunteers. In 2019, Cambridge Bay GSAR conducted two large-scale searches that involved over fifty volunteers.

- When executing searches, Cambridge Bay GSAR always deploys in pairs, never sending out solo searchers. Generally, each pair will take an inReach device with it. In each pair, one searcher is responsible for keeping track of the time and for checking in with the SAR command post, which allows the other to remain completely focused on looking for tracks or other signs of the missing person. When a search occurs farther from the community, the GSAR team will establish base



InReach devices are “a SAR game changer. They are the Connor McDavid of searches.”

camps as required, which allows searchers to resupply and refuel without having to return all the way to the community. Searches are orchestrated and supported from a command centre set up in the hamlet office. Due to the support provided by the hamlet office in Cambridge Bay, the SAR coordinators can focus on organizing the search and working with community members.

- The inReach devices are "a SAR game changer," one participant described. "They are the Connor McDavid of searches." In the field, they provide access to weather forecasts, instant messaging, and "all the tracking capabilities that a searcher needs." With each pair of searchers using an inReach device, people at the command post in the community can use laptops to keep track of where all the teams are operating and where they have searched. They also can remain in constant communication via messaging. Information received from searchers can be relayed back to NEM or JRCC. Community members could log onto the search to allow them to track it, or it could be shared on Facebook.

- Most of the GSAR teams in the Kitikmeot deploy their searchers in pairs, with at least one GPS per pair. There have been examples in the past, however, a lack of volunteers and time constraints have led searchers to go out by themselves. This practice must be avoided.

- Whenever possible, a GSAR pair should be kept together for training or performing a search. A new member should be paired up with an elder or an experienced searcher so that they can learn from them. Eventually, the member will be in a position to pass along all the knowledge that they have learned to another recruit. Participation in GSAR teams also represents a valuable way to transmit traditional knowledge between generations.

- Several community participants highlighted the need to have clearly-defined SAR roles for each person on the SAR Committee/GSAR team, highlighting the need for ICS training. Everyone should know what they have to do to prepare for a search and to complete their tasks immediately (e.g. buying food, checking the weather, preparing a kamotik, getting information from the missing person's family). The SAR coordinator should not do all of the preparation work by him/herself. It should be split up amongst the team. If each team member has a clearly-defined role, they can also train new SAR members in that role to ensure that there is always a replacement if any member is unable to participate.

Contact with NEM/JRCC/CAF/Coast Guard Responders: During a search, community SAR organizations should remain in close contact with Nunavut Emergency Management and with the southern organizations responsible for SAR. It is essential that community searchers know how to talk with NEM or the JRCC, including an awareness of the information that they need to share and how to relay that information effectively. Community searchers need to share as much as possible about popular routes to help narrow down search parameters.

The Benefits of Coast Guard Auxiliary Training: In the last few years, the Canadian Coast Guard has visited communities every summer to provide in-community training. It has also hosted annual meetings in Yellowknife. This has had a positive impact in terms of SAR capabilities and relationship-building. The Coast Guard has adopted a train-the-trainer approach, which has allowed Nunavummiut Auxiliarists to take over some of the training responsibilities in their own units. The Coast Guard has also sent them to other communities to provide training.

- In particular, the Auxiliarists found the radio operator course to be very useful. The ability to "speak the same language" as potential partners on a SAR mission provided members with a boost of confidence.
- Several people explained the value of the towing training that they had received. Shortly after completing this training in Cambridge Bay, a member from Gjoa Haven was able to successfully tow a 31-foot research vessel back to the community with his 19-foot boat. He expressed that he did not think he would have been able to do this successfully without the training that he received from the Coast Guard.
- Several members commented that it might be beneficial to move all of the training into the Kitikmeot communities. Training in their communities, or even in a regional hub like Cambridge Bay, might allow for wider participation and would allow them to gain experience in waters similar to those in which they actually operate.

Lessons Learned: "When we have taken the time to talk about searches, and how they have gone, we've learned a lot," one participant summarized. Whenever possible the results of a search should be analyzed: Where did it occur? What challenges were encountered? Solutions? How could we operate better? Every part of the Arctic SAR system needs to improve how it turns lessons observed into lessons learned.

Role for RCMP: The involvement of the RCMP in SAR differs across the Kitikmeot communities, but there are benefits to involvement. Sergeant Jas Dilbar of the Cambridge Bay RCMP noted that her unit does not go out on the land for searches but does help wherever possible in the community. When she first arrived in the community, she realized that the hamlet and community groups had SAR well in hand. She simply observed the first couple of SAR operations to figure out what roles the RCMP could take on. The RCMP can help with communication and coordination at the community-level, and they can keep families informed so that SAR coordinators can focus on other aspects of the operation.

Education and Prevention: "Education and prevention are vital," a participant emphasized. "This should be a big part of what we do…With climate change and bad ice, machines are getting damaged and more people are getting hurt and getting lost. Even with the most experienced people things happen. If people know how to survive they can. They just need the knowledge and education."

Roundtable participants highlighted the need to start teaching community members how to survive on the land at an early age. The more traditional skills and SAR training that can be provided in the elementary

and high schools, the less strain for a community's SAR system. One participant noted that he had the chance to do a survival skills course when he was in high school, but that this is no longer in the curriculum. "On the land survival skills should be part of the school curriculum and everyone should have to pass."

Kugluktuk's GSAR coordinator and unit leader Jack Himiak highlighted the success that his organization had with prevention and education. Members of his team visit the schools and talk to youth whenever they can. They explain to students what they need when they go out on the water or on the land. They tell them what to look out for and be aware of when they are out. They also teach the kids to observe who is leaving the community, to track the direction they are going, and to note the equipment that they are taking with them. In one SAR case, two kids had watched their uncles go out on the land, so they reported to the GSAR team what their relatives were wearing, driving, and where they were going. Himiak also emphasized the value of a sign that the GSAR team put up at the community's gas station – which is usually the last place people go before they head out on the land. The sign tells people to be prepared, to complete a trip plan, be aware of ice and weather conditions, take emergency supplies, and, if they become lost, to "stop, sit, think, observe, plan," and not leave their machines.

