



FRAMEWORK for ARCTIC COOPERATION

among

**NORTH AMERICAN AEROSPACE
DEFENSE COMMAND,**

**UNITED STATES NORTHERN
COMMAND,**

and

**CANADIAN JOINT OPERATIONS
COMMAND**

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Executive Summary

During the December 2010 Tri Command Staff Talks, the Commanders of North American Aerospace Defense Command (NORAD), United States Northern Command (USNORTHCOM), and Canada Command (Canada COM) directed their staffs to identify areas of potential tri command cooperation in the Arctic. This *Framework for Arctic Cooperation* is an initial product of that directive.

With the establishment of Canadian Joint Operations Command (CJOC) effective 05 Oct 2012, all responsibilities previously assigned to Canada COM were assumed by CJOC. Commander CJOC recognizes and supports the intent of all historical instruments agreed among NORAD, USNORTHCOM and Canada COM referenced in this Framework. Where appropriate and necessary, historical documents should be amended to reflect the CJOC command structure.

NORAD, USNORTHCOM, and CJOC (collectively, the “Commands”) all have portions of the Arctic within their respective areas of operation (AOs) and areas of responsibility (AORs). The Commands have complementary missions and can work closely together to meet their individual and collective responsibilities in the Arctic region.

This *Framework for Arctic Cooperation* has the immediate goal of promoting enhanced military cooperation in the preparation for and the conduct of defense, security, and safety operations in the Arctic. It deals primarily with operational level military-to-military operations, but it also serves to identify further challenges and emerging issues that may require resolution at a more strategic level. Accordingly, this document highlights areas where the Commands can collectively overcome challenges in the region. Areas identified for potential Tri Command cooperation in the Arctic include:

- Planning
- Operations
- Domain awareness
- Information sharing
- Exercises and training
- Science and technology
- Capability development

A follow on Action Plan developed by the Commands will generate tasks to provide potential solutions to shared gaps in these areas. In this manner the

Commands will continue to work to enhance their capabilities and capacities to act effectively, in a timely and coordinated fashion, consistent with the national interests of Canada and the United States.

Introduction

1. In September 2009, the North American Aerospace Defense Command (NORAD), United States Northern Command (USNORTHCOM), and Canada Command (Canada COM) signed the *Framework for Enhanced Military Cooperation among NORAD, USNORTHCOM, and Canada COM*, which codified the close relationships among the Commands and their supporting agencies to ensure a timely and coordinated response to defense and security challenges to North America. Signed in December 2010, the *Tri Command Strategy* built upon the strategic goals outlined in the March 2010 *Tri Command Vision*, further strengthening the bonds which link the Commands. The *Strategy* charged the Commands to synchronize defense and security efforts to include common interests in the Arctic. With the establishment of CJOC, this Framework for Arctic Cooperation identifies opportunities for potential Tri Command cooperation in the Arctic among NORAD, USNORTHCOM and CJOC.

2. Since the advent of satellite records in 1979, summer minimum Arctic ice extent has receded at a rate of approximately 11 percent per decade. Over that period, there has been significant annual variation in ice extent and areas remaining ice covered. Winter ice extent has declined at only 3 percent per decade over the same period. Several Arctic change models project the Arctic could be seasonally ice-free beginning in 2030-2040. As a result, human activity (tourism, commercial, adventure, scientific, and military) is increasing, which is likely to bring with it increased hazards such as environmental dumping and degradation. The potential for threats such as organized crime, illegal immigration, and even terrorism cannot be ruled out. Because security and safety interests closely follow economic interests, emerging Arctic challenges require the military to be prepared to support lead agencies in response to these threats and hazards when requested and directed.

3. Operating in the region is a challenge given the harsh climate, large area, sparse population and limited infrastructure. As a rule of thumb, construction costs are three to five times the cost of comparable infrastructure in lower latitudes. This necessitates a forward looking approach in this region more than any other, including the need for NORAD, USNORTHCOM, and CJOC to further develop cooperative partnerships.

Purpose

4. This *Framework for Arctic Cooperation*, hereafter referred to as the *Framework*, supports the *Tri Command Vision's* stated goal to improve unity of effort among the three Commands and with our respective mission partners. Its immediate goal is to promote enhanced military cooperation in the Arctic and identify specific areas of potential tri command cooperation in the preparation for and conduct of defense, security, and safety operations in the Arctic.

