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DoD released its Arctic Strategy with the strategic approach of strengthening rules-based order in the Arctic, building Arctic awareness, and enhancing Arctic operations. The changing Arctic security/strategic environments and Great Power competition provides the necessary elements to focus efforts over time; however, the current state of the Joint Force's Arctic operational environment hinders the way-ahead. The Joint Force must designate ALCOM as the Arctic CCMD, create an Arctic RCP, and develop a Joint Force with Arctic specific capabilities and training. These recommendations mitigate existing impediments obstacles currently preventing the operationalization of the latest Arctic Strategy.

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**NATIONAL DEFENSE UNIVERSITY
JOINT FORCES STAFF COLLEGE
JOINT ADVANCED WARFIGHTING SCHOOL**



OPERATIONALIZING THE 2019 DEPARTMENT OF DEFENSE ARCTIC

STRATEGY

by

Byron J. Brown

Lieutenant Colonel, United States Army

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A paper submitted to the Faculty of the Joint Advanced Warfighting School in partial satisfaction of the requirements of a Master of Science Degree in Joint Campaign Planning and Strategy. The contents of this paper reflect my own personal views and are not necessarily endorsed by the joint Forces Staff College or the Department of Defense.

This paper is entirely my own work except as documented in footnotes.

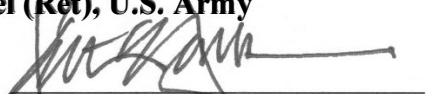
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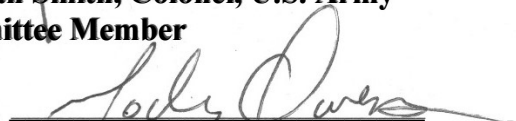
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Abstract

The Department of Defense released its Arctic Strategy in June 2019 with the strategic approach of strengthening rules-based order in the Arctic, building Arctic awareness, and enhancing Arctic operations. The changing Arctic security environment, the Arctic strategic environment, and Great Power competition provides the necessary elements to focus efforts over time; however, the current state of the Joint Force's Arctic operational environment hinders the way-ahead for this Arctic Strategy. To fully operationalize the 2019 Department of Defense Arctic Strategy, the Joint Force must designate Alaska Command as the Arctic Functional Combatant Command, create an Arctic Regional Campaign Plan, and develop a Joint Force with Arctic specific capabilities and training. These recommendations mitigate existing impediments obstacles currently preventing the operationalization of the latest Arctic Strategy.

Dedication

This thesis is dedicated to the eight Canadian Soldiers who died on January 30th, 1989, when their C-130 Hercules crashed at Fort Wainwright while arriving to participate in the United State Arctic exercise Brim Frost and to those American Joint Force members who attempted to save their lives. The conditions at the time included thick, icy fog on the runway with temperatures around 60 degrees below zero.

Acknowledgements

This thesis became a reality with the support and insights of many individuals. The researcher wishes to express his sincerest gratitude and warm appreciation to all those who aided in the development of this thesis while providing specific acknowledgement to those who played a pivotal role.

Thesis advisor, Dr. Bryon Greenwald, Ph.D., Professor, Colonel (Ret), U.S. Army, for providing the tough critique through the development of this thesis and throughout the curriculum. His critical feedback significantly developed the researcher over the past year.

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Additional thanks and appreciation go to colleagues in the Joint Advanced Warfare School and those that in the field who willingly aided in the development of this thesis with additional insights and research material.

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Chapter 1: Introduction

The Arctic situation now goes beyond its original inter-Arctic States or regional nature, having a vital bearing on the interests of States outside the region and the interests of the international community as a whole, as well as on the survival, the development, and the shared future for mankind. It is an issue with global implications and international impacts.

-- Xinhau, *China's Arctic Policy*

The Arctic Problem

The Arctic region presents a unique security environment with “direct implications for the United States’ national security interests.”¹ Unique security environment factors that apply to the Arctic region include “changing physical environment due to climate change,” “multilateral cooperation to address shared interests and challenges,” nation-state friction over the status of Arctic Sea Routes, increasing military activity by Russia and China, and nation-state “attempts to alter Arctic governance through economic leverage.”² Additionally, eight nations dispersed across U.S. Northern Command, U.S. Indo-Pacific Command, and U.S. European Command lay claim to portions of the Arctic. Concerned with the Arctic security environment, the U.S. Congress directed the Department of Defense to describe the “United States national security interests in the Arctic region,” provide an “assessment of the threats and security challenges posed by adversaries operating in the Arctic region,” provide “roles and missions of each military service in the Arctic region,” explain near and long term force development to perform Arctic operations, and describe needed interagency cooperation

¹ Office of the Under Secretary of Defense for Policy, *Report to Congress Department of Defense Arctic Strategy*, Report to Congress, (Washington D.C.: Department of Defense, June 2019), 3.

² *Ibid.*, 3-5.

to defend the Arctic region.³ In June 2019, the Department of Defense released an updated Arctic Strategy to address Congressional concerns and further define Arctic efforts as described in the 2017 National Security Strategy.

Initial Analysis and Thesis

The 2019 Department of Defense Arctic Strategy provides the United States Government's assessment and concepts to address challenges in the Arctic security environment. The Department of Defense's Arctic Strategy delivers the strategic objectives of "building Arctic awareness," "enhancing Arctic operations," and "strengthening the rules-based order in the Arctic" to the Joint Force.⁴ Operationalization of these strategic objectives provides a means for the United States to regain the strategic advantage against Russia and China in the Arctic region; however, a failure to prioritize Arctic requirements in a resource constrained environment limits the way-ahead for the Joint Force. Utilizing existing resources and emerging concepts such as Global Integration with creative and critical thinking provides the mechanism to strengthen rules-based order in the Arctic, build Arctic awareness, and enhance Arctic operations. To operationalize the 2019 Department of Defense Arctic Strategy, the Joint Force must designate the Alaska Command as an Arctic Functional Combatant Command, create an Arctic Regional Campaign Plan, and modernize the Joint Force with Arctic specific capabilities while transitioning the Joint Pacific Alaska Range Complex into a resourced Joint Arctic Training Center.

³ 115th United States Congress, *John S. McCain National Defense Authorization Act for Fiscal Year 2019*, National Defense Authorization Act, (Washington D.C.: House of Representatives, 2018), 343.

⁴ Office of the Under Secretary of Defense for Policy, *Report to Congress Department of Defense Arctic Strategy*, Report to Congress, (Washington D.C.: Department of Defense, June 2019), 6-7.

This paper examines the Arctic issue and makes recommendations in four key increments corresponding to chapters 2-5 of the study. The first step (Chapter 2) describes the current strategic environment in the Arctic region to include Great Power competition. The discussion focuses on the equities in the Arctic region, recent efforts in policy and strategy to affect the Arctic security environment, and the anticipated way-ahead for each of the Great Powers. The second step (Chapter 3) analyzes the current operational environment for the Joint Force in the Arctic region focusing on critical challenges. The third step (Chapter 4) in this paper seeks to create a future operational environment in the Arctic region that utilizes existing resources while nesting the recommendations within the pillars of Global Integration: Force Management, Force Planning, and Force Development. The final step (Chapter 5) in this paper aligns the Global Integration recommendations to the strategic approach described in the 2019 Department of Defense Arctic Strategy to create a way-ahead for operationalization.

Limitations

The classification level of some elements of this research, particularly in force planning, prevents inclusion into this paper. This paper will not discuss specific areas such as planning and military locations due to this restriction. Additionally, some elements of the research rely on classified documents and this paper includes information marked as unclassified in the classified documents as necessary.

This study uses the latest concepts of Global Integration developed over the past year by the Joint Staff. As Global Integration continues to mature, definitions and concepts associated with Global Integration may become obsolete as the concept develops. Despite potential changes in Global Integration definitions and concepts, the

recommended way-ahead to operationalize the 2019 Department of Defense Arctic Strategy remains valid.

Delimitations

Research conducted for this paper identified Antarctica as an emerging security environment due to Great Power competition. Expansion of the paper's recommendations may be made to include the Antarctic as similar conditions exist between polar regions; however, the scope of this paper remains focused on the Arctic region.

This study does not provide a comprehensive step-by-step instruction on Planning, Force Management, and Force Development processes. Furthermore, this study does not provide Service-specific recommendations unless a Service-specific requirement needs met to support Joint Force operations. Finally, the study focuses on Department of Defense efforts and does not address efforts needed by multinational or interagency partners.

Chapter 2: The Strategic Environment

I believe that in the future, whoever holds Alaska will hold the world. I think it is the most important strategic place in the world.

-- U.S. General Billy Mitchell to the 74th U.S. Congress

Analyzing the Arctic strategic environment requires an appreciation of many variables to include the Arctic climate, accessibility for trade, access to natural resources such as minerals and fossil fuels, strategic reach for military and commercial ventures, national interests, and national policies. The effects of climate change drive changes to the Arctic strategic and security environments contributing to Great Power competition. This chapter examines the current challenges of the Arctic region, the implications of climate change on the Arctic's strategic importance, and the activities of the global powers to influence the emerging opportunities and threats.