The Kugluktuk Ranger patrol is also active in educating and preparing youth through the Junior Canadian Ranger program. They teach the JCRs traditional skills and even have them participate in SAR exercises. All of the communities except for Cambridge Bay (which has a cadet corps) have JCR patrols, and the roundtable participants all highlighted the benefits the youth program in transmitting traditional skills and teaching youth to be prepared when they go on the land. The adult committees in each community, which oversee JCR activities, should include Rangers, GSAR members, and Coast Guard Auxiliary.



Participants also suggested that community Hunters and Trappers Organizations (HTOs) and Nunavut Emergency Management have to publicize their SPOT programs more extensively so that community members know that they can borrow these devices free of charge. If people have these devices with them on the land, they can more readily "take the search out of SAR."

Newcomers to the communities should have to go out on the land with an elder. In turn, the elder should be empowered to determine if these people are prepared to go out on their own in the future.

Participants also recommended that the Kitikmeot SAR community should create a website where they can share training videos in which elders and experienced community members explain how to travel and work safely on the land. Particularly important are videos that show people how to prepare and what to include in an emergency kit/action packer – and how to use these materials if required (e.g. two-burner primer stoves, cooking set, lantern, two different sizes of tarps, snow knife, survival blanket, and snow fleece blankets).

Community SAR organizations need to provide consistent messaging about preparation. "It's all about persistence," one participant explained. "We have to keep on telling people every chance we get, on Facebook [and] on the community radio."

Additional Best Practices:

- Any gas and food requisitioned but not used during a search should be provided to volunteers as a modest way of thanking them for their work.

- Searchers must know who they are looking for. Searchers often know the people they are looking for, but not all the personal details. The members of the SAR Committee who stay in the community need to gather as much information as possible. For instance, during a search, one community's GSAR team found out that the missing person was a diabetic and brought candy with them to increase his blood sugar in case it was low.

- After every search there should be a sharing circle led by the elders. This allows for debriefing and critical incident stress management.

- There should be community meetings put on after every successful search to celebrate, share lessons learned, and educate community members.

George Angohiatok, Cambridge Bay GSAR: "I have a lot of experience doing searches. I've been involved in GSAR for decades. I got my education on the land from my father, grandfather, and other elders. I was 12 years old when I went out by myself for the first time. I was 14 years old when I went on my first search. Everyone needs to know how to read a trail, how to identify what type of machine is used. This will let them know who has been lost. Everyone needs to pay attention. Needs to learn how friends act on the land. Needs to know their skill level, if they are able to make it home on their own. When people go out, we have to pay attention to what they are wearing, what they are bringing with them. This is everyone's responsibility. This kind of information is important during a search. One time in the 1980s, I found a guy who had a snow knife, but who didn't know how to use the snow knife to build a snow house. After this, I convinced the hamlet to offer a day-long survival course for the community. We need to educate people. We need to keep on training them. We need to educate the community – this will deal with the problem before it becomes a problem. And we need to learn how people act on the land."

Sgt. Roger Hitkolok, Canadian Rangers, Kugluktuk GSAR, and Coast Guard Auxiliary: "Me and Jack [Himiak] started up a GSAR team in Kugluktuk and we have been working at it ever since. It's a lot of work, but the community needs it. I usually start a search at a person's house, so that I can learn their tracks and be able to recognize them on the land. It's really important to know the tracks. People should pay attention to the tracks left by their family and friends. I've been on searches where the people didn't bring anything with them on the land. Not even a tent. People who go out prepared can still lose their way in a storm. People can lose their heads during bad weather or when they get lost. People go into shock. People will leave their machines, which they should never do. We have to teach people how to stay calm on the land. What to do if they run into trouble."

Throughout this session, people emphasized that there is no one-size-fits-all approach to SAR in the Kitikmeot communities. Cambridge Bay, for instance, has far different resources and a much larger volunteer pool than the other communities. Nevertheless, the lessons recorded above are widely applicable and should be relevant to SAR teams across the Canadian North.

KITIKMEOT
SEARCH AND RESCUE

Session 5
Improving the SAR System: What do you need? What would you like?

During this session, participants were encouraged to think about the equipment, training, organization, relationships, and other assets that a community-based organization requires to carry out the various SAR missions that it might be assigned. Participants were then asked to reflect on what they would like to have, particularly in terms of equipment, if they had an unlimited budget.

All participants agreed that the Roundtable had been very beneficial and should be a permanent part of the Kitikmeot SAR system, with one such event held every two years. Participants welcomed the opportunity to share ideas and challenges, and to discuss recurring issues and possible solutions

with local, regional, territorial, and federal partners. Many of the participants had suggestions on how to improve the Roundtable, provided more funding could be secured: extend the length so there is more time for discussion; provide translators in both Inuinnaqtun and Inuktitut throughout the entire meeting; create opportunities for the on-the-land learning with elders; invite representatives from private industry; and ensure that members of each hamlet office attend.

After discussing the benefits of the Roundtable, the group came up with the following 'wish list':

- Every community should have a list of basic procedures for what to do during a search, including all contact information for territorial and federal partners. They can work through this like a checklist before, during, and after a search.
- Every community should have a database that lists the skills and competencies of everyone involved in their SAR and emergency management organizations. Keeping such a database current should be a key part of the community emergency plan.
- Create memorandums of understanding between community groups and the RCMP for use of snowmachines and other equipment.
- Increase the coordination and cooperation between community groups. The different community-based SAR organizations should meet regularly and create a common training schedule. If one group is going to receive first aid training, they should open the training to members of all of the different groups whenever possible. Equipment could be shared between groups. Furthermore, community groups should have opportunities to train and exercise with each other.
- Municipal, territorial, and federal governments should provide time off, with pay, to allow their employees to pursue training opportunities. This recommendation reflects the high number of community responders who are employed by the municipal, territorial, and federal governments.