5. The information in this *Framework* is drawn from a number of sources, including the *USNORTHCOM Commander's Arctic Estimate* and the *Canadian Forces Northern Employment and Support Plan*, and is consistent with Canadian and United States strategic guidance and policy documents. A list of primary references is at Annex A.

The Arctic Defined

6. For the purposes of this *Framework*, the Arctic Area of Operations (AO) has been defined:

- a) By Canada, as the area north of 60 degrees north latitude, including the Yukon Territory, the Northwest Territories, Nunavut, and Nunavik (the portion of northern Quebec north of 60N latitude); and all contiguous seas, including the Arctic Ocean, the Beaufort, the Lincoln and Labrador Seas, Baffin Bay and the Davis Strait (Figure 1a).

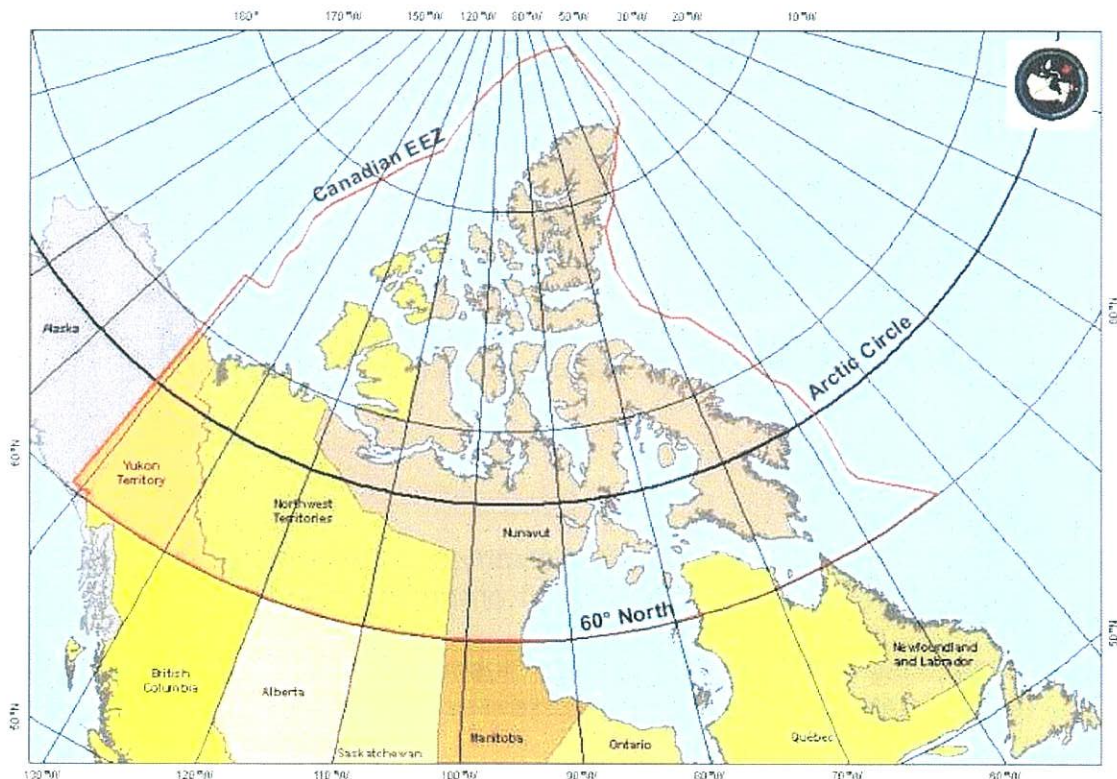


Figure 1a

- b) By the United States, as U.S. and foreign territory north of the Arctic Circle (66.5 degrees north latitude) and all U.S. territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all

contiguous seas, including the Arctic Ocean and the Beaufort, Bering and Chukchi Seas; and the Aleutian chain (Figure 1b).