The Arctic Environment

Cold, inhospitable, and inaccessible for most of the year, the Arctic region is a geographic area that many governments ignored for centuries. The resulting effects of climate change, regardless of its cause, alter the realities of the Arctic region. While still cold in the upper regions and during winter months, the Arctic region now warms to temperate temperatures during the summer months as demonstrated by the 70F – 90F temperatures of the 2019 summer. Climate change creates a more hospitable environment as demonstrated by an increase in previously unseen wildlife migration north of the Arctic circle. Finally, climate change provides increased accessibility to the Arctic region. The loss of sea ice has increased the use of Arctic sea lanes, while the loss

of land ice has increased access to land-based resources. These effects are forcing governments to reevaluate their view of the Arctic Region.



Figure 1. The Arctic Region includes Norway, Sweden, Finland, Russia, the United States, Canada, Greenland (Denmark), and Iceland. Source: Department of State, *Alaska Region*, 2017. <https://2009-2017.state.gov/documents/organization/258414.pdf> (accessed March 13, 2020).

As shown in Figure 1, countries with direct equities in the Arctic region include Norway, Sweden, Finland, Russia, the United States, Canada, Greenland (Denmark), and Iceland.¹ In 1996, the Ottawa Declaration formalized these eight countries as the core of the Arctic Council, an “intergovernmental forum promoting cooperation, coordination and interaction among the Arctic States, Arctic indigenous communities and other Arctic

¹ U.S. Department of State Office of Ocean and Polar Affairs, *Arctic Region*, n.d., <https://www.state.gov/key-topics-office-of-ocean-and-polar-affairs/arctic/> (accessed November 14, 2019).

inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic.”²

The Arctic’s Strategic Importance

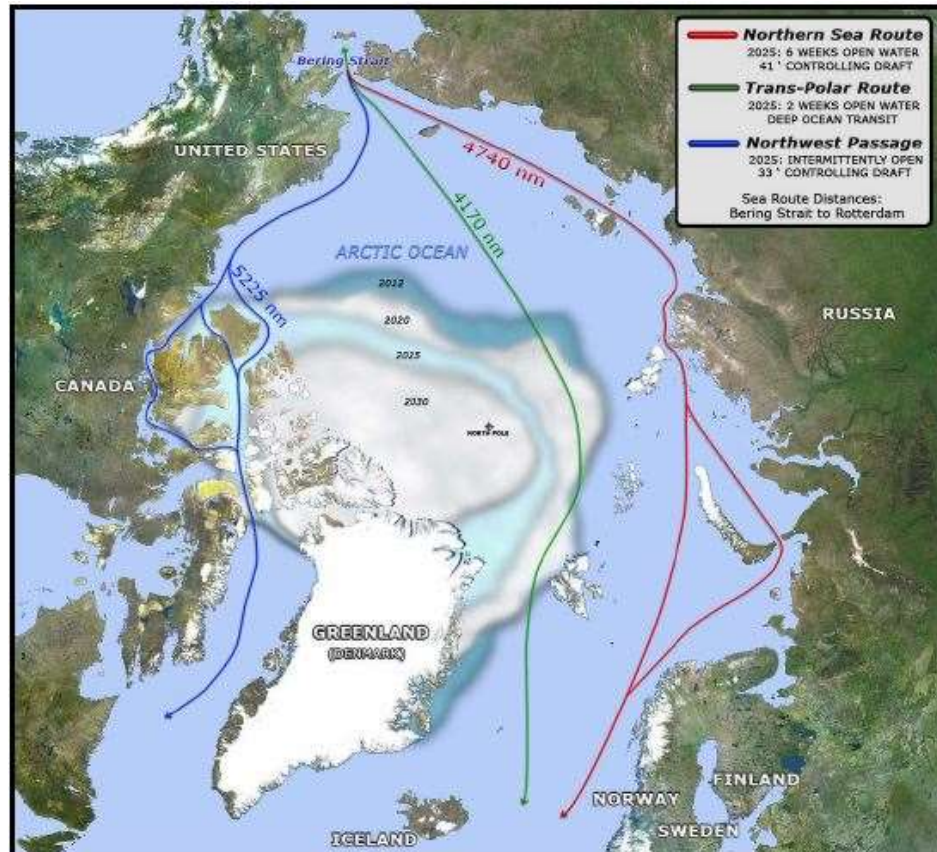


Figure 2. Geographical representation of the Northwest Passage, Northeast Passage/ Northern Sea Route. Source: Chief of Naval Operations, "U.S. Navy Arctic Roadmap 2014-2030," February 2014, https://www.navy.mil/docs/USN_arctic_roadmap.pdf (accessed November 12, 2019), 14.

Northwest Passage, Northeast Passage, and the Northern Sea Route

The Northwest Passage, Northeast Passage and the Northern Sea Route, shown in Figure 2, define the maritime shipping routes that traverse the Arctic region.

² Arctic Council, *Declaration on the Establishment of the Arctic Council*, Arctic Council, September 19, 1996, https://oarchive.arctic-council.org/bitstream/handle/11374/85/EDOCS-1752-v2-ACMMCA00_Ottawa_1996_Founding_Declaration.PDF?sequence=5&isAllowed=y (accessed 01 20, 2020), 1; Arctic Council. *Arctic Council*. September 13, 2018. <https://arctic-council.org/> (accessed January 20, 2020).

Specifically, the Northwest Passage describes the route along the northern edge of Canada, while the Northern Sea Route and Northeast Passage describe the maritime shipping lanes along the northern edge of Russia. Traditionally, the use of these maritime shipping lanes required the use of nuclear-powered icebreaker ships during the summer months to traverse the Arctic region at severely unprofitable costs for shipping companies.³ Scientists anticipate climate change and accelerated melting of sea ice to provide an ice-free Arctic summer within the next three to four decades.⁴ As the Northwest Passage, Northeast Passage, and Northern Sea Route become viable options for commercial shipping, the need to develop standards for Arctic shipping and Arctic shipping governance increases.⁵ Anticipated commercial impacts include increased use of commercial shipping by northern hemisphere countries due to the shortened distance over using maritime canals, such as the Panama and Suez, and increased ship sizes as canal-induced size restrictions disappear. Additionally, U.S. defense interests increase the need for U.S. Coast Guard presence along the coast of Alaska and U.S. Navy presence to ensure freedom of navigation along the maritime corridors.

Sea and Land Resources

As climate change erodes Arctic sea ice, the maritime and land access to the Arctic region's previously untapped natural resources increases. Across the Arctic region, oil and natural gas fields lay under the Arctic ice with an estimated 90 billion barrels of oil, 1669 trillion cubic feet of natural gas, and 44 billion barrels of liquid

³ Mia Bennett, *The Arctic Shipping Route No One's Talking About*, *The Maritime Executive*. May 5, 2019. <https://www.maritime-executive.com/editorials/the-arctic-shipping-route-no-one-s-talking-about> (accessed February 4, 2020).

⁴ Ibid.

⁵ Protection of the Arctic Marine Environment, *Arctic Marine Shipping Assessment (AMSA) Report 2009 Report*, (Iceland: Arctic Council, 2009), 50-53.

natural gas.⁶ On the European and Asian side of the Arctic region, minerals such as uranium, gold, molybdenum, silver, platinum, palladium, and titanium exist along with the Earth's largest deposits of coal and diamonds.⁷ On the North American side of the Arctic region, mineral deposits consist of gold, coal, copper, marble, zinc, lead, and silver.⁸ Whether the resources exist on-land or under-sea, increased profitability resulting from easier access to these natural resources leads to an increase of human, commercial, and national presence in the Arctic. This increased presence leads to the requirement for rules-based order in the Arctic region favorable to the liberal ideals of free trade and international cooperation.

Aerial hub

If one looks out across the tarmac of the Ted Stevens Anchorage International Airport, one sees cargo planes from North America, Asia, Europe, and the Middle East. Anticipated to become one of the world's top e-commerce hubs over

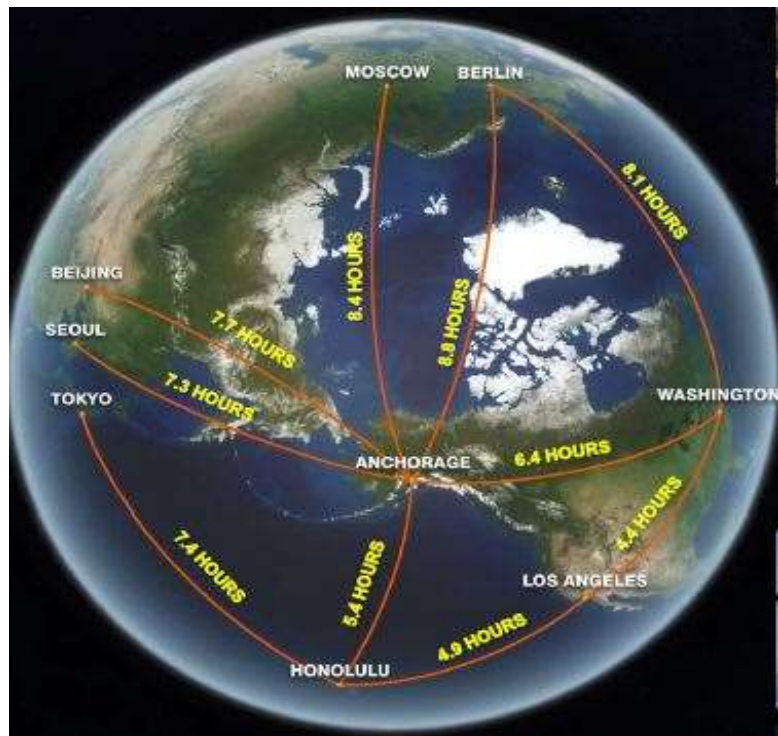


Figure 3. Geographical representation of flight times between major northern hemisphere cities and Anchorage, Alaska. Source: Alaskan Command, "Alaskan Command Command Overview Presentation," (Joint Base Elmendorf-Richardson, AK, 2019), 3.

