



ARCSAR Policy Brief #1 December 2019

ARCTIC AND NORTH ATLANTIC SECURITY AND EMERGENCY PREPAREDNESS NETWORK (ARCSAR): CURRENT STATUS AND STEPS FORWARD

An Introduction to the ARCSAR Network

Ships operating in Arctic and North Atlantic polar waters face greater dangers than those operating in the rest of the world. The Arctic and North Atlantic Security and Emergency Preparedness Network (ARCSAR) is an international collaborative network of key partners with an interest in ensuring Arctic and North Atlantic security and safety from threats due to increased commercial activity in the Circumpolar North.¹ Traditionally dominated by fishing and fishing related interests, the area is now experiencing greater traffic and human activity through the Northern passages, cruise traffic, and offshore oil and gas activity.² This increased activity poses key challenges for Search and Rescue (SAR) and Oil Spill Response operations, including long distances, severe weather, ice and cold conditions, poor communication networks, lack of infrastructure and limited resources. In addition, limited medical capacity, the need for coordinated situational awareness, and for specialized evacuation and survival equipment, all pose major challenges for search-and-rescue (SAR) and Oil Spill Response operations in the Arctic and North Atlantic.³

Therefore, the ARCSAR network was designed to support practitioners involved in front-line security and emergency response by bringing together first responders, researchers, industry, and those involved in governance and policy-making.⁴ The ARCSAR project is funded through the EU Framework Programme for Research and Innovation Horizon2020, with the explicit goal of establishing international best practices and innovation platforms for security and emergency response institutions in the Arctic and North Atlantic region.

The ARCSAR network partners began work in 2018 on a five-year project plan. This brief serves as an update of the activities of the network in the first reporting period (from September 2018 to February 2020), with an eye towards examining future barriers to implementing existing and future safety protocols. Project partners have been industrious in this first phase in terms of goal achievement, and the project is on track to complete its first set of benchmarks.

Network Accomplishments in the First Reporting Period

During this first reporting period, the following goals have been accomplished:

- ✓ *Situating ARCSAR within existing fora, exercises and conferences to integrate functions, reduce overlap and establish unique competencies and domains.*
- ✓ *Developing the ARCSAR website and network platform to expand our reach and provide important information about our work.*
- ✓ *Creation of an Intranet space to facilitate communication and knowledge exchange among network members.*
- ✓ *Establishing a social media presence by creating an ARCSAR Twitter and Instagram feed, Facebook page, YouTube channel and LinkedIn account. Social media hashtags are also being utilized to increase the visibility of project accomplishments.*
- ✓ *Launching an Innovation Arena where new advancements could be proposed and promoted, challenges could be diagnosed, and Arctic specific best practices could be developed.*
- ✓ *Production of an instructional video on how to behave under helicopter medevac to be used on board expedition cruise ships.*
- ✓ *Identified the feasibility of an Arctic North Atlantic Lessons Learned Arena in cooperation with EPPR/Arctic Council.*
- ✓ *Holding a number of workshops and open meetings bringing together representatives from a wide variety of organizations and institutions to establish shared mental models of the needs and capabilities of Arctic stakeholders.*
- ✓ *Hosting a joint tabletop exercise (TTX) providing participants the opportunity to work through a disaster scenario requiring cooperation and coordination between incident responders.*
- ✓ *Mapping of knowledge and innovation needs which included a synthesis of expert opinions, results from existing research projects, and relevant literature. This report culminated in the identification of 20 gaps in knowledge and innovation.*
- ✓ *Development of an online computer based On Scene Coordinator (OSC) course for Arctic North Atlantic Conditions, to be utilized by crews on cruise ships sailing in the region.*

ARCSAR's preliminary work in this period has been driven by the overarching goals of identifying current gaps in technology and targeting areas for improvement. The gaps identified largely stem from the remoteness of the region, infrastructure deficiencies, and difficulties in meeting new International Maritime Organization (IMO) regulations (the Polar Code). In the following report, we will summarize some key findings of the work that has been done so far and outline the next steps for the project moving forward.

Key Findings

1. Membership is expanding, but need greater involvement from underrepresented groups

The ARCSAR Network seeks to bring together practitioners involved in front line of security and emergency response in order to remove traditional barriers within the safety and preparedness services of the ANA region. By extending membership to a variety of stakeholders, multiple perspectives, needs and resources can be brought to bear on both common and unique problems.