Figure 1b

Assumptions

7. Key strategic assumptions that are common to the three Commands are necessary to define the Arctic strategic environment:

- a) Global interest in the Arctic will be sustained, for both Arctic and non-Arctic states. This will lead to increases in human activity and resource development;
- b) The types and level of international activity in the Arctic will not result in armed conflict in the foreseeable future;
- c) Relationships among Arctic nations will remain stable and cooperative;
- d) Environmental change will continue to affect the Arctic, creating opportunities for economic development but producing significant

challenges for governments and the traditional life styles of indigenous peoples;

- e) Current budgetary pressures experienced in both countries may limit investment in Arctic capabilities; and
- f) The Commands will continue to work together in the development of our respective Arctic strategies within a whole of government framework.

Strategic Guidance

8. The U.S. *National Security Strategy* articulates U.S. interests as an Arctic nation with broad and fundamental interests in the region. It articulates the U.S. interest in seeking to meet national security needs, protecting the environment, responsibly managing resources, accounting for indigenous communities, and supporting scientific research, and strengthening international cooperation on a wide range of issues. Essential to strengthening this international cooperation in the Arctic is the close relationship the U.S. shares with Canada. More specific guidance is set forth in NSPD-66/HSPD-25 *Arctic Region Policy*.

9. Canada's *Northern Strategy* identifies four integrated, mutually reinforcing priorities focusing on: exercising sovereignty; protecting the environment; promoting social and economic development; and improving and devolving governance. The Canadian Forces contribute directly to exercising Canadian sovereignty, and indirectly to the other three Government priorities. Canada's Statement on Canada's Arctic Foreign Policy also stresses the importance of maintaining bilateral relations with its neighbors in the Arctic, and through regional mechanisms and other multilateral institutions. Key to this Statement is further developing Canada's engagement with the United States, its premier partner in the Arctic.

Command Concepts of Operations and Support in the Arctic

10. Commander NORAD (CDRNORAD) is the supported commander for aerospace warning, maritime warning and aerospace control missions. NORAD is formed according to the three geographic regions: Continental NORAD Region (CONR); Canadian NORAD Region (CANR); and Alaskan NORAD Region (ANR). While both CANR and ANR have responsibilities in the Arctic and are organized according to national boundaries, NORAD routinely conducts operations across these lines. For the mission of maritime warning, NORAD supports USNORTHCOM and CJOC in their assigned missions to defend North America.

11. Commander USNORTHCOM (CDRUSNORTHCOM), as the U.S. supported commander for operations in the Arctic, conducts homeland defense, civil support, and security cooperation missions throughout the USNORTHCOM area

of responsibility (AOR). Joint Task Force Alaska (JTF-AK) is subordinate to CDRUSNORTHCOM and is responsible for execution of homeland defense and civil support missions within the JTF-AK joint operations area (JOA). Within its JOA (the State of Alaska and portions of the Arctic), JTF-AK plans and integrates the full spectrum of homeland defense efforts and provides defense support to a primary federal agency in a civil support scenario. Crisis response and consequence management are capabilities included within the spectrum of support. CDRUSNORTHCOM will provide additional forces to the Commander JTF-AK as required.

12. Commander CJOC, as the Canadian supported commander for operations in the Arctic, conducts routine and contingency operations in response to threats and hazards to defend Canada and provide safety and security assistance in support of civil authorities when requested. Commander Joint Task Force North (JTFN) is responsible for planning and conducting routine and contingency operations within the JTFN AOR. Routine operations will be focused on providing situational awareness, in accordance with Canadian law and policy, and maintaining a visible presence in support of Arctic sovereignty. Contingency operations will be focused on providing a scalable, timely, and effective response to either defend against threats to the Arctic or provide support to other government departments (OGDs) in the event of an emergency or crisis. If the situation is beyond the capabilities of Commander JTFN, Commander CJOC will provide additional forces projected from the south relying on high-readiness maritime, land, air and Special Forces units and formations. Support undertakings will be achieved through partnerships between federal, provincial and territorial government departments as well as industry and indigenous peoples.

Areas for Potential Tri Command Cooperation in the Arctic

13. This *Framework* identifies areas where the Commands may collectively overcome challenges to defense, security, and safety in the Arctic region. Areas for potential tri command cooperation in the Arctic include planning, operations domain awareness, information sharing, training and exercises, science and technology, and capability development.