⁶ Stephen P. Fainer, *Arctic Resources. The lure of energy resources in the frontier*, *The Coast Guard Journal of Safety and Security at Sea* 72, no. 3 (Fall 2015): 66.

⁷ Arctic.ru, *The Arctic Natural Resource*, n.d. <https://arctic.ru/resources/> (accessed February 4, 2020).

⁸ Ibid.

the next decade, Anchorage’s location on the edge of the Arctic region provides the ability for aircraft to reach any destination in the northern hemisphere in less than ten hours as shown in Figure 3.⁹ This demonstrates the strategic reach of aerial platforms for not only the U.S. but also for Russia who also maintains air bases in the Arctic region. Furthermore, any land based strategic nuclear attack against the United States would likely transit the Arctic region warranting the placement of the United States’ missile defense system and support radars in Alaska. The strategic reach of commercial and defense aerial platforms operating at or near the Arctic circle by the United States, its allies, and adversaries demonstrates the strategic importance of the Arctic region and, therefore, its defense.



Figure 4. State of Alaska compared to the continental United States with key Alaskan locations identified. Source: Source: Alaskan Command, "Alaskan Command Command Overview Presentation," (Joint Base Elmendorf-Richardson, AK, 2019), 8.

⁹ CAPA Center for Aviation. *Anchorage airport: an east-west hub growing into cargo and e-commerce*. August 22, 2019. <https://centreforaviation.com/analysis/reports/anchorage-airport-an-east-west-hub-growing-into-cargo-and-e-commerce-485935> (accessed February 4, 2020).

Arctic Equities: United States

When one thinks of the United States' presence in the Arctic, the state of Alaska comes to mind. One-fifth the size of the continental United States as shown in Figure 4, Alaska boasts nearly 6,640 miles of coastline, 665,384 square miles of land, 32 military facilities, and five major military installations.¹⁰ Military and homeland defense presence in the state primarily consists of U.S. Air Force fighters and bombers, U.S. Army light and medium infantry brigades, and U.S. Coast Guard capabilities to secure the coastline. Alaska also maintains the nation's primary missile defense capability to detect and destroy intercontinental missiles fired from any enemy adversary across the northern hemisphere.

With land territory and sea access in the Arctic region, the security environment of the Arctic directly impacts the United States. The Northern slope of Alaska and sea bed of the Arctic Ocean contain strategic resources, such as precious metals and fossil fuels, which contribute to the United States economy and energy freedom. Changes in Arctic region accessibility reduce costs for exploration, off-shore drilling, and mining operations further increasing American economic opportunities. Potential use of the Northwest Passage to transit between the Atlantic and Pacific Oceans provides economic and military opportunities as well as threats to national security.

As the United States military proponent for the Arctic region, the U.S. Northern Command focuses on "ways to ensure the Arctic is a secure and stable region where United States' national interests are safeguarded, the United States homeland is defended, and nations work cooperatively to address challenges." Alaska Command (ALCOM), a

¹⁰ Maynard M. Miller and Donald Lynch, *Encyclopaedia Britannica – Alaska*, August 12, 2019, <https://www.britannica.com/place/Alaska> (accessed January 18, 2020).

subordinate command to U.S. Northern Command, provides a venue to execute these Arctic responsibilities. In its theater strategy, U.S. Northern Command stresses the following:

The Arctic is an emerging national security interest to both the United States and Canada. The effects of climate change are creating opportunities for increased human activity in the Arctic region, as sea lines of communication become open for longer periods of the year. Access to the Arctic's untapped natural resources will also increase maritime traffic, raising sovereignty concerns among Arctic nations, as resource-constrained nations move to stake claims in the newly accessible frontier. The potential opening of the Arctic will widen the depth and breadth of our collective military challenges associated with assuring U.S. and Canadian broad and fundamental national interests in the region.¹¹

An emerging avenue of approach for sea and land based hostile action, access to the United States through the Arctic region increases as the climate warms.

Arctic Equities: Russia

With 53 percent of its coastline spanning the Arctic Ocean and approximately one third of its land territory residing above the Arctic circle, Russia remains the most prominent of the eight Arctic states.¹² These facts shape the economic, military, and policy actions of the Russian government. Since the Soviet era, Russians consistently view "its Arctic territories mainly from two angles: security and economic value."¹³ The natural gas, oil, minerals, and biological resources provide the backbone for the Russian economy. The emerging use of the Northern Sea Route and Northeast Passage along the Russian coast provides additional economic opportunities for Russia and additional risk

¹¹ U.S. NORTHCOM/NORAD. *U.S. NORTHCOM/NORAD Theater Strategy*. (Colorado Springs: U.S. NORTHCOM/NORAD, 2017), 6.

¹² The Arctic Institute, *Russia Facts and Figures*, n.d. <https://www.thearcticinstitute.org/countries/russia/> (accessed February 7, 2020).

¹³ Nurlan Aliyev, "Russia's Military Capabilities in the Arctic." *Rahvusvaheline Kaitseuringute Keskus, International Centre for Defence and Security, EEST - Estonia*. June 25, 2019. <https://icds.ee/russias-military-capabilities-in-the-arctic/> (accessed February 2, 2020).

to the Russian security environment. As such, the effects of climate change and the emergence of an ice-free Arctic region has resulted in significant policy changes in Russia over the past decade.

In 2015, Russia established the Arctic Commission consisting of representatives from all other federal agencies engaged in Arctic region operations to include the Russian National Security Council.¹⁴ President Putin charged the Arctic Commission with “evaluating the effectiveness of existing policy and making decisions related to the regional development.”¹⁵ In 2018, President Putin further charged the commission with determining “a special structure responsible for NSR (sic) development and adjacent territories, security, and management.”¹⁶ The establishment of this commission and the associated tasks given to the commission by President Putin demonstrate Russia’s desire to shape the Arctic region to provide the best economic and security outcome for Russia.

In 2008 and over the subsequent decade, Russia adopted four strategic documents that outline “plans to bolster the country’s Arctic military capabilities, strengthen territorial sovereignty, and develop the region’s resources and infrastructure.”¹⁷ Additionally, Russia reactivated and modernized military bases that exist in the Arctic, while investing heavily in construction of dual-use military and civilian Arctic Ocean sea ports.¹⁸ Finally, Russian restrictions on vessels traversing the Northern Sea Route since 2018 include: 45 day notifications, forbiddance to foreign military naval ships, and the

¹⁴ The Arctic Institute, *Russia Facts and Figures*, n.d. <https://www.thearcticinstitute.org/countries/russia/> (accessed February 7, 2020).

¹⁵ Ibid.

¹⁶ Ibid.; NSR stands for the Northern Sea Route.

¹⁷ Congressional Research Service, *Changes in the Arctic: Background and Issues for Congress*, Congressional, (Washington D.C.: Congressional Research Service, 2020), 30.

¹⁸ Ibid., 30.

required use of Russian flagged icebreakers.¹⁹ These efforts demonstrate an active Russian attempt to militarize and gain control of the Arctic region.

Analysts anticipate Russia to continue developing the Arctic region security environment with increased radio-electronic warfare capabilities, air force and air defense capabilities, surface and sub-surface naval capabilities, and increased capacity for keeping the Northern Sea Route open with more icebreaker ships.²⁰ Additionally, anticipated Russian efforts include increased control of the Northern Sea Route, while transforming the Arctic region into the strategic resource base for Russia.²¹ As demonstrated by its actions in leveraging the existing United Nations Convention on the Law of the Sea treaty and Economic Exclusion Zones rules, Russia's actions serve its own economic and security interests and drive a need for international cooperation to stop this malign behavior.

Arctic Equities: China

In January 2018, the State Council Information Office of the People's Republic of China released a white paper that established China's Arctic Policy. Despite a lack of Arctic land territory, China perceives that the "natural conditions of the Arctic and their changes have a direct impact on China's climate system and ecological environment, and, in turn, on its economic interests in agriculture, forestry, fishery, marine industry, and

¹⁹ Nurlan Aliyev, "Russia's Military Capabilities in the Arctic." *Rahvusvaheline Kaitseuringute Keskus, International Centre for Defence and Security, EEST - Estonia*. June 25, 2019. <https://icds.ee/russias-military-capabilities-in-the-arctic/> (accessed February 2, 2020).

²⁰ Ibid.

²¹ Nazrin Mehdiyeva, *Russia's Arctic Papers: The evolution of Strategic Thinking on the High North, NATO Defence College*. November 19, 2018. www.ndc.nato.int/research/research.php?icode=567 (accessed February 2, 2020).

other sectors.”²² Furthermore, China claims close involvement in “the trans-regional and global issues in the Arctic, especially in such areas as climate change, environment, scientific research, utilization of shipping routes, resource exploration and exploitation, security, and global governance.”²³ Understanding that climate change generates opportunities in the future Arctic and potential threats to its own way of life, China created policy to insert itself into the way-ahead for the Arctic.