- Think of incentives to encourage people to volunteer for SAR and participate in training. Ideas for incentives included: a small annual cash bonus, equipment and gear, and Nunavut or Kitikmeot SAR clothing and gear ("everyone loves swag!").
- Community groups should have access to lessons learned from previous searches. This should include maps of where previous searches have occurred over the last decade. These learning materials will help community organizations to train and better prepare for SAR missions.
- Large SAR maps should be given to community groups to help plan and execute searches. These maps should be of different scales, some focused on the 100 km around each community, and others covering the area between communities. All maps should be sufficiently detailed to meet the needs of search teams.
- Communities should be given more funding and materials for preventative SAR: to make posters, to go into the schools and give presentations, and to talk with people one-on-one.
- NEM should consider distributing decks of playing cards to communities with tips on how to survive on the land (for example, how to wait out dangerous situations like storms, or what to do if your machine breaks down).
- Reference cards should be made and maintained for every community containing the contact information of the local SAR Committee or GSAR team members, of all the territorial and southern organizations involved, and information on all of the SAR resources in a community. Southern organizations should be provided with these SAR cards so that they know with whom they are working in each community.
- Funding should be provided to make caribou clothing for all members of a community's GSAR team.
- Funding should be use to erect permanent markers on the land, at regular intervals, which can serve as way-finders.
- NEM should provide GSAR teams with dry suits for the shoulder seasons when most of the searchers occur. Dry suits would help with many searches.
- SAR members should have access to Wilderness First Aid training on a regular basis.
- A basic survival course should be made mandatory for every elementary school student in Nunavut.
- Funding should be secured to work with JRCC Trenton to produce a database or map with traditional names in Inuktitut or Inuinnaqtun.
- A new course should be developed for members of the SAR Committee who do not engage in searches, but remain in the community to support families and to perform administrative tasks.

- Community groups should work on standardizing the radios that they use to ensure that they are interoperable.
- Each community GSAR team should be provided with at least three (3) Garmin inReach devices to provide to pairs that are deploying on the land.
- NEM should consider expanding its SPOT program to provide more devices to community members. Furthermore, NEM and HTO need to publicize this service to make sure people are using the devices.
- Each community should have a dedicated SAR building where they can store supplies, equipment, and fuel, hold meetings, and which can serve as a command post during SAR missions.
- Cabins should be built on the most commonly-used routes connecting the communities that provide people with shelter, basic supplies, and a radio to call for help.
- Each GSAR team should have access to two snowmobiles and two ATVs to be used only during searches, training, and exercises. (This suggestion generated significant debate and mixed opinions, with some searchers responding that they prefer to take their own, familiar machine out on the land, and that a better solution might be to establish an equipment fund that people could draw upon to buy their own equipment which could be used for SAR missions as well).
- The Coast Guard Auxiliary and Indigenous Community Boat Volunteer Pilot Program should be expanded to Taloyoak and Kugaaruk.
- One participant noted that "SAR cases are increasing. SAR is an essential service at the community-level; we need it for health and community safety. There are multiple community groups involved in SAR – it is tough to coordinate between all of them. We should have a paid coordinator in each community who is the full-time point of contact for "all things SAR." This person could organize the searchers, train community members, ensure there is cooperation and coordination between the different groups, check equipment, and ensure that a community is always ready for SAR. This person could keep track of who has what training in the community. They could arrange the fundraising. This could be a full- or part-time job, but it should be paid work. I think it would be a great investment in our communities."
- Another participant explained: "Everyone has a cell phone in the communities. Everyone. We need to push the cell service out on the land, push it out 50-100 miles from the community. Repeater towers on the hills can push the coverage way out. We could put repeaters on the most common routes or hunting areas. We could put repeaters at all the DEW Line sites, every 100 miles. Making sure they are up and running could be part of the Ranger NWS site checks.[19] This seems to be a cheaper option than giving everyone an inReach."

[19] The Canadian Ranger task list includes a provision of service to the North Warning System (NWS) to conduct patrols of the NWS sites that are most accessible to each community.

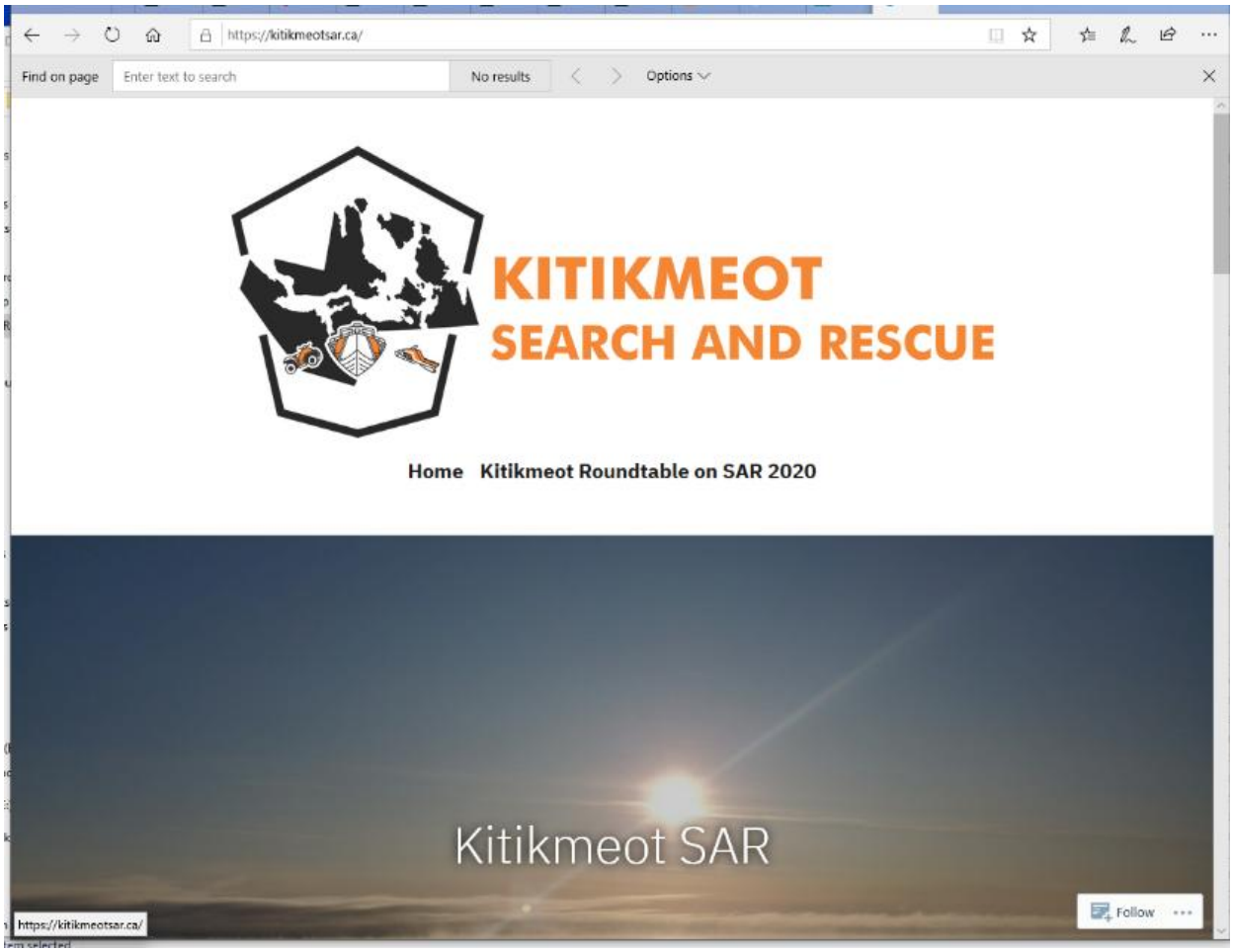
- Deploy more federal assets to the Kitikmeot. RCAF Twin Otters (CC-138), Hercules (CC-130), or helicopters could be stationed in Cambridge Bay during the shoulder or turning seasons when most searches occur. Furthermore, the Canadian Coast Guard station should consider establishing a station in Cambridge Bay that is operational during the summer months.

