

Defense Policy Review – Roundtable Discussion  
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My comments are restricted to issues around surveillance and monitoring in Canada's north, scientific research and development, Arctic Council agreements with the potential to require Canadian Armed Forces (CAF) support for implementation, and cooperative relations between Canada and some of our allies.

The nature of current and future security and defense challenges in the Arctic justify new investments in research and development to suit multiple user needs – both the CAF and others. Beyond immediate or future military, political or terrorist threats, security challenges can be broadly conceptualized to include threats to northern food security, human health and well-being, wildlife health and biodiversity, clean air, water, and a safe environment, and to infrastructure. Such threats are posed by a changing climate, natural hazards, regional and global-scale industrial development, transport of non-renewable resources, and increased tourism to cite a few examples. These security challenges are of course applicable to the nation as a whole but perhaps unique in the Arctic because of the size of the territory, the widely distributed and comparatively small population, the difficulties of operating in Arctic conditions, particularly during winter, an inadequate communications and transportation infrastructure, the global interest in Arctic resources, and potential economic benefits from transit access for commercial purposes.

Satellite coverage is critical to advancing goals around observation of the north, including transmission of real time data useful for military and operational services, as well as scientific needs for remotely sensed data. Improved satellite, remote sensing, and observational coverage benefits many stakeholders while strengthening CAF's ability for command and control. It will ensure Canada's ability to meet obligations under Arctic Council search and rescue<sup>1</sup> and emergency preparedness and response agreements<sup>2</sup> and support national and regional operations beyond those of the CAF and the 1<sup>st</sup> Canadian Ranger Patrol Group. Canadian entities who would better be able to fulfill their mandates with improved satellite and remotely sensed data and better communications include the Coast Guard, the Ice Service, the Canadian Space Agency, Canada's Arctic research community, the shipping and aviation sectors, the territorial governments of Nunavut, Northwest Territories and Yukon, and the provincial governments of Newfoundland and Labrador, Quebec, Ontario and Manitoba.

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<sup>1</sup> Arctic Council, 2011. Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic. Arctic Council Secretariat, Tromsø, Norway.

<sup>2</sup> Arctic Council, 2013. Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic, Arctic Council Secretariat, Tromsø, Norway.

A more robust funding arm of the DND to support research both within the Department and at university-based and other research facilities should fertilize cross-sectorial partnerships within Canada. It would also support CAF-relevant international research collaborations including with comparable partners in the Arctic countries and with the US and Denmark in particular as we share Arctic borders with those nations, have already well-established partnerships, and have common goals around research and development of observational infrastructure for the Arctic<sup>3</sup>. This type of investment would help to maintain Canada's technological competitiveness particularly if it is focused in areas where Canada has traditional strengths (earth space technologies, GPS, communications, etc.) that can be leveraged to meet future CAF needs as well as broader national needs.

Research innovation and infrastructure are badly needed to cope with the current technological limitations to operating in the Arctic, and to provide support to the CAF and the Rangers as they may be called upon to cope with traditional and non-traditional security issues, and to engage in disaster and emergency response efforts around oil spills, illegal dumping, and other incidents on land, sea, and ice. Such non-traditional security threats have response duties that will require additional capacity and training. Investment should be directed towards both expansion of the Ranger Patrol Group and widening the scope of their duties to include training for oil spill response among other emergencies – thus improving and enabling local and more immediate delivery of services and support.

Currently 1% of the CAF budget (0.2 billion) is directed toward grants and contributions. It is unclear what fraction of this is dedicated to Arctic-relevant CAF research needs. Also unclear are the resources dedicated to capacity and training needs for diversified operations in the north. Many of the needs around research, technology, and capacity, if met, would be beneficial to Canada as a whole and would facilitate improved civilian-military integration around issues of Northern security as broadly defined above.

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<sup>3</sup> AOS, 2016. Arctic Observing Summit – Conference Statement. 23 March 2016, Fairbanks, Alaska, USA. <http://www.arcticobservingsummit.org/aos-2016-conference-statement-0>