Planning

14. A family of bilateral and bi-national plans exists to facilitate the combined defense, security, and safety of the U.S. and Canada, including in the Arctic. The *Canada-U.S. Civil Assistance Plan (CAP)* provides guidance for the military forces of one nation to support the military forces of the other nation that are supporting civil authorities. The *Canada-U.S. Combined Defense Plan (CDP)* provides a construct for the combined defense of Canada and the U.S. during peace, contingencies, and war. Additionally, NORAD Concept Plan (CONPLAN) 3310 outlines the concept of operations for the execution of NORAD missions.

As required the Commands will continue to jointly assess and develop these and other plans as required. Similar processes and procedures are intended to be used for crisis action planning.

Operations

15. The Commands retain responsibility for the collective defense of North America, and when directed, will support lead agencies for security and safety operations in the Arctic. To that end, the Commands are dedicated to mutually supporting each other in the Arctic within a whole of government construct through the approved bilateral and bi-national plans previously mentioned. Should a crisis or situation occur requiring a coordinated response from more than one of the Commands, following government approval, the plans described above will be implemented according to the situation and additional orders issued as appropriate.

Domain Awareness

16. Due to increasing activity in the Arctic, the Commands will continue to require Arctic domain awareness to successfully identify potential threats and hazards to defense, security, and safety, in accordance with national laws and policies. Current capabilities for monitoring activities in the Arctic are limited. Central to the development of Domain Awareness is determining what needs to be identified and which agencies need to be informed. To, provide answers to these fundamental questions, the Commands will establish a Working Group (WG) to: refine Commanders' needs for domain awareness; and encourage interagency (IA), OGD, and multinational contributions to domain awareness. Without neglecting the requirement for comprehensive awareness in all domains (maritime, land, air, space and cyber), the WG will concentrate first on Maritime Domain Awareness (MDA) as this will make a critical contribution to the NORAD maritime warning mission.

Information Sharing

17. Information sharing among the Commands is a complex issue influenced by technical, policy and legal considerations. A Strategic Operations Information Sharing (SOIS) plan among NORAD, USNORTHCOM and Canada COM was signed in January 2010. The SOIS Plan of Action (SOIS POA) captures the information sharing processes of the NORAD and USNORTHCOM, and the Canada COM operations and command centers during normal operations, significant events, incidents, crises and exercises. Additionally, an information sharing memorandum of understanding (MOU) was signed by the Commanders on 25 Jan 2012, which facilitates the exchange of information among the Commands. The SOIS Plan of Action and the Information Sharing MOU remain operative under the CJOC command structure and will be modified in due course.

18. In addition to these enablers, Commanders intend to advocate for additional information sharing solutions that work within current restraints. An example of such a solution is the Arctic Collaboration Enterprise (ACE), which was approved as a Joint Capability Technology Demonstration (JCTD) in 2011. This JCTD is a whole of government web-based, open-source, environmental decision support system for the Arctic region and is designed to integrate disparate data, models, tools, and products from the U.S., Canada, and other Arctic states. Successful integration of ACE is expected to enhance information sharing and thereby improve security and safety in the Arctic. Furthermore, Commands will continue to identify information flow issues to defense policy leadership for resolution at such forums as the Military Cooperation Committee and the Permanent Joint Board on Defense.

Exercises and Training

19. NORAD, USNORTHCOM, and CJOC plan to maximize opportunities to conduct combined Arctic exercises, to include providing observer support, evaluations, after action review (AAR) submissions, and report distribution. The following Arctic training objectives identified in the *USNORTHCOM Commander's Arctic Estimate* and *The Canadian Forces Northern Employment and Support Plan* are expected to be exercised in conjunction with national and bilateral/bi-national plans and operations:

- a) Search and Rescue;
- b) Maritime Domain Awareness;
- c) Intelligence and information sharing;
- d) Security and sustainment arrangements; and
- e) Command and control (C2).

20. In addition, NORAD, USNORTHCOM, and CJOC plan to maximize opportunities to participate and/or observe in regional or international exercises or operations conducted by the other commands. Arctic exercise and operational lessons learned will be shared among the Commands and considered for future exercises and operations.