Session 6
What to do with kitikmeotsar.ca?

Finally, the organizers asked participants what they would like to do with the website created for the roundtable (kitikmeotsar.ca). Could this website be used to facilitate more effective SAR operations in the Kitikmeot? What kind of information might it provide? What would be most helpful from a community perspective? Participants suggested that the website include:

- a record of the best practices, challenges, and suggestions collected from the Roundtable discussions
- best practices for SAR operations that can be kept current
- a repository for lessons learned from Kitikmeot SAR cases
- a list of all the community groups involved in SAR in the Kitikmeot communities that tracks what they do, how many people are involved, their capabilities, and the missions that they have completed
- an interactive map showing where SAR cases happen in the Kitikmeot
- preventative SAR/education services
    - descriptions and photos of emergency travel kits
    - videos with elders talking about essential on the land and survival skills
    - information on what to do during various on the land scenarios (e.g. you are in a storm, you fall into a frozen lake)
    - videos explaining how to read clouds, ice, and the weather
    - stories of how people survived in bad situations on the land
- stories of past SAR operations that highlight the services community SAR organizations provide
- a list of SAR volunteers and contact numbers from each community – one participant explained that, because SAR is a public service, everyone should have access to this information

- Territorial and federal organization contact information and the information they require from community responders when performing SAR operations



Session 7:
Mass Rescue Tabletop Exercise

The culminating activity of the roundtable was the Mass Rescue Tabletop Exercise. Mass Rescue Operations (MRO) Officers and SAR specialists from CCG Arctic Region facilitated the exercise on the afternoon of 1 February. To encourage the sharing of location specific perspectives and responses to the exercise incident, the Roundtable broke into six groups arranged generally by community. Facilitator Chris Bianco from the Coast Guard set the stage by laying out the initial incident, which involved a fictional cruise ship called MS *Arctic Explorer* running aground off Unahitak Island close to Cambridge Bay. He asked that each community apply the scenario to their own unique context.