China’s stated policy goals seek “to safeguard the common interests of all countries and the international community in the Arctic, and promote sustainable development in the Arctic.”²⁴ To accomplish these policy goals, China provides four primary Ways: deepening the exploration and understanding of the Arctic, protecting the eco-environment of the Arctic and addressing climate change, utilizing Arctic resources in a lawful and rational manner, and participating actively in Arctic governance and international cooperation.²⁵ Additionally, China seeks to extend its “Silk Road Economic Belt and 21st Century Maritime Silk Road” to include a Polar Silk Road through the Arctic circle.²⁶ Through its efforts as an official Arctic Council permanent observer member and accomplishments in Arctic economic investments, China closes the gap in accomplishing its strategic Arctic policy goal.²⁷ In the absence of a United States’ plan operationalizing the 2019 Department of Defense Arctic Strategy and providing a way to

²² Xinhua, *China's Arctic Policy*, (Beijing: The State Council Information Office of the People's Republic of China, 2018).

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

²⁷ David Auerswald, *China's Multifaceted Arctic Strategy*, May 24, 2019, <https://warontherocks.com/2019/05/chinas-multifaceted-arctic-strategy/> (accessed February 2, 2020).

compete with Chinese influence, China will continue to successfully impact Arctic Governance and become a major player in the Arctic.

Chapter 3: Current Arctic Operational Environment

I view the Arctic as the front line in the defense of the United States and Canada. . .

--U.S. General O'Shaughnessy to the Senate Armed Services Committee

The last decade brought significant change for United States forces in the Arctic region. These efforts have not sufficiently postured the Joint Force for the current Arctic security environment much less the emerging Arctic security environment anticipated over the next several decades. Between muddled command structures, immature plans, and under equipped/trained forces for Arctic operations, changes must be made to posture the Joint Force for future Arctic requirements. This chapter seeks to describe the current operational environment of the Joint Force in the Arctic region through open-source information and personal experience from operating in the Arctic region between 2017 and 2019. Specifically, this chapter discusses the current Arctic command force structure, status of unclassified planning, and overall force development.

Current Arctic Force Management

In accordance with the United States Unified Command Plan, the U.S. Northern Command maintains responsibility for the Arctic region. With the mission to “conduct homeland defense, civil support and security cooperation to defend and secure the United States and its interests”, U.S. Northern Command examines “how to support other United States’ government agencies in the region with search and rescue assets, humanitarian assistance, disaster response, and law enforcement.”¹ Additionally, as part of its requirement for homeland defense, U.S. Northern Command commits to detecting and

¹ Andrew Feickert, *The Unified Command Plan and Combatant Commands: Background and Issues for Congress*, (Congressional, Washington D.C.: Congressional Research Service, 2013), 42-46.

defeating “threats operating both in the Arctic and passing through the Arctic.”² As such, U.S. Northern Command maintains responsibility for all planning and force development to execute operations in the Arctic region, to include those forces that operate in Alaska.

On 27 October 2014, Secretary of Defense Chuck Hagel approved the reassignment of the Alaskan Command from U.S. Pacific Command to the U.S. Northern Command as a sub-unified command.³ Leadership at U.S. Pacific Command and U.S. Northern Command requested this reassignment to allow for a streamline of “command and control in Alaska and improves the ability of U.S. Pacific Command and U.S. Northern Command to execute their missions.”⁴ Leadership anticipated that this move would “improve partnerships with our Canadian neighbors and international allies in order to optimize support to all combatant commanders in the context of the evolving Arctic environment.”⁵ As early as 2014, senior leaders grasped the changing security environment of the Arctic and put into motion the command structure changes that would begin preparing the Joint Force to conduct operations in the future Arctic regions.

With this reassignment, the Alaska Command became responsible for “maximizing theater force readiness for Alaskan service members and expediting worldwide contingency force deployments from and through the Alaska.”⁶ Additionally, Alaska Command took on the responsibility of closely integrating “headquarters

² Terrence J. O’Shaughnessy, interview by Senate Armed Services Committee, *Statement of General Terrence J. O’Shaughnessy, United States Air Force Commander United States Northern Command and North American Aerospace Defense Command Before the Senate Armed Services Committee* Sen, (February 26, 2019).

³ Alaskan Command Public Affairs, *Alaskan Command joins U.S. Northern Command*, November 3, 2014, <https://www.af.mil/News/Article-Display/Article/547709/alaskan-command-joins-us-northern-command/> (accessed February 5, 2020).

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.

activities with Alaska NORAD Region, the 11th Air Force, and U.S. Army Alaska.”⁷

This change gives Alaska Command the responsibility for coordinating, planning, and developing the Joint Forces for operations in the Arctic region; however, the Joint Staff never realigned the service components command structure out of U.S. Pacific Command to U.S. Northern Command to give Alaska Command the forces to execute its mission.

As of 2019, the U.S. Army Alaska remains aligned with U.S. Army Pacific and the 11th Air Force remains with U.S. Pacific Air Force. Representing the only maritime forces assigned to the Arctic region, the U.S. Coast Guard remains aligned with the Department of Homeland Security. Finally, the Missile Defense Complex at Fort Greely remains under the command and control of the Missile Defense Agency instead of the Space and Missile Defense Command. While many agreements exist that create dotted lines on command structure charts for support, Alaska Command only gains command and control of these forces in crisis events through formal requests to the Joint Staff. This results in a significant challenge to cohesive planning across the Joint Force.

To further confuse the command and control structures in the Arctic region, misalignment exists between the Combatant Commands and the services. Following the reassignment of Alaska Command from the U.S. Pacific Command to the U.S. Northern Command, the border between the two combatant commands shifted to put Alaska under the responsibility of U.S. Northern Command.⁸ While this change occurred at the Joint Force level in 2014, the service components such as U.S. Army Pacific and U.S. Pacific

⁷ Alaskan Command Public Affairs, *Alaskan Command joins U.S. Northern Command*, November 3, 2014, <https://www.af.mil/News/Article-Display/Article/547709/alaskan-command-joins-us-northern-command/> (accessed February 5, 2020).

⁸ Ibid.

Air Forces retained Alaska within the Pacific area of responsibility.⁹ This misalignment directly results in significant problems dealing with planning and force development.

Current Arctic Planning

Considered the “first of its kind in more than three decades” in the Arctic region, the Alaska Command hosted the Arctic Edge exercise in the winter of 2018.¹⁰ The exercise consisted of U.S. Air Force, Marines, Army, and Special Forces executing simulated Defense Support to Civil Agencies operations and security operations in the Arctic conditions of northern Alaska.¹¹ During this exercise, military leaders and planners identified significant lessons learned that directly impact established contingency and homeland defense plans. For example, the Joint Force identified to secure the oil fields in northern Alaska, the radar stations distributed across the Arctic region, and the Missile Defense Complex at Fort Greely doubled as formations identified by the Global Force Management Allocation Plan to support contingency operations outside of the Arctic region. Additionally, daily activities and planning requirements for this exercise demonstrated that multiple combatant commands, specifically U.S. Indo-Pacific Command and U.S. Northern Command, relied on the limited manpower and equipment to execute their missions in contingency and wartime scenarios.

⁹ U.S. Army Pacific, *U.S. Army Pacific - About Us*, February 2020, <https://www.usarpac.army.mil/about.asp> (accessed February 6, 2020); U.S. Pacific Air Forces, *Pacific Air Forces Units and Bases*, February 2020, <https://www.pacaf.af.mil/Info/PACAF-Units/> (accessed February 6, 2020).

¹⁰ U.S. Department of Defense, *Arctic Conditions Provide Valuable Lessons in Alaska Exercise*, March 20, 2018, <https://www.defense.gov/Explore/News/Article/Article/1470645/arctic-conditions-provide-valuable-lessons-in-alaska-exercise/> (accessed February 6, 2020).

¹¹ *Ibid.*

Current Arctic Force Development

The confused ownership of forces in Alaska has led to onerous and lengthy efforts to improve the readiness of forces operating in the region. For example, in 2017, the commander of the 59th Signal Battalion, while dual-hatted as the U.S. Army Alaska G6, submitted an Operational Needs Statement to acquire Arctic Kits for tactical communications systems to operate in the Arctic. The U.S. Army Research, Development and Engineering Command originally tested the Arctic kits in Alaska during the mid-2000s; however, the systems never became a program of record, failed to receive sustainment, and became incompatible with upgrades made to the communications systems. The approval process required concurrence by the U.S. Army Forces Command as the service component, the U.S. Northern Command through Alaska Command as the Arctic proponent, and the U.S. Indo-Pacific Command as the owner of the formations requiring the Arctic kits. The Operational Needs Statement required justification against plans for each of the commands and took eight months to reach Headquarters Department of the Army G-3/5/7 for consideration.¹²

Arctic Specific Capabilities

Military equipment should be able to operate in the environs to which it is assigned. In the Arctic, ideally, military equipment should operate down to temperatures of -60F.¹³ This requirement should be listed in all requirement documents. Unfortunately, due to cost thresholds, Services limit general military equipment to a minimum temperature threshold of -24F. This temperature range does not meet the

¹² The author of this thesis served as the 59th Signal Battalion Commander/U.S. Army Alaska G6 in 2017.