The network has grown to include 21 partners from 13 different countries, and continued expansion is likely considering the robust attendance from external participants in ARCSAR conferences and workshops. In the last year, over 80 different entities have attended and/or participated in in ARCSAR events including members of the media, government representatives and business and enterprise organizations. The benefits to expansion of the network are clear given the diverse perspectives and areas of expertise these participants could bring. Given that an objective of the ARCSAR network is identifying common platforms and opportunities for collaboration, and stimulating partnerships for response capabilities, the benefits of a larger network are evident.

Important perspectives in the network could be more visible. While indigenous groups are represented through both the External Advisory Board and associated partners, greater involvement from these groups should be elicited in future endeavors. Involvement with indigenous peoples and volunteers is crucial for local SAR and Oil Spill Response in the ANA region, and successful disaster management is impossible without it.⁵ These issues are not unique to ARCSAR, however, and many Arctic initiatives have a similar goal of determining how to more actively and meaningfully engage with indigenous peoples in the area.

2. Increased visibility but early stages

Another major accomplishment is the creation of the ARCSAR website and Intranet, increasing visibility of the project and expanding network reach. Having an open and public arena for Arctic North Atlantic safety and security information allows for dissemination of relevant information to those on the front lines of disaster preparedness. Additionally, by making network membership transparent, connections among stakeholders are facilitated and reinforced. The webpage also has an intranet workspace for network partners to access documentation, work products and deliverables. This secure channel of communication allows for coordination among interested parties, facilitates workflow, and reduces task redundancies.



**21 ARCSAR
Partners**



13 Countries



80+ Extended Network

In addition to the website, ARCSAR also now has a social media presence through an ARCSAR Twitter and Instagram feed, Facebook page, YouTube channel and LinkedIn account. Social media hashtags will facilitate the sharing of project accomplishments. Currently, ARCSAR has an impressive following with 469 on Facebook, 132 on Twitter, 99 on LinkedIn, 54 on Instagram, and 1437 views on YouTube. Targeting outreach efforts to these social media followers will allow for expansion of the network in the future.

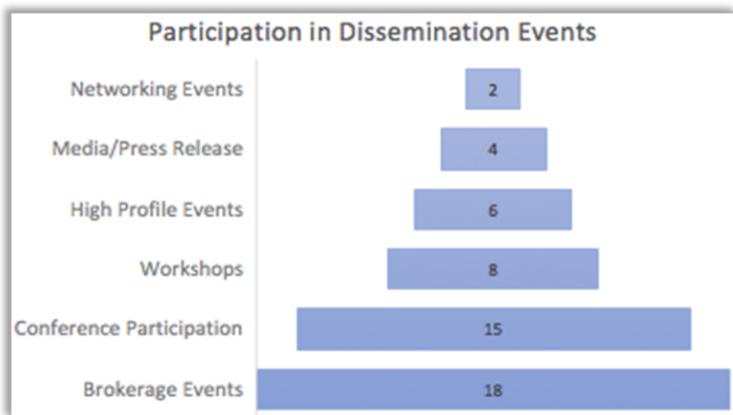
Network expansion is also no doubt due to the active promotion by ARCSAR members in worldwide dissemination activities over this past year. These events have allowed network members to achieve the goal of monitoring innovations in research, products and services for better disaster risk management in the ANA region. The next phases of the project will continue to focus more fully on monitoring new innovations towards an eye towards recommending the uptake and industrialization of results.

The next phases of the project will also focus on determining how to synthesize the needs of practitioners and industry providers, developing a prioritization plan to ensure that technology is being driven by the needs of SAR practitioners. For example, end users can drive advancements in areas where regulations demand technology that does not yet exist (e.g., Polar Code’s five-

day rule). Additionally, as the network builds momentum, having more network partners contributing to information dissemination activities will ensure maximum visibility of project accomplishments.

