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**U.S. NATIONAL ARCTIC STRATEGY: PREPARING DEFENSIVE LINES OF
EFFORT FOR THE ARCTIC**

by

Kevin W. Riddle

Commander, U.S. Coast Guard

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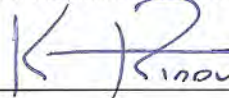
by

Kevin W. Riddle

Commander, U.S. Coast Guard

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.

Signature:  K. W. Riddle, CGR

01 April 2014

Thesis Adviser:

Signature: 

Professor William Marlowe, Thesis Advisor

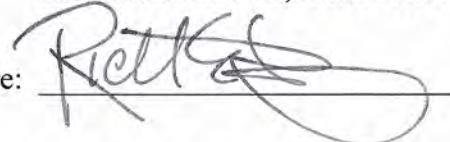
Approved by:

Signature: 

Col Denis Doty, Academic Advisor

Signature: 

Dr. Keith Dickson, Committee Member

Signature: 

**Richard E. Wiersema, Col
Director, Joint Advanced Warfighting School**

ABSTRACT

The United States is one of eight Arctic nations. Approximately 1,000 miles of the Alaskan coastline border and 200,000 square nautical miles of the U.S. exclusive economic zone are encompassed in the Arctic Ocean. As economic opportunities in the Arctic steadily increase, the U.S. is realizing the strategic importance of the Arctic, but lacks the infrastructure, command and control structure, and Arctic-capable assets to meet national strategic objectives.

Since 2009, the U.S. has progressively released strategic documents outlining the U.S. interests and national objectives in the Arctic. Although these documents recognize the increasing interests of the United States in the region, they do not adequately address all the strategic risks at stake in the Arctic and do not provide clear guidance to the Department of Defense (DoD) for defensive lines of effort. The U.S. strategic approach to the Arctic is that of accepting the current stable and conflict free Arctic region as remaining the same in the future. This strategic approach is adequate for the near term; however, it lacks specific guidance to DoD on how to prepare for possible conflict in the future. Recent events involving Russia in the Ukraine and China in the South China Sea provide historical context to the willingness of nations to use military means to defend their national interests. Without adequate defensive posturing, competition over Arctic resources could become the first direct existential threat to U.S. sovereignty. This paper will provide a strategic assessment of the Arctic, from the Department of Defense perspective, and provide recommendations for the combatant commander to prepare defensive lines of effort, should they be needed in 10-15 years or beyond.

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Finally, I would like to thank my wife Stephanie for her unwavering support throughout my career and during my tenure at JAWS. Acting as my personal editor for written assignments, she was a patient and steadfast teacher; I am a more professional and capable writer thanks to her guidance.

DEDICATION

This thesis is dedicated to all those who dedicated their lives exploring uncharted waters throughout maritime history. It is through their sense of adventure and duty to humanity that they explored that which lies over the horizon and charted the world's oceans. Through their years of self-sacrifice, they made the common global navigable for all the free world to use. One day, the last common global of the Arctic may indeed open up for the free world's use as well.

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CHAPTER 1: ARCTIC STRATEGIC ISSUES

. . . we perceived a brigh[t]ness in the Northern horizon like that reflected from ice, commonly called the blink; it was little noticed from a supposition that it was improbable we should meet with ice so soon . . .

- Captain James Cook, 1778: Upon encountering sea-ice in the Chukchi Sea while attempting to locate the Northwest Passage.¹

In July 1776, Captain James Cook set sail from Plymouth, England with instructions from the British Admiralty that “an attempt should be made to find out a Northern passage by Sea from the Pacific to the Atlantic Ocean.”² Two years later, in August 1778, Captain Cook gave up his attempt to find the Northern passage upon encountering sea-ice in the Chukchi Sea.³ Even in 1776, Great Britain recognized the potential for a Northern passage to significantly shorten trade routes between England in the Atlantic, and India and Asia in the Pacific.⁴ Although the importance of Arctic searoutes was recognized 233 years ago, until recently it has remained a vast and dormant ocean for navigation. Diminishing ice in the Arctic is bringing new maritime traffic to the region and the United States must position itself to take advantage of its natural resources and its geostrategic location.

The United States is one of eight Arctic nations. Approximately 1,000 miles of the Alaskan coastline border, and 200,000 square nautical miles of the U.S. exclusive economic zone are encompassed in, the Arctic Ocean. As economic opportunities in the Arctic steadily increase, the United States is realizing the strategic importance of the

¹ The Hakluyt Society, *The Charts & Coastal Views of Captain Cook's Voyages*, Vol. 3 (London: The Hakluyt Society, 1997), lii.

² Ibid., xviii.

³ Ibid., lii.

⁴ A. Grenfell Price, ed., *The Explorations of Captain James Cook In the Pacific: As Told By Selections of his Own Journals 1768-1779*, ed. A. Grenfell Price (New York: Dover Publications, Inc., 1971), 198.

Arctic, but our nation lacks the infrastructure, command and control structure, and Arctic-capable assets to achieve national strategic objectives.