¹³ Department of Defense, *MIL-STD-810G: Environmental Engineering Considerations and Laboratory Tests*, (Washington D.C.: Department of Defense, 2008), 502.5-4.

minimum temperatures found in the Arctic region. Additional temperature constraints develop when working with electronics equipment. For example, computerized systems fail when temperatures reach below freezing, touchscreens freeze and crack when the liquid inside freezes, and battery life span significantly decreases in extreme cold temperatures. Specific challenges noted during Exercise Arctic Edge 2018 include failed laptops due to frozen hard drives, Blue Force Tracking systems failing due to touchscreens shattering when using the stylus, and cell phone batteries lasting less than 30 minutes off a full charge. Additional considerations include the use of heavy gloves on touchscreens or tiny radio buttons when environmental conditions prevent the glove's removal. The Arctic Joint Force routinely identify these concerns as direct impacts to Arctic operations; however, non-Arctic headquarters with no familiarity of Arctic environmental concerns do not prioritize the capability requests. Additionally, capability development across the Services require approved plans to justify specific requirements. While the U.S. Northern Command began developing contingency plans for the emerging Arctic security environment in 2019, existing plans focus on ballistic missile defense and security cooperation, which does not provide the necessary information for Service specific capability development.

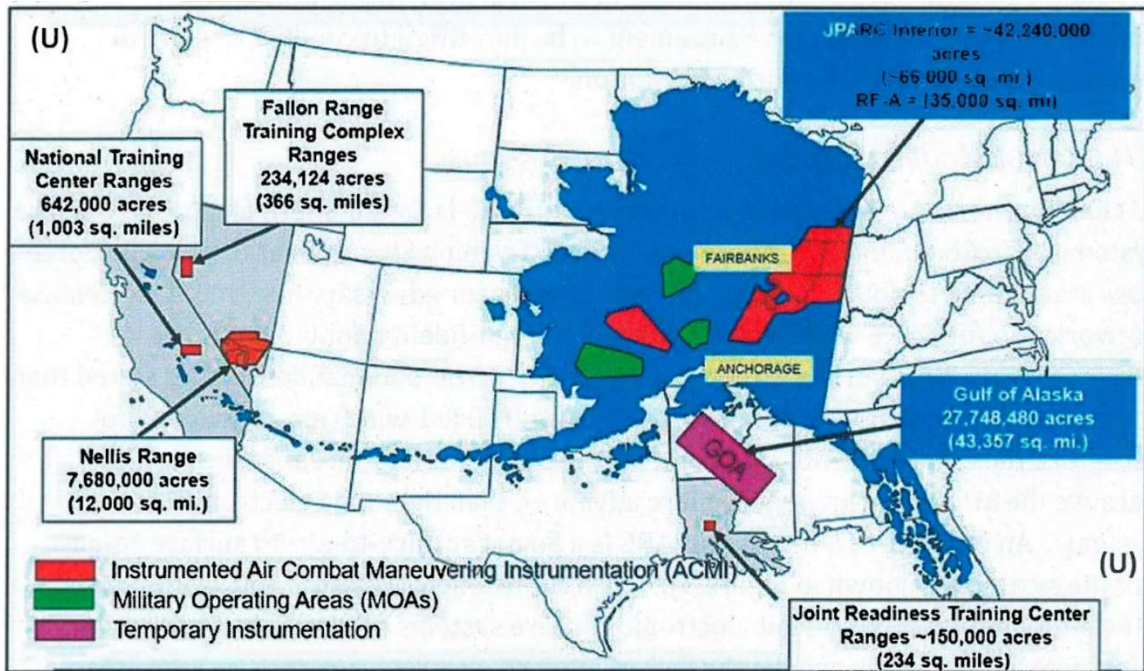


Figure 5. JPARC and Alaska size compared to the continental United States. Source: Department of Defense Inspector General, *Audit of Training Ranges Supporting Aviation Units in the U.S. Indo-Pacific Command*, DoD IG Report, (Washington D.C.: Department of Defense, 2019), 15.

Joint Pacific Alaska Range Complex

Consisting of 65,000 square miles of air space, nearly 25,000 square miles of land space, and 42,000 square nautical miles of surface, subsurface, and overlying airspace, the Joint Pacific Alaska Range Complex is the largest training area in the Department of Defense.¹⁴ While the complex is roughly the size of Florida as shown in Figure 5, a small detachment out of Eielson Air Force Base manages the majority of the training area with U.S. Army Alaska managing smaller portions outside of Fort Greely.¹⁵ The individual Services have the “responsibility, authority, and funding to develop the

¹⁴ Alaskan Command Public Affairs, "JPARC: Winning the Future Fight," *Joint Base Elmendorf-Richardson Units*, 2011, <https://www.jber.jb.mil/Portals/144/units/JPARC/PDF/JPARC-Fact-Sheet.pdf> (accessed March 7, 2020).

¹⁵ Isaac Johnson, "Prepping the Battlespace for RED FLAG-Alaska," *354th Fight Wing Public Affairs*, August 8, 2019, <https://www.eielson.af.mil/News/Article-Display/Article/1929585/prepping-the-battlespace-for-red-flag-alaska/> (accessed March 7, 2020).

ranges” with a governing body that helps synchronize the “investments and resources to increase efficiencies and joint training opportunities.”¹⁶ While the bi-annual Arctic Edge and annual RED-FLAG exercises take place at the Joint Pacific Alaska Range Complex, the Joint Force regrettably underutilizes the range complex. Outside of the major exercises, Alaska-based U.S. Air Force, U.S. Coast Guard, and U.S. Army units conduct training at the complex during their primary training months. Emerging training requirements by the U.S. Marine Corps necessitate additional use of the Joint Pacific Alaska Range Complex; however, current timelines show several years of development needed before full U.S. Marine Corps use of the range complex.¹⁷

Despite the outstanding training opportunity that the Joint Pacific Alaska Range Complex provides to the Joint Force, the Department of Defense Inspector General determined significant shortfalls in capability and capacity. Specifically, the Joint Force lacks access to the range complex due to restrictions on overflights and ordnance.¹⁸ Additionally, the Joint Pacific Alaska Range Complex antiquated electronic systems prevents integration with modern weapon systems such as the targeting systems on the newer U.S. Air Force fighters.¹⁹ Finally, lack of modernization on ranges, as demonstrated by the use of garbage dumpsters in lieu of real targets, prevents realistic training for ground and air forces.²⁰ A lack of modernization prevents the Joint Pacific

¹⁶ Alaskan Command Public Affairs, "Joint Pacific Alaska Range Complex - Frequently Asked Questions," *Joint Base Elmendorf-Richardson Units*, 2011, <https://www.jber.jb.mil/Portals/144/units/JPARC/PDF/JPARC-FAQ.pdf> (accessed March 7, 2020).

¹⁷ Shawn Snow, *Why Alaska could become the Corps' next Twenty-Nine Palms*. July 22, 2019. <https://www.marinecorpstimes.com/news/your-marine-corps/2019/07/22/why-alaska-could-become-the-corps-next-twentynine-palms/> (accessed March 13, 2020).

¹⁸ Department of Defense Inspector General, *Audit of Training Ranges Supporting Aviation Units in the U.S. Indo-Pacific Command*, DoD IG Report, (Washington D.C.: Department of Defense, 2019), 17.

¹⁹ *Ibid.*, 16.

²⁰ Department of Defense Inspector General, *Audit of Training Ranges Supporting Aviation Units in the U.S. Indo-Pacific Command*, DoD IG Report, (Washington D.C.: Department of Defense, 2019), 15.

Alaska Range Complex from developing a Joint Force fully prepared for the emerging Arctic security environment.

The Department of Defense Inspector General further identified a significant lack of Unified Command Structure for the Joint Pacific Alaska Range Complex.²¹

Specifically, the Inspector General found a lack of joint oversight and management and instead found the range complex operating under the auspices of the individual

Services.²² While the Alaska Command maintains coordination oversight of the Joint Pacific Alaska Range Complex, the continued disconnect in lines of command between Alaska-based units under the U.S. Indo-Pacific Command and Alaska Command under the U.S. Northern Command prevents a joint management of the range complex.²³

Referencing the Secretary of Defense realignment of Alaska Command from U.S. Indo-Pacific Command to U.S. Northern Command and the overall management of the Joint Pacific Alaska Range Complex, Alaska Command asserts “U.S. Alaska Command is the only joint command in Alaska. Therefore, with the realignment of U.S. Alaska Command, there is no local joint command that oversees all military activity of JPARC.”²⁴ The continued lack of streamlined command and control under one Combatant Command directly impacts training of the Joint Force in the Arctic.

Arctic Exercises.

Starting in 2018 with the intent to repeat every two years, the Alaska Command conducts Arctic Edge: a combined, joint exercise that includes U.S. Marines, Special

²¹ Department of Defense Inspector General, *Audit of Training Ranges Supporting Aviation Units in the U.S. Indo-Pacific Command*, DoD IG Report, (Washington D.C.: Department of Defense, 2019), 31.

²² *Ibid.*, 31.

²³ *Ibid.*, 31.

²⁴ *Ibid.*, 31.