The Ship

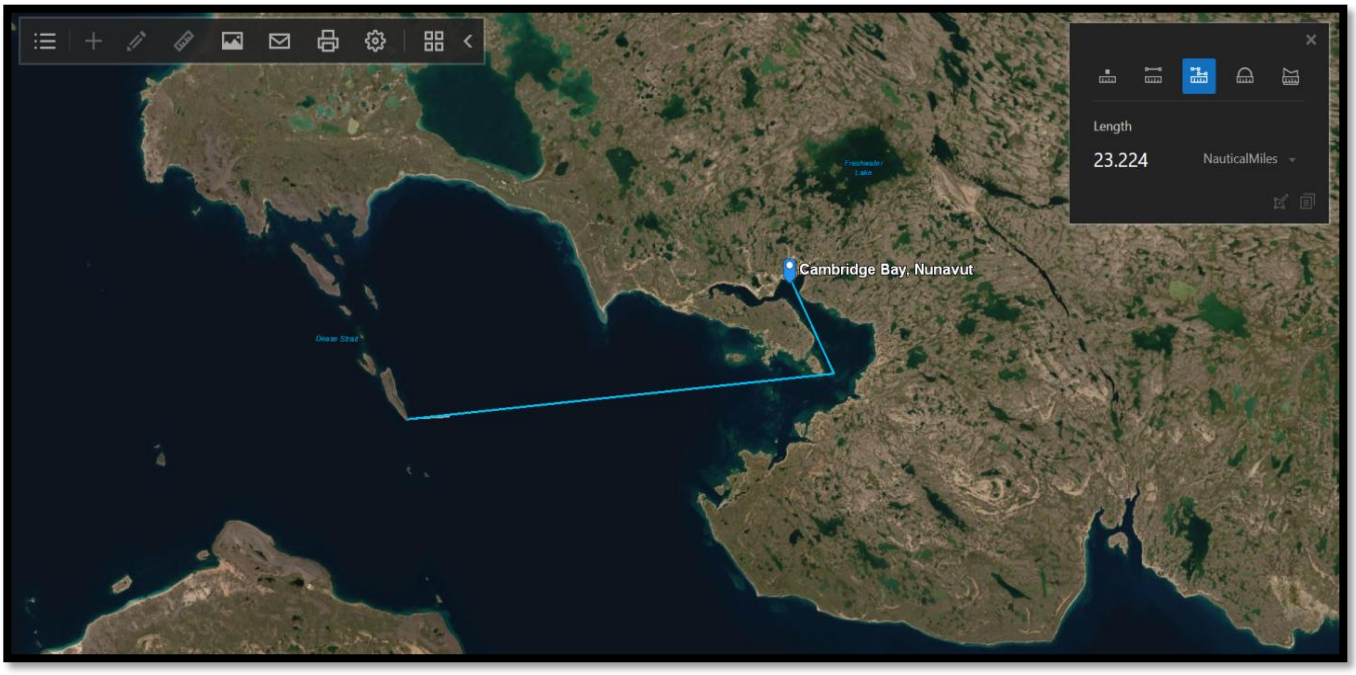


- MS *Arctic Explorer*
- Tour Operator: Nautica Tours (headquarters in Miami, Fl.)
- Shipping Company: Cruise Management International (CMI)
- Built in 2019
- First time eastbound NWP transit
- 138m length
- 22m beam
- 5.4m draft
- 395 POB (240 passengers, 155 crew)
- Average age of passenger is 63
- 16 zodiacs onboard, a 3 ward infirmary, 1 shipboard doctor, 1 paramedic and 3 “first responders” with unknown qualifications
- Zodiacs are loaded from the marina in the aft section of the vessel
- No helipad on vessel, however, there are winching locations in the fore and aft section of vessel

Injects

Next, Bianco moved through a series of scenario injects that gradually increased the complexity and difficulty of the rescue operation. After each inject, roundtable participants were asked to discuss their concerns and actions, the information they would need to gather, the local resources available to address the situation, the cooperation required, and the challenges they might encounter.

Inject 1: On 30 July, *Arctic Explorer* is en route to Cambridge Bay when changing ice conditions force the vessel to alter its route. Due to a lack of familiarity with the region, the ship runs aground on the southeastern point of Unahitak Island at 0300. The grounding occurred about 23 km from Cambridge Bay by water (estimated at 1 hour by boat).



Inject 2: After sounding the tanks it is determined that the vessel is taking on water. Bilge pumps have been activated and are able to somewhat delay the ingress. On orders from the Captain, passengers and crew are being evacuated to the shoreline of Unahitak Island. At this stage, JRCC Trenton notifies Cambridge Bay CCGA and tasks them to assist on-scene.

Inject 3: JRCC receives a report from the vessel that a number of passengers and crew have been injured during the grounding incident.

Inject 4: Upon reaching Cambridge Bay, a passenger informs an expedition staff member that she cannot find her husband. The last time she saw her husband was onboard the ship, at the muster station. She says that he went back to their cabin to retrieve a personal item and she was evacuated from the ship shortly afterwards. A staff member assured her that he would be evacuated with the next group, however he is not with the group of passengers on shore.

Inject 5: All passengers are now in Cambridge Bay. A number of passengers have left their medication aboard the vessel. Eight elderly passengers require heart medication, and two diabetics have left their insulin aboard the vessel.

Inject 6: The passengers and responding personnel are now being transported out of Cambridge Bay.

A full report on the tabletop exercise, including the actions, recommendations, and key considerations the roundtable participants laid out for each inject scenario, is available at kitikmeotsar.ca. The following are key observations, themes, and recommendations from the TTX:

- The tabletop captured the willingness of community members to risk their lives to help strangers who might be in trouble. If a disaster unfolded close to their communities, they would go and see how they could help. [20]
- The exercise highlighted the sophistication of community-level understandings of and plans for MROs and reinforced the value of community-level perspectives in planning, preparing for, and executing an MRO.
- The local information that community-based groups could provide on geography and environmental conditions would be absolutely vital during an MRO and could save lives (e.g. during the TTX, Cambridge Bay participants provided information on the geography of Unahitak Island, environmental conditions, the safest evacuation route, and where passengers could be offloaded).
- Community groups would have essential and diverse roles to play in an MRO. Participants listed a series of potential responses for Coast Guard Auxiliary units, community GSAR teams, and/or Ranger patrols:

    - put eyes on the situation;
    - provide updates to the JRCC;

[20] This was also a key finding of the tabletop exercise executed by Liane Benoit and the Munk-Gordon Arctic Security Program in 2014. Their scenario envisioned a cruise ship running aground in Cumberland Sound close to Pangnirtung. Liane Benoit, *Perspectives on Emergency Response in the Canadian Arctic: Sinking of the MS Arctic Sun in Cumberland Sound, Nunavut. Parts A, B, C*. Munk-Gordon Arctic Security Program, 2014, http://gordonfoundation.ca/resource/perspectives-on-emergency-response-in-the-canadian-arctic/

- act as on-scene coordinator;
- provide intelligence on where passengers could be evacuated to on the land;
- shepherd lifeboats or zodiacs to safe havens or to the community;
- help in offloading and tracking passengers;
- search for missing passengers;
- establish a camp to provide warmth and shelter;
- give first aid;
- provide predator control;
- reassure evacuees that the situation is under control;
- assist in setting up accommodations for evacuees in their communities;
- be the points of contact between evacuees and the community

- The actions that community-based groups could take during an MRO should be further developed and practiced by community members in partnership with federal and territorial agencies. The training and equipment required to complete these tasks should be provided to community-based groups and tracked through community emergency plans. Community emergency plans should be kept as up to date as possible and be built to reflect the specific local contexts of each community. A generalized or standardized plan will not work in a real emergency.

- Cruise/tour operators should consider sharing their emergency plans and procedures with the communities that they plan to visit or travel near – and particularly with members of community-based SAR organizations. This would foster relationship-building with the people with whom they might have to work during an MRO or smaller-scale SAR operation, and would allow community members to get a sense of the capabilities, plans, and equipment these companies possess. These companies should consider donating rescue equipment to the community groups whose assistance they might require at some point.