21. To prepare for and conduct combined exercises, Commands intend to complete a five-year bi-national exercise schedule that will be formally reviewed on a two year cycle. In accordance with this *Framework*, a Tri Command Arctic Roadmap with a one-year outlook will be reviewed and updated at each semi-annual Tri Command Staff Talks to identify and synchronize opportunities to maximize training objectives and ensure continued cooperation.

Science and Technology

22. In cooperation with lead agencies, Commands intend to identify areas for potential collaboration on Science and Technology (S&T) and Research & Development (R&D) projects that aim to improve capability to meet Arctic operational requirements

Capability Development

General

23. Capability development is intended to be based on identifying required capabilities for conducting defense, security, and safety operations in the Arctic. This is expected to involve developing both cooperative and complementary capabilities that provide the foundation for future operations. Advocacy will be required to resolve shared capability gaps.

24. Given limited staff capacity and resources, the Commands intend to concentrate first on three primary capability areas: Maritime Domain Awareness; Communications; and Infrastructure and Sustainment. Shared capability gaps have been identified in each of these areas.

Maritime Domain Awareness

25. Shared MDA gaps include:

- a) meteorological/hydrologic/navigation information and systems that facilitate safe transit of vessels in Arctic waters;
- b) persistent tracking of cooperative and uncooperative vessels to monitor the movement of ships in Arctic waters; and
- c) the ability to support rapid decision making among the Commands and their interagency partners.

Communications

26. Reliable and interoperable communications are becoming increasingly important in the Arctic region as activity increases. The vast distances, lack of robust communications architecture, harsh weather conditions, and high latitude ionic disturbances combine to make communications in the Arctic difficult.

27. Tri command advocacy for communications solutions must focus on establishing robust architectures which ensure communications equipment operates in an Arctic environment while maximizing interoperability among the Commands and their interagency partners. To facilitate connectivity, streamline acquisition processes, and reduce program costs, Commands intend to consider

potential partnerships among the military, other government departments and industry.

28. Current shared communications gaps include:

- a) Line of Sight (LOS), beyond LOS and broadband communications; and
- b) a need to ensure robust command, control, communications, and computers (C4) support to Forward Operating Locations.

Infrastructure and Sustainment

29. Supporting infrastructure and the ability to sustain operations in the Arctic are limited. The strategic vision is a network that provides adequate coverage across the Arctic to meet the operational and training needs of the Commands. To that end, the Commands intend to coordinate installation/real property development plans to better integrate airfields, ports, and forward operating bases.

Way Ahead – Actions Required

30. To further Arctic cooperation outlined in this *Framework* and within their assigned legal and command authorities and resources available, CDRNORAD, CDRUSNORTHCOM, and Comd CJOC intend to develop a detailed action plan that identifies specific areas of cooperation within the following broad categories:

- a) Planning – as required, review and revise existing bilateral and bi-national strategies and plans, and develop additional plans as required to meet the unique requirements of the Arctic;
- b) Operations – improve existing processes for tri command coordination and synchronization during planning and execution of bi-national and bilateral operations, including those conducted in the Arctic;
- c) Domain Awareness – establish a Tri Command Domain Awareness WG to identify DA requirements in all domains. Concentrate first on Maritime Domain Awareness to:
 - (1) facilitate safe transit of vessels in Arctic waters; and
 - (2) provide persistent surveillance systems for tracking cooperative and uncooperative vessels;
- d) Information Sharing – promote solutions that facilitate information flow among the Commands and their interagency partners;

- e) Exercises and Training – develop a Tri Command Arctic Roadmap, which identifies and aligns opportunities to maximize training objectives and ensure continued cooperation. The Roadmap should be reviewed and updated during annual Tri Command Staff Talks;
- f) Capability Development – Identify realistic opportunities for cooperative capability development, including, but not necessarily limited to:
 - (1) Maritime Domain Awareness;
 - (2) Communications – improvements in line of sight and beyond line of sight arctic communications architecture; and
 - (3) Infrastructure and Sustainment – coordination of Commands' installation/real property development plans to better integrate airfields, ports, and forward operating bases; and
- g) Science and Technology – identify areas for potential collaboration in the areas of S&T and R&D.



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