3. Some successes in Search and Rescue, but more work on coordination needed

In April 2019, ARCSAR partners participated in a Joint Arctic Search and Rescue workshop and tabletop exercise (TTX). Attending these events were representatives from the cruise industry, search and rescue community, and academics. In addition, 42 outside of network organizations and industries participated as well. The exercise titled “Stranded” was developed and led by the Canadian Coast Guard, which allowed participants to examine challenges stemming from a scenario where cruise passengers were stranded on a remote area on land away from the cruise vessel. Particular attention was paid in the scenario to opportunities for self-assisted rescue, survival equipment, survival plans and communication protocols between expedition leaders, ship and rescue authorities.⁶ Results from the exercise showed that cruise ships have robust procedures for dealing with stranded passengers, but that shared situational understandings and communication between rescue authorities needed improvement⁷. Thus, more work is needed to understand and operationalize decision making processes among safety and security personnel, and future ARCSAR efforts will prioritize developing best practices in these areas.



4. Robust problem identification; now priorities need to be established

One of the largest precursors to the work of ARCSAR stems from the gaps that currently exist in security and emergency capabilities, and in the emergency preparedness system. In an effort to fully identify and examine problem areas, ARCSAR partners have held five workshops and open events in the first 17 months of the project. The range of issues discussed at these workshops has been all-encompassing including:

- capability gaps in lifesaving appliance and cold survival issues,
- communication issues,
- navigation and voyage planning issues,
- training/education requirements for operators
- technology needs and improvements including satellite-based services,
- cold climate tests of rescue equipment,
- cold climate oil spill response,
- sharing of situational awareness
- broadband communication
- physiological responses during cold exposure,
- challenges of operating in sea ice,
- engaging indigenous peoples and volunteers in emergencies, and
- satellite services for supporting Arctic Communities⁸.

In order to consolidate and categorize the variety of issues under consideration, ARCSAR partners conducted a Mapping of Practitioner Needs for Innovation and Knowledge Exchange. This report, which included interviews with experts, review of relevant literature, and examination of the results of previous studies, concluded with the identification of 20 gaps, spanning across 6 key themes. These themes became the basis of the formation of six working groups, tasked with exploring solutions

within their domains. The report also synthesized current knowledge and awareness into shared mental models which can serve as a baseline for new developments.

The number of gaps identified, and the diversity of topics discussed at the workshops held thus far is important in the early stages of a project to ensure full consideration of interests and perspectives from a wide variety of stakeholders. In this next phase, however, efforts will move towards prioritizing issues in an effort to avoid getting stuck in brainstorming stages or becoming overwhelmed by the number of issues. ARCSAR partners are now shifting towards formalizing how and when to move from problem identification to advocacy stages, so as to ensure forward momentum on pressing needs.

The ARCSAR Innovation Arena, which is also linked through the new website, will also facilitate this transition to problem solving stages. This open platform promotes new ideas, process improvements and solutions to challenges within the Arctic North Atlantic search and rescue and oil spill response domains.⁹ An additional advantage of this arena is messaging capabilities which allow users to communicate and exchange information privately for instances where security concerns are present. Because search and rescue practitioners in the Arctic North Atlantic encompass a number of different stakeholders including military and civilian actors, this private messaging capability could be especially useful. Presently, there are 79 challenges developed in the ARCSAR Innovation Arena for collaborative problem solving.

20 Knowledge and Innovation gaps have been identified spanning across 6 key themes

Conclusions and Planned Next Steps

The ARCSAR network has achieved a number of milestones in the first 17 months of the project, with most of the strides occurring in network expansion and problem identification. Primary concerns moving forward at this point include prioritizing problem areas and identifying critical gaps upon which to focus attention in order to facilitate forward momentum. The network should also focus on expanding membership to external participants, the most important of which include Arctic North Atlantic indigenous groups. Finally, the next phases of the project will work towards establishing common requirements with regard to innovations that fill in capability gaps, and identify common capabilities that could benefit from standardization.

Next Steps:



Prioritize target areas for improvement in security and emergency capabilities with regards to emergency preparedness



Monitor and select available innovative solutions for increased security, risk and crisis management and cultivate the innovation arena



Report on successful case studies and identify barriers to uptake



Work to shape, standardize and enhance technological advances available for SAR and emergency preparedness in the ANA region

ENDNOTES:

¹ ARCSAR website, <https://arcsar.eu/>

² *Ibid.*

³ *Ibid.*

⁴ *Ibid.*

⁵ ARCSAR Meeting Agenda

⁶ Report of the Fourth Joint Arctic SAR TTX and Workshop, found at <https://www.aeco.no/events/joint-arctic-sar-workshop-and-ttx/>

⁷ *Ibid.*

⁸ ARCSAR Action Reports 1, 2

⁹ ARCSAR Action Report 2