- While willing to follow the direction of the JRCC, the CAF, or Emergency Management Nunavut, community first responders stressed that they also expected these agencies to listen to the information and suggestions that they passed along, and to act upon their recommendations and approaches. The need to listen to community-based responders was repeated frequently.

- Communication and coordination would be vital in an MRO (at the community-level, between responders and the JRCC, responders and the ship's crew, between the different groups acting at the scene, etc). Lines of communication and coordination must be firmly established and put to the test through exercises.

- During an MRO it would be essential to provide a steady stream of information to the broader community to reassure community members and enlist their support in evacuation efforts.

- Roundtable participants wished to be briefed on the plans, preparations, and tools federal and territorial agencies have in place to deal with an MRO.
- As the regional hub for the Kitikmeot, Cambridge Bay is well equipped with both the human and physical infrastructure required to deal with a disaster involving hundreds of people – the community's size, capacity in terms of transport, shelter, food, medical care facilities, and its highly effective community-based GSAR team and Coast Guard Auxiliary unit are all key assets. The community has also established clear lines of communication and information flow in the case of an emergency. The community could host evacuees for several days if required.
- Participants noted that, while the other Kitikmeot communities also have effective community-based groups that could respond to an MRO, even a short stay by evacuees would place a severe strain on their existing physical infrastructure.
- Private industry should be considered an important force multiplier in the Kitikmeot. The North Warning System helicopter could be requisitioned from Cambridge Bay, while other communities might have access to equipment and infrastructure from mining companies operating in the region.
- The fuel and oil spills that could result from this kind of incident were a major concern for community participants. They noted that there was extremely limited or no resources to deal with an oil or fuel spill at the community-level and advised that community members should be better equipped and trained to respond.
- Participants highlighted the importance that a TTX can play in preparing and planning for an MRO or SAR operation – it allowed the different groups involved to navigate the complexity of an MRO while seated around the same table. Through this TTX, federal and territorial learned a great deal about community capabilities and approaches to disasters, while community members learned about some of the resources at the disposal of federal agencies (eg. the MAJAID Kit). The TTX also offered a chance to build the relationships that would be required in a real MRO. Participants hoped that the Coast Guard, other federal agencies, or academics would offer additional exercises at the community level, eventually moving towards functional and full-scale exercises.

"We know the local weather. We know the conditions. We know the water and ice, the rocks. We know how the ice works. We know the best routes to take, the fastest, the safest routes to take. We know things that you can't get from a GPS or a weather report. We know how the tides work. If you are coming in by zodiac or lifeboat, we can help you avoid dangers. We may not be happy that you've brought this trouble, but we will try our best to help you out of it. You have to listen."

- TTX Community Participant, Kitikmeot Roundtable on SAR

TTX Wrap-Up

After the facilitator presented the final scenario injects, roundtable participants convened for a short debrief. The tabletop illustrated the sophistication of community-level understandings of and plans for MROs. All agreed that the exercise reinforced the value of community-level perspectives in planning, preparing for, and executing an MRO. As the discussions reinforced, community groups would have essential and diverse roles to play in a rescue – roles that should be clarified, further developed, and practiced moving forward.

Maritime MROs are complex events involving an array of factors and actors. Community members and participants from the territorial and federal agencies involved in MROs agreed that the tabletop offered a helpful setting to work through this complexity together. While southern-based participants learned a great deal about community capabilities and approaches to emergencies, community members learned about some of the resources at the disposal of federal agencies, including the MAJAID Kit and Arctic Response Company Groups. Given the increase in the number of cruise ships visiting the Kitikmeot, participants suggested that tabletop and full-scale exercises should be held on a more regular basis to practice responses, but to also facilitate the relationship-building required to effectively execute an MRO.

The tabletop captured the willingness of community-members to risk their lives to help strangers who might be in trouble. If a disaster unfolded close to their communities, they would go and see how they could help. Their responses during the tabletop emphasized a few key points:

- While willing to follow the direction of the JRCC, the CAF, or Emergency Management Nunavut, community first responders stressed that they also expected these agencies to listen to the information and suggestions they passed along, and act upon their recommendations and approaches.
- The information that community-based groups provide on geography and environmental conditions could prove vital during an MRO and could save lives.
- Community groups understand that they could play many different roles in an MRO. They desire the training, equipment, and guidance required to play these roles effectively.
- Communication and coordination would be vital in an MRO (at the community-level, between responders and the JRCC, responders and the ship's crew, between the different groups acting at the scene, etc). Lines of communication and coordination must be firmly established and practiced.

Whitney Lackenbauer, in offering a few summary remarks about the TTX, pointed out that Canada's Arctic and Northern Policy Framework commits to "increase whole-of-society emergency management capabilities in Arctic and Northern communities" as a key priority. Community-level perspectives, skills, and responses must form the core of this whole-of-society approach in the North. The tabletop embraced

this approach, and Lackenbauer shared his hope that, as the government worked towards co-developing implementation plans for its policy framework, more exercises would follow that engaged community-based groups and federal and territory departments/agencies .

Lackenbauer concluded by suggesting that the idea "we're from Ottawa, we're here to help" – which has been the government's historic approach to emergencies in the North – does not fit in a whole-of-society approach to emergency management, threatens to undermine community-level understandings and responses, and is unsuited to local realities. Instead, Lackenbauer recommended that this approach be replaced by a mindset of "Hi, we're Ottawa, we know you have things in hand – how can we help without disrupting what you are already doing and getting in your way."

Roundtable Wrap-Up

Over the course of a closing dinner, participants were encouraged to continue their discussions and information sharing, as well as to share stories recounting some of their past experiences on SAR operations.