Since 2009, the United States has progressively released strategic documents outlining the U.S. interests and national objectives in the Arctic. Although these documents recognize increasing interests of the United States in the region, they do not adequately address all the strategic risks at stake in the Arctic and do not provide clear guidance to the Department of Defense (DoD) for defensive lines of effort. The strategic approach of the United States to the Arctic is one of accepting the current stable and conflict free Arctic region as remaining the same in the future. This strategic approach is adequate for the near term; however, it lacks specific guidance to DoD on how to prepare for possible conflict in the future. Recent events involving Russia in the Ukraine and China in the South China Sea provide historical context to the willingness of nations to use military means to defend their national interests. Without adequate defensive posturing, competition over Arctic resources could become the first direct existential threat to U.S. sovereignty. This paper will provide a strategic assessment of the Arctic, from the Department of Defense perspective, and provide recommendations for the combatant commander to prepare defensive lines of effort, should they be needed in 10-15 years or beyond. To constrain the scope of this paper, an assumption is made that predictions for an ice-free Arctic by 2037⁵ are accurate and there will be significant increased Arctic maritime traffic over the next 10-15 years.

Identifying the strategic issues at stake in an ice-free Arctic points to the *ways* and *means* necessary for a combatant commander to support the national strategic goals. This

⁵ Muyin Wang and James E. Overland, "A sea ice free summer Arctic within 30 years?," *Geophysical Research Letters* 36, no. 7 (April 2009): 1.

chapter will outline the key geostrategic issues that are shaping the strategic environment in the Arctic region.

Mineral and Resource Protection

In 2008, the U.S. Department of the Interior and the U.S. Geological Survey estimated approximately 90 billion barrels of undiscovered and technically recoverable oil exist in the Arctic Circle. In addition, they estimated approximately 1,670 trillion cubic feet of natural gas and 44 billion barrels of natural gas liquids are located in the Arctic Circle. This accounts for approximately 22 percent of the undiscovered and recoverable oil and natural gas resources in the world, with 84 percent of this located offshore.⁶

As the demand for energy resources increases globally, this amount of untapped oil and gas has significant implications. There is great potential that Arctic resources will affect global energy markets. Arctic mineral resources have the potential to make some countries energy independent, provide other countries enough supplemental oil for continued economic and technological development, and could make some countries global hegemony as energy suppliers. Competition for unrestricted access to energy sources can be a catalyst for conflict. The most significant example of this was Japan's conquest for western Pacific territory during World War II. Japan's limited domestic energy resources were inadequate to meet its national security interests, therefore, they sought to expand the Japanese Empire and forcefully acquire other countries' resources.

⁶ U.S. Department of the Interior, U.S. Geological Survey, "90 Billion Barrels of Oil and 1,670 Trillion Cubic Feet of Natural Gas Assessed in the Arctic" (Reston, VA: U.S. Department of Interior, July 23, 2008).

Global demand for energy resources continues to increase at a high rate and could drive some countries to seek supply sources by force. Essential to any country's capacity to acquire energy resources, and ultimately avoid the threat of conflict, is a secure supply line. Oceanic trade routes are essential for shipment of energy resources, and the ability of nations to navigate the oceans freely is a key component of national security.

Freedom of Navigation

The United Nations Convention on the Law of the Sea (UNCLOS) is largely based on traditional and customary practices of sea-going nations. A fundamental principle associated with those customary practices is freedom of navigation on the seas. Codified in Article 87 of UNCLOS, freedom of navigation and freedom of overflight on the high seas is a right of all states. Although the U.S. Senate has not ratified UNCLOS, the United States recognizes the provisions of UNCLOS as customary international law and complies with its provisions accordingly. The provision which the United States upholds as a top national priority is freedom of navigation, and the United States actively protects this right through its Freedom of Navigation (FON) program.⁷

Enacted through Presidential Decision Directives, the U.S. FON program directs military ships and aircraft to "routinely assert U.S. rights against territorial sea claims and other claims to jurisdiction over maritime areas in excess of 12 nautical miles that purport to restrict non-resource related high seas freedoms and archipelagic claims not in

⁷ See Daniel W. Gray, *Changing Arctic: A Strategic Analysis of United States Arctic Policy and the United Nations Convention on the Law of the Sea*, Thesis, Joint Advanced Warfighting School, Joint Forces Staff College (Norfolk: National Defense University, 2013) and United Nations, "United Nations Convention on the Law of the Sea," *United Nations Convention on the Law of the Sea* (New York: United Nations, December 10, 1982).

conformance with the LOS Convention.”⁸ The fundamental principle behind FON operations is that “the United States will not acquiesce in unilateral acts of other states designed to restrict the rights and freedoms of the international community in navigation and overflight and other traditional uses of the high seas.”⁹ These infringements include territorial sea claims in excess of 12 nautical miles, claims that do not permit transit passage through international straits in accordance with UNCLOS, archipelagic claims that do not permit archipelagic sea lanes passage in accordance with UNCLOS, and requirements for advance notification or authorization for innocent, transit, or archipelagic sea lanes passage for all vessels, including warships.¹⁰ Since 2000, the United States has exercised FON operational assertions against the excessive claims of 32 states.¹¹ These assertions are typically conducted by U.S. DoD assets transiting through the excessive claim, usually preceded