Operations, the U.S. Army, and the U.S. Air Force. This exercise routinely involves other Arctic or near-Arctic nations such as Canada and Britain. Alaska Command conducts this exercise through formal and informal requests with the Services, U.S. Indo-Pacific Command, and foreign governments. While not aligned with any particular Combatant Command plan, the exercise “comprised a series of isolated vignettes that included a joint Army and Marine Corps live-fire exercise on snow- and ice-covered ranges, and several elements that focused on defense capabilities . . .”²⁵ This exercise further provides an opportunity to “. . . develop teams and relationships across Services, which allows us to protect and defend the United States.”²⁶

While Alaska Command conducts its Arctic exercises in Alaska, Joint Force members stationed in Europe participate in Swedish and Norwegian Arctic exercises such as Exercise Cold Response and Exercise Arctic Challenge. Conducted since 2013, the Arctic Challenge exercise includes aircraft and ground personnel from “Denmark, USA, the Netherlands, Germany, France and the United Kingdom” as part of the Nordic Defence Cooperation.²⁷ While the CoVID19 virus pandemic resulted in its cancelation, the Cold Response exercise intended to bring together 1,500 members from the entire Joint Force to conduct a large-scale, tactical field exercise.²⁸ These Arctic exercises

²⁵ U.S. Department of Defense, *Arctic Conditions Provide Valuable Lessons in Alaska Exercise*, March 20, 2018, <https://www.defense.gov/Explore/News/Article/Article/1470645/arctic-conditions-provide-valuable-lessons-in-alaska-exercise/> (accessed February 6, 2020).

²⁶ *Ibid.*

²⁷ Thomas Nilsen, *Over 100 aircraft take part in multinational exercise in Arctic*, May 27, 2019, <https://www.rcinet.ca/eye-on-the-arctic/2019/05/27/arctic-challenge-europe-military-exercise-sweden-finland-norway/> (accessed March 7, 2020).

²⁸ Marine Corps Forces Europe, *U.S. Forces to Hone Arctic Warfare Skills in Norway's High North in Exercise Cold Response 20*, March 3, 2020, <https://www.marines.mil/News/News-Display/Article/2100494/us-forces-to-hone-arctic-warfare-skills-in-norways-high-north-in-exercise-cold/> (accessed March 13, 2020).

included military members and capabilities from across the Joint Force. Regrettably, these exercises did not include the Alaska Command nor any of the United States Arctic forces based in Alaska. Furthermore, the Nordic Defence Cooperation does not include Alaska Command, which further complicates force development and force planning for the Joint Force in the Arctic.

Chapter 4: Future Arctic Operational Environment

While the fundamental nature of war has not changed, the pace of change and modern technology, coupled with shifts in the nature of geopolitical competition, have altered the character of war in the 21st century . . . As a result, decision space has collapsed, and we can assume that any future conflict will involve all domains and cut across multiple geographic regions.

-- General Joseph F. Dunford, Jr., *Joint Force Quarterly*, Issue 89

As discussed prior to this chapter, the Arctic region is a complex, emerging security environment consisting of direct and indirect Great Power competition with Russia and China. The Arctic region cuts across multiple geographic combatant commands, to include U.S. Northern Command, U.S. Indo-Pacific Command, and U.S. European Command. Multiple plans across the combatant commands require the capabilities that Arctic forces provide. Finally, due to challenges in force development, the United States possesses no competitive military advantage in the Arctic region. While these statements seem hopeless, the Joint Staff's concept of Global Integration, designed to solve these types of problems globally, provides the way-ahead for posturing the United States to address the future Arctic security environment.

In development for the past decade with significant changes over the past few years, the Global Integration concept provides an "arrangement of cohesive military actions in time, space, and purpose, executed, as a whole, to address transregional, all-domain, and multi-functional challenges."²⁹ Global Integration provides an approach to "integrate planning, prioritize resources, mitigate risk, and assess Joint Force progress toward strategic objectives for the Secretary."³⁰ As shown in Figure 6, Global Integration

²⁹ Chairman of the Joint Chiefs of Staff, *Chairman of the Joint Chiefs of Staff Instruction (CJCSI 3050.01): Implementing Global Integration*, (Washington D.C.: Joint Staff, 2018), 1.

³⁰ *Ibid.*, 1.

utilizes three primary pillars as part of this approach: Force Management, Planning, and Force Development.³¹ This chapter provides a way-ahead for the Arctic region and the Joint Force that utilizes these three pillars of Global Integration.

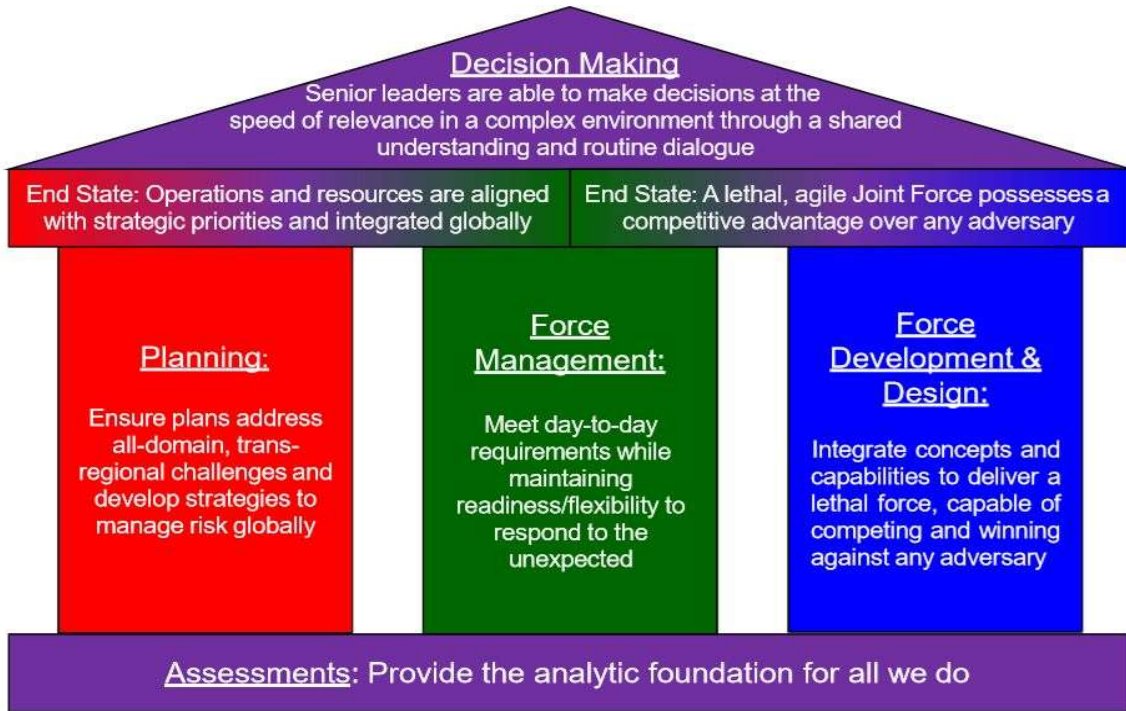


Figure 6. Global Integration includes Planning, Force Management, and Force Development. Source: Chairman of the Joint Chiefs of Staff, *Chairman of the Joint Chiefs of Staff Instruction (CJCSI 3050.01): Implementing Global Integration*, (Washington D.C.: Joint Staff, 2018), C-1.

Changes to Arctic Force Management

The first pillar of Global Integration, Force Management, provides the processes the Joint Force “employs to plan force employment and meet day-to-day requirements while maintaining readiness and flexibility to respond to the unexpected.”³² Specifically,

³¹ Joint Chiefs of Staff, "Globally Integrated Operations," *Joint Chiefs of Staff*, 2018, https://www.jcs.mil/Portals/36/Documents/Doctrine/MECC2018/globally_integrated_ops.pdf?ver=2018-10-30-085737-770 (accessed November 14, 2018).

³² Chairman of the Joint Chiefs of Staff, *Chairman of the Joint Chiefs of Staff Instruction (CJCSI 3050.01): Implementing Global Integration*, (Washington D.C.: Joint Staff, 2018), C-9.

the Force Management pillar includes strategic documents such as the National Security Strategy, the National Defense Strategy, and the National Military Strategy along with the Joint Staff documents such as the Global Force Management Allocation Plan and the Global Force Management Implementation Guidance.³³ The strategic documents directly refer to the Arctic region as an emerging security environment that needs attention. The Global Force Management Allocation Plan and the Global Force Management Implementation Guidance provides the “integration of readiness, assignment, allocation, apportionment, and assessment information.”³⁴ Utilization of the Arctic guidance provided by the strategic documents and the Joint Staff processes described through Force Management allows for changes to the Arctic region command and control structures that provides clarity and ownership for Alaska Command to fully execute its mission and posture itself to be prepared for the future Arctic security environment.

Functional Combatant Commands typically consist “of forces of two or more Military Departments established to perform designated missions” and exercise command authority as delegated over the military forces made available to them.³⁵ Additionally, Functional Combatant Commands have “the authority to employ forces within their commands to carry out assigned missions, and they act as the supported commander for planning and executing of these missions.”³⁶ Operating as a Functional Combatant Command provides the ability to plan, exercise, and operate in transregional security environments, while the restrictions inherent of sub-Unified Commands under a

³³ Chairman of the Joint Chiefs of Staff, *Chairman of the Joint Chiefs of Staff Instruction (CJCSI 3050.01): Implementing Global Integration*, (Washington D.C.: Joint Staff, 2018), C-10.

³⁴ *Ibid.*, C-9.

³⁵ Joint Staff, *Joint Publication 3-33: Joint Task Force Headquarters*, (Washington D.C.: Joint Staff, 2018), III-3.

³⁶ *Ibid.*, IV-5.

Geographic Combatant Command constrain actions to a geographic area. As the Arctic region straddles three Geographic Combatant Commands, requires forces specifically trained and equipped for the Arctic environment, and needs security cooperation with Arctic Council members at a minimum, the creation of an Arctic Functional Combatant Command makes sense. Transitioning the Alaska Command to fulfill an Arctic Functional Combatant Command requirement allows for the utilization of existing resources, which minimizes potential costs while allowing the Joint Force to provide a focus for planning and force development to meet the emerging security environment in the Arctic region.

Further requirements under the Force Management pillar of Global Integration involve realignment of service component commands and reassignment of forces. At a minimum, the U.S. Army Pacific and the U.S. Pacific Air Forces need to realign their designated Areas of Responsibility to the U.S. Indo-Pacific Command Area of Responsibility as approved by the Secretary of Defense in 2014. This realignment ensures planning efforts align with Joint Force requirements, while allowing for force development to fall under the proper proponent at the Joint Force level. Finally, reassignment of Alaska-based Arctic formations under U.S. Army Alaska and the 11th Air Wing to Alaska Command, henceforth Arctic Command, allows for the headquarters to fulfill its mission of planning for the future Arctic security environment and developing the Joint Force to succeed in the Arctic region. Increasing the apportionment of forces to the U.S. Indo-Pacific Command or creating a habitual relationship between the new Arctic Command and U.S. Indo-Pacific Command mitigates the resulting

decrement of Joint Forces that the U.S. Indo-Pacific Command needs to meet its wartime mission.

New Arctic Planning

The Global Integration concept of Force Planning consists of Global Campaign Plans that address the National Defense Strategy designated adversaries of concern, the Joint Strategic Campaign Plan that operationalizes the National Military Strategy, campaign and contingency planning for the combatant commands, Regional Campaign Plans, and Functional Campaign Plans.³⁷ The development of these plans under Global Integration allows the Secretary and Chairman to “set priorities to prosecute effective campaigning and to shape the Joint Force.”³⁸ For each of the campaign plans, the Joint Staff assigns a Coordinating Authority that facilitates collaboration among Combatant Commands, Services, government departments and agencies, allies, and partner nations.³⁹ These facilitation efforts lead to globally integrated plans. As the Arctic region consists of multiple Services, government departments and agencies, allies, and partner nations spread across multiple Geographic Combatant Commands and does not meet the threshold of a Global Campaign Plan from the National Defense Strategy, the way-ahead for the Arctic region requires a Coordinating Authority with a Regional Campaign Plan focused on the Arctic region.

The Arctic’s unique security environment poses a significant variable in planning for efforts in the Arctic region. As discussed previously, operations in the Arctic

³⁷ Chairman of the Joint Chiefs of Staff, *Chairman of the Joint Chiefs of Staff Instruction (CJCSI 3050.01): Implementing Global Integration*, (Washington D.C.: Joint Staff, 2018), C-7.; The National Defense Strategy designates the most pressing challenges in the strategic environment as China, Russia, North Korea, Iran, and Violent Extremist Organizations (VEOs).

³⁸ *Ibid.*, C-7.

³⁹ *Ibid.*, C-7.

environment require specific capabilities and training typically not found within the traditional Joint Force. Additionally, the existing integration of military capabilities with government departments and agencies to create resiliency and redundancy in the austere environment does not exist in other regions. Furthermore, effective building of Arctic awareness, enhancing of Arctic operations, and strengthening of the Arctic rules-based order necessitates an understanding of the Arctic region's unique environment. Building an effective campaign plan requires an Arctic based Coordinating Authority with a focus specifically on the region.

Finally, planning efforts to counter Russian or Chinese Great Power competition must be tailored as each have its own motivations in the Arctic region. Russia's militarization of the Arctic region and China's effort to build the Polar Silk Road require focused efforts to counter. To regain strategic advantage over Russia and China, these efforts must nest with the respective Global Campaign Plans and the strategic ends of the Department of Defense Arctic Strategy, while remaining all-encompassing.

Future Arctic Force Development.

The Global Integration pillar of Force Development looks at the Joint Force "functions, capabilities, and concepts to improve the strength, agility, endurance, resilience, flexibility, and awareness of the current force."⁴⁰ Force Development looks across Doctrine, Organizational structures, Training, Materiel solutions, Leader development, Personnel, and Facilities (DOTMLPF), identifies capability gaps, and pursues today's innovations to improve performance tomorrow or into the future.⁴¹

⁴⁰ Chairman of the Joint Chiefs of Staff, *Chairman of the Joint Chiefs of Staff Instruction (CJCSI 3050.01): Implementing Global Integration*, (Washington D.C.: Joint Staff, 2018), C-13.

⁴¹ *Ibid.*, 13-14.

Requirements generate the capability gaps across the DOTMLPF and plans inform the requirements. While the Joint Force maintains a tendency to pursue material solutions to fill capability gaps, Global Integration's Force Development includes nonmaterial solutions such as doctrine, training, and Tactics, Techniques, & Procedures (TTPs) to mitigate capability gaps when circumstances make material solutions infeasible. A combatant command focused purely on the Arctic region force development provides an opportunity to prioritize material solutions to meet Arctic region campaign plans, while developing and advocating for non-material solutions.

Mission Essential Equipment Listing

Joint doctrine provides a mechanism to develop and equip the Joint Force with the non-standard equipment required to conduct Arctic operations. This mechanism, called a Joint Mission Essential Equipment List, allows combatant commanders to identify tools that address missions outside the scope of a unit's standard equipment set.⁴² Following the development of a Regional Campaign Plan and an assessment by the Coordinating Authority to identify capability gaps, the Arctic Functional Combatant Command will create a Joint Mission Essential Equipment List to develop unique capabilities for the Joint Force operating in the Arctic environment.

Joint Arctic Training Center

The concept of a Joint Arctic Training Center exists in theory, but not in reality. Alaska Command coordinates the Services' operations and efforts at the Joint Pacific

⁴² Joint Staff, *Joint Publication 3-33: Joint Task Force Headquarters*. (Washington D.C.: Joint Staff, 2018), B-3; United States Government Accountability Office, *Regionally Aligned Forces: DoD Could Enhance Army Brigades' Efforts in Africa by Improving Activity Coordination and Mission-Specific Preparation*, Report to Congressional Committees, (Washington D.C.: United States Government Accountability Office, 2015), 32.

Alaska Range Complex; however, the command does not maintain any true command and control over the facility or the Services operating the range complex. As identified by the Department of Defense Inspector General, this resulted in a lack of modernization, coordinated use, and access for training of the Joint Force.⁴³ With the consolidation and management of the Joint Pacific Alaska Range Complex under the auspices of an Arctic Functional Combatant Command with authorities over the Arctic Joint Force, the concept of a Joint Arctic Training Center becomes a reality. This transition allows the Joint Staff to hold the Arctic Functional Combatant Command responsible for the necessary modernization, coordinated use, and access required by all Services.

Globally Integrated Exercises

The concept of Globally Integrated Exercises provides a “structure focusing on combatant commander (CCDR) and higher authority integration.”⁴⁴ Furthermore, the characteristics of Globally Integrated Exercises direct that joint training must reflect the strategic environment, emphasize global integration, span the range of military operations, and enable Joint Force innovation.⁴⁵ These types of exercises provide an opportunity to be led by a Combatant Commander with two or more Combatant Commanders in support while working effectively with the “Joint Staff, CCMDs, Services, interagency, and Allies and Partners to address global integration/TMM threats.”⁴⁶ Through the use of an Arctic Functional Combatant Command, the concept of Globally Integrated Exercises becomes a reality as the exercises in the Arctic region

⁴³ Department of Defense Inspector General, *Audit of Training Ranges Supporting Aviation Units in the U.S. Indo-Pacific Command*, DoD IG Report, (Washington D.C.: Department of Defense, 2019), 15-18, 31.

⁴⁴ Stephen Gallotta, James A. Covington, and Timothy B Lynch, "Globally Integrated Exercises: Optimizing Joint Force C2 Structure," (*Joint Forces Quarterly*, 2nd Quarter 2018), 18.

⁴⁵ *Ibid.*, 19.

⁴⁶ *Ibid.*, 20.

straddle three Geographic Combatant Commands and requires significant coordination with the Services, interagency partners, and various Arctic nations. Allowing the Arctic Functional Combatant Command the authority and ability to run Arctic specific exercises across the Pacific, North America, and Europe ensures a coordinated effort in preparing for the emerging Arctic security environment, addresses Great Power competition with Russia and China in the Arctic region, identifies Joint Force capability gaps to operate in Arctic environments, and guarantees a continuity of effort in Arctic planning.

Chapter 5: Operationalizing the Department of Defense Arctic Strategy

The Arctic is changing. We must proceed, cognizant of what we must do now, and consistent with our principles and goals for the future.

-- President Barack Obama, *National Strategy for the Arctic Region*

The 2019 Department of Defense Arctic Strategy provides the ends, ways, and means to address the emerging security environment of the Arctic region. Its desired end-state for the Arctic region is a “secure and stable region in which United States national security interests are safeguarded, the United States homeland is defended, and nations work cooperatively to address shared challenges.”¹ The Joint Force accomplishes this end-state through strengthening the Arctic rules-based order, building Arctic awareness, and enhancing Arctic operations. This chapter uses the recommendations for a Future Arctic Operational Environment based on Global Integration to operationalize the 2019 Department of Defense Arctic Strategy.

Strengthening the Arctic Rules-Based Order

The Department of Defense seeks to strengthen rules-based order in the Arctic region. Specifically, the 2019 Department of Defense Arctic Strategy seeks cooperation with allies and partners to deter aggression and preservation of freedom of the seas. Current Force Management constructs limit the success of this goal. Allies and partners reside in multiple Geographic Combatant Command areas of responsibility which confuses planning efforts and requires integration of efforts across multiple Combatant Command staffs. The Arctic Council, which provides an international body to enable Arctic region governance, rotates through the Combatant Commanders’ areas further

¹ Office of the Under Secretary of Defense for Policy, *Report to Congress Department of Defense Arctic Strategy*, Report to Congress, (Washington D.C.: Department of Defense, June 2019), 9-11.

complicating coordination. Additionally, U.S. Northern Command, the current Combatant Command designated as the proponent for the Arctic region, retains no authority over the Arctic capabilities available as part of the Joint Force.

Transitioning Alaska Command from a subordinate Combatant Command to a Functional Combatant Command with the authorities to operate across multiple Geographic Combatant Command areas of responsibility provides necessary conditions to strengthen the rules-based order in the Arctic region. Utilizing existing resources with simple reassignment, this transition provides the Joint Force with a headquarters capable of directly engaging allies and partners with strategic dialogue and information sharing. Additionally, a realignment of forces from the Pacific Area of Responsibility to the Arctic region allows the Joint Force to better and more effectively deter aggression and preserve freedom of the seas through daily operations.

Building Arctic Awareness

The 2019 Department of Defense Arctic Strategy intends to build Arctic awareness through enabling domain awareness; improving communications and Intelligence, Surveillance, and Reconnaissance, increasing in-situ observations and enhancing environmental modeling; and supporting the Coast Guard's homeland security missions.² Success building Arctic awareness requires a multi-service and whole of government approach that identifies specific objectives over time as resources and technology becomes available. Specific prioritization of efforts also needs to occur in a resource constrained environment. Designating a Coordinating Authority for the Arctic

² Office of the Under Secretary of Defense for Policy, *Report to Congress Department of Defense Arctic Strategy*, Report to Congress, (Washington D.C.: Department of Defense, June 2019), 9-11.

region, with a streamlined command and control effort, allows for multilateral efforts and coordination across multiple combatant commands. Finally, planning to build Arctic awareness must include an assessment of the threats resulting from the growing Great Power competition with Russia and China in the Arctic region. Development of a Regional Campaign Plan by a Functional Combatant Command with the authority to coordinate efforts across a combatant command's area of responsibility provides the mechanism to synchronize efforts successfully and ultimately build Arctic awareness over time.

Enhancing Arctic Operations

To enhance Arctic operations, the Department of Defense directs the Joint Force to conduct regular exercises and deployments in the Arctic, execute cold weather training, refine Arctic posture, support resilient infrastructure, and work with other federal departments and agencies on civil contingency responses. Successful operation of equipment and protection of the Joint Force in the Arctic region's harsh environment while conducting training, exercises, and deployments requires modernization through a streamlined process that allows for proper prioritization and command support. Furthermore, the Joint Force formations operating in the Arctic region require specialized equipment otherwise deemed expensive to field across the entire Joint Force. Finally, training, exercises, and deployments of the Joint Force require an integrated approach that nests with campaign and contingency plans.

Utilizing a Functional Combatant Command for all Arctic region operations ensures that the Arctic Joint Force receives the proper equipment as it becomes available. The creation of a Mission Essential Equipment List for the Arctic Functional Combatant

Command allows development of specific capabilities to be used by Joint Forces operating in the Arctic region. Utilizing the Globally Integrated Exercise concept allows exercises and deployments to identify shortcomings in the Joint Force, while exposing areas that need to be deconflicted across the Global Campaign Plans and Combatant Campaign Plans. Utilizing a fully resourced Joint Arctic Training Center to train and exercise the Joint Force postures all properly equipped formations to support Arctic operations.

Conclusion

The United States failed to fully comprehend and address the implications of a thawing Arctic region until 2014 when the Secretary of Defense reassigned Alaska Command. For their own national interests, China and Russia began addressing the Arctic region's security environment in the late 1990s and early 2000s, which puts the United States at a strategic disadvantage. The 2019 Department of Defense Arctic Strategy provides the foundation for addressing the Great Power competition in the Arctic region and allows for the United States to regain strategic advantage; however, optimizing efforts requires effective operationalization of the Arctic Strategy. Global Integration provides the approach to operationalize the 2019 Department of Defense Arctic Strategy. Transitioning the Alaska Command to an Arctic Functional Combatant Command ensures a focus on the Arctic region across all areas of responsibility. Planning conducted by an Arctic Functional Combatant Command in the form of a Regional Campaign Plan ensures synchronization of efforts across the Arctic region while identifying Arctic capability gaps in the Joint Force. Developing the Joint Force through modernization, training, and exercises informed by an Arctic Functional

Combatant Command Regional Campaign Plan postures the Joint Force for success in the future Arctic security environment.

The steps required for greater Arctic security began in 2014, extended in 2019, but need to continue or else the effort is moot. Now is the time to create an Arctic Functional Combatant Command and affix responsibility to correct known deficiencies and secure American interests in the Arctic for the future.

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Annex A: Definitions list

Arctic region. The United States Government defines the Arctic region as “all U.S. and foreign territory north of the Arctic Circle and all U.S. territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers, and all contiguous areas and straits north of and adjacent to the Arctic Circle.”¹

Global Integration. The Joint Staff defines Global Integration as “the arrangement of cohesive military actions in time, space, and purpose, executed as a whole to address transregional, all-domain, and multi-functional challenges.”²

Mission Essential Equipment List. The Government Accountability Office defines the Mission Essential Equipment List as an enduring document aligned by regional command that identifies mission essential equipment to ensure forces are equipped with all known mission essential equipment at the outset of their missions.³

¹ Chief of Naval Operations, "U.S. Navy Arctic Roadmap 2014-2030," February 2014, https://www.navy.mil/docs/USN_arctic_roadmap.pdf (accessed November 12, 2019), 40.

² Chairman of the Joint Chiefs of Staff, *Chairman of the Joint Chiefs of Staff Instruction (CJCSI 3050.01): Implementing Global Integration*, (Washington D.C.: Joint Staff, 2018), 7.

³ United States Government Accountability Office, *Regionally Aligned Forces: DoD Could Enhance Army Brigades' Efforts in Africa by Improving Activity Coordination and Mission-Specific Preparation*, Report to Congressional Committees, (Washington D.C.: United States Government Accountability Office, 2015), 68.

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Annex B: Acronym list

ALCOM	Alaska Command
CAPA	Center for Asian Pacific Aviation
CCMD	Combatant Command
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs Staff Instruction
DoD	Department of Defense
EEST	Estonia
EUCOM	European Command
FCC	Functional Combatant Command
FCP	Functional Campaign Plan
GI	Global Integration
GIE	Globally Integrated Exercises
GIO	Globally Integrated Operations
HASC	House Armed Services Committee
HQDA	Headquarters, Department of the Army
INDOPACOM	Indo-Pacific Command
JP	Joint Publication
JSCP	Joint Staff Campaign Plan
MDA	Missile Defense Agency
MDC	Missile Defense Complex
MEEL	Mission Essential Equipment List
MIL-STD	Military Standard

NATO	Northern Atlantic Treaty Organization
NDAA	National Defense Authorization Act
NDS	National Defense Strategy
NMS	National Military Strategy
NORAD	Northern American Aerospace Defense
NORTHCOM	Northern Command
NSR	Northern Sea Route
PACAF	Pacific Air Force
RCC	Regional Combatant Command
RCP	Regional Campaign Plan
RDECOM	Research, Development, and Engineering Command
SASC	Senate Armed Services Committee
SMDC	Space and Missile Defense Command
UCP	Unified Command Plan
USA	United States Army
USAF	United States Air Force
USARPAC	United States Army Pacific
USMC	United States Marine Corps
USN	United States Navy
USCG	United States Coast Guard
VEO	Violent Extremist Organization

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Vita

Lieutenant Colonel Byron J. Brown recently finished serving as the Battalion Commander for the 59th Signal Battalion while dual-hatted as the U.S. Army Alaska G6. He previously served as the 8th Army G6 Headquarters Support Division Chief where he was responsible for all tactical and strategic voice and data communications for the 8th Army headquarters. Prior to that assignment, LTC Brown served in HQDA G-3/5/7 as the Protection Capabilities Development Portfolio Manager where he assessed future capability development versus current capabilities and strategic risk in areas of Robotics, Countering Weapons of Mass Destruction, Explosive Ordnance Disposal, and Law Enforcement for decisions by the VCSA and CSA. LTC Brown entered the U.S. Army in 1999 through the ROTC program at Gannon University, Erie, Pennsylvania. He is a Signal Officer in the U.S. Army and has held various command and staff positions in the United States, Asia, Europe, Pacific, and the U.S. Central Command area of responsibility. He has served at the Company, Battalion, Brigade, Division, Corps, NATO, and HQDA levels to include Joint and Multinational environments. LTC Brown's academic credentials include a Master of Arts in Information Technology Management and a Bachelor of Science in Electrical Engineering. He is a graduate of Command and General Staff College, Signal Captain's Career Course, and Signal Officer Basic Course.