As the Roundtable drew to a close, several community participants explained to the organizers the importance of SAR to the Kitikmeot and to the rest of Nunavut. They noted how essential is for Nunavummiut to go out on the land to be healthy and whole. People must be able to hunt and fish to feed their families. They must feel confident that they can travel safely between communities, over the ice, land, and water, to visit family and friends. This kind of travel is central to Inuit culture. "For all of this to be possible, you need SAR," one participant emphasized. "You need people who know how to go out on searches. You need people who are willing to go out on searches. Because with all the changes going on, even the best-prepared people could have an accident and could need help." The many programs designed to get people on the land and to support hunters are essential, he explained. "But we also need programs to help SAR, to build our SAR teams. We need this space [the roundtable] to talk about it and get better at." The health of Nunavummiut is tied to the land, and community SAR responders provide essential support to maintain this connection.

It seems fitting to end this report with one of the stories shared by Roger Hitkolok and Jack Himiak, the founders of Kugluktuk GSAR. It captures just how challenging SAR can be in the Kitikmeot and the incredible ways in which these challenges are overcome.

One November, when it was dark and the ice was still thin, a lone hunter went missing. He had no GPS or SPOT device with him, and he had told no one where he planned to go hunting. Kugluktuk's GSAR team was notified and together they drew upon their knowledge of the land, ice, and hunting grounds to figure out where to look. They figured the man had gone seal hunting along the coast towards High Lake and Bathurst Inlet. Roger and Jack led a small team of GSAR volunteers down the coast. After 130 miles of

travel in terrible weather and treacherous ice conditions, they finally spotted the hunter's snowmachine. The man had shot a seal and went to retrieve it on his snowmachine, only to hit some rough ice, fall off, and hit his head. This left him disoriented and confused. The GSAR team delivered first aid to the injured and near-hypothermic man. Using his Ranger-issued satellite phone, Hitkolok reported his position and requested a Twin Otter from 440 squadron in Yellowknife to evacuate the hunter. Next, he used his Ranger training to instruct his GSAR team on how to prepare an ice strip for the Twin Otter. The team filled pots, pans, and plates with whatever they could light on fire to illuminate the strip. The Twin Otter landed on the austere landing strip that the GSAR team had made on the ice and the man was successfully evacuated. As Roger casually concluded, "It was a hard one."

SAR in the Kitikmeot is often a very hard task. It is our hope that the knowledge collected at this Roundtable, the experiences shared, the best practices discussed, and the suggestions for improvement, help to make this difficult but essential responsibility easier to bear for community-based organizations.

Appendix A: Definitions[21]

After action review — a structured review or de-brief process for analyzing what happened, why it happened, and how it can be done better by the participants and those responsible for the incident or event.

Agency — a division of government with a specific function, or a non-governmental organization (e.g., private contractor, business, etc.) that offers a particular kind of assistance.

Assignment (or team assignment) — a specific set of tactics assigned to a ground search and rescue resource for implementation in the field in order to meet specific objectives.

Authority having jurisdiction (AHJ) — the government agency that has responsibility for search and rescue within their jurisdiction.

Briefing — the process of providing searchers with the information they need to adequately perform their task.

Call-out — the authority having jurisdiction's call to conduct a search and rescue operation whereby GSAR personnel are requested to respond.

Camp — a geographical site, within the general incident area separate from the incident base, equipped and staffed to provide sleeping, food, water, and sanitary services to incident personnel.

Convergent volunteer — an individual that offers his or her service and/or expertise for no remuneration during a recognized public safety line activity and is signed into the task and is not already registered as a public safety line volunteer.

Core competency — the essential knowledge, skills, abilities, and attributes required to successfully accomplish assigned tasks or roles.

Craft — any air or water-surface vehicle, or submersible of any kind or size.

Critical incident stress (CIS) — a stress reaction experienced by searchers and/or emergency responders during the incident that could have long-term, debilitating psychological and physiological effects upon them.

[21] Drawn from CSA, Training curriculum standards for ground search and rescue operations: Searcher, team leader, and SAR manager, Z1625-16.

Debriefing — the exchange of information, usually at the close of a tasking, that conveys important knowledge and experience.

Note: *A SAR team will be debriefed when it returns from the field so important information can be gathered to help with the search planning. At the end of a SAR incident all those who participated are usually debriefed on the event and how it unfolded.*

Demobilization — occurs at the end of a search successful or otherwise and includes all of the sign-out procedures and the return of equipment and the debriefing, as well as the reorganization of personal gear for the next response.

Distress — an aspect of a search and rescue incident where there is a reasonable certainty that one or more individuals are threatened by grave and imminent danger and require immediate assistance.

Evacuation — to move or remove people from an area that is deemed unsafe or will become unsafe.

Extraction — to remove someone from a location as part of a rescue (synonym to the "transport" part of the rescue cycle).

Global positioning system (GPS) — a specific satellite-based system used in conjunction with mobile equipment to determine the precise position of the mobile equipment.

Ground search and rescue (GSAR) — the conduct of a search and rescue operation to assist persons lost, missing, or in distress on land and inland waters.

Initial response — the first response to a search event, usually by a small team of three searchers who are fit, fast, and skilled that can quickly search high-probability areas.

Note: *Also known as "initial response teams" or "hasty teams."*

Last known position (LKP) — the last known location for the missing subject as determined by physical evidence or clue such as a parked car, discarded object such as a wallet, or a footprint that places the missing subject. **Note:** *LKP can be revised during search.*

Likely spot — features or areas that might offer attraction to the lost person. **Note:** *Lost-person behaviour is often used along with interview information to determine likely spots a lost person might go.*

Lost person — a known individual in an unknown location whose safety might be threatened by conditions related to the environment or other factors.

Lost-person behaviour — the travel and self-help behaviour generally exhibited by persons in various age groups, mental conditions, or by activity when lost.

Point last seen (PLS) — the physical point a lost or missing person was actually last seen at.

Reporting person — the person who initially reported someone lost or missing.

Rescue — an operation to retrieve persons in distress, provide for their initial medical or other needs, and deliver them to a place of safety.

Resource list — a list of search or logistical resources that can be employed during an incident; part of the pre-plan.

Risk management — the process of decision making for managing risk and the implementation, enforcement, and re-evaluation of its effectiveness from time to time, with input from the results of risk assessment. **Note:** *Risk assessment is a structured, common-sense approach to reducing the frequency and severity of loss events.*

SAR manager — a person who manages and coordinates a search and/or rescue incident, leads and directs the SAR resources, is trained and experienced in search and rescue, and might or might not be the incident commander under the ICS system.

SAR volunteers — an organized group of trained and equipped individuals who are capable of conducting search and rescue operations.

Search — a search involves assembling, coordinating, and using the necessary resources to find lost, stranded, trapped, missing, or injured people, to save lives or avoid further injury to them. **Note:** *Search is its own discipline with its own theories, strategies, and tactics.*

Search and rescue (SAR) — the combined activities and tasks involved in both searching

for and rescuing persons who are feared to be lost, missing, or in distress. **Note:** *Many searches do not involve rescue, and many rescues do not require searches.*

Search and rescue (SAR) manager — a person who manages and coordinates a search and/or rescue incident, leads and directs the SAR resources, is trained and experienced in search and rescue, and might or might not be the incident commander under the ICS system.

Search and rescue (SAR) volunteers — an organized group of trained and equipped individuals who are capable of conducting search and rescue operations.

Search techniques — a body of techniques used in the orderly conduct of a search. **Note:** *These include patterns of coordinated movement, employment of sound or visual signals, self-orientation during movement, and awareness of others and their positions.*

Search termination — the point at which the official search is called to an end by the AHJ due to the finding of the subject, lack of clues and evidence to continue, safety issues, etc.

Searcher — a trained individual, reporting to the team leader, who is tasked to use observation skills to detect clues that may lead to the location of a subject of a search.

Searching data — that information that searchers require in order to search for the lost subject, such as the subject's name, description, clothing, footwear, and items carried.

Specialized SAR groups — organized groups (military, police, volunteer, etc.) of trained individuals with specialized skills and equipment that are capable of working in technical environments (e.g., water, cave, high angle, avalanche, etc.).

Stress defusing — a short meeting (30 to 60 min) held shortly after an incident, conducted by qualified peer counsellors, directed at those people who are assumed to be experiencing stress from the incident.

Subject — the object of a search.

Task — a specific search and rescue operation formally initiated by an AHJ.

Tasking — a role delegated to a searcher or to a search team to carry out as part of a search and rescue operation.

Team leader — a trained individual, reporting to the SAR manager, responsible for the conduct of a ground search and rescue resource.

Volunteer — an individual or group donating time and talents to a specific task or project without salary or compensation other than for allowable out-of-pocket expenses associated with the volunteer activity.

Walk-away — a type of missing person with some mental cognitive deficiency, who has wandered away from a constant care environment. **Note:** *Alzheimer's and other forms of dementia are often associated with a walk-away.*

Appendix B: Roundtable and TTX Participants (by community, alphabetical order)

Cambridge Bay

- Murphy Angnayoak - GSAR
- George Angohiatok - GSAR
- Sgt. Jas Dilbar - RCMP
- Jimmy Haniliak - GSAR and CCGA
- Bobby Klengenberg - GSAR
- Randy Klengenberg - GSAR
- Rosabelle Klengenberg - GSAR
- Jim MacEachern - Assistant Senior Administrative Officer and SAR command centre lead
- Beverly Maksagak - GSAR Coordinator
- Ivor Maksagak - GSAR
- Angulalik Pedersen - 2IC CCGA and GSAR
- Calvin Pedersen - GSAR
- Candice Pedersen - CASARA

Taloyoak

- Abel Aqqaq - Canadian Ranger
- John Ikilik - Canadian Ranger
- David Nanook - Canadian Ranger
- Mary Ugyuk Sutherland - Canadian Ranger
- Bruce Takolik - GSAR and Canadian Ranger
- Sgt. Sam Tuluirialik - Canadian Ranger
- David Totalik - Canadian Ranger
- Steven Ukuqtunnuaq - GSAR and Canadian Ranger
- Lena Ukuqtunnuaq - GSAR
- Johnny Ukuqtunnuaq - GSAR and Canadian Ranger

Kugaaruk

- Breanne Inaksajak - GSAR
- Sam Inaksajak - GSAR
- Ronald Inutuinaq - GSAR
- Bernadette Iqqugaqtuq - GSAR
- Nick Sikkuark - GSAR
- Chris Tungilik - GSAR

Kugluktuk

- Aidan Case - Junior Canadian Ranger
- Jack Himiak - CCGA and GSAR
- Sgt. Roger Hitkolok - Canadian Ranger, CCGA, GSAR
- Glen Leyte - Canadian Ranger
- MCpl Baba Pedersen - Canadian Ranger, CCGA, GSAR

Gjoa Haven

- Winnie Hatkaittuq - CCGA
- Paul Ikuallaq - Unit Leader CCGA, GSAR Coordinator, Canadian Ranger
- Sarah Kamimmalik - CCGA
- Kenneth Puqiqnak - CCGA
- Leonard Teelktak - 2IC CCGA

Nunavut Emergency Management

- Mike Kendall - Manager Emergency Response and Recovery

Joint Task Force North

- Capt Daniel Wilkinson - J9-Ops, Joint Task Force (North)

Department of National Defence

- Ehren J. Edwards - Policy Officer, Directorate of Strategic Coordination and Outreach, Department of National Defence / Government of Canada

Royal Canadian Air Force

- Maj Wesley Cromwell - Staff Officer Search and Rescue Readiness, 1 Canadian Air Division Headquarters

Canadian Coast Guard

- Chris Bianco - Mass Rescue Operations Officer, Arctic Region
- Jay Collins - Deputy Superintendent SAR, Arctic Region
- Darlene Langdon - Arctic Administrative Assistant, Canadian Coast Guard Auxiliary
- Alana Swales - Canadian Coast Guard, Arctic Region

Transport Canada

- Miguel Parent - Senior Policy Advisor

Academic

- Natalie Carter, Ph.D.
- Bailey Chisholm
- Ryan Dean
- Peter Kikkert, Ph.D.
- HLCol P. Whitney Lackenbauer, Ph.D.
- Bianca Romiagnoli
- Chloe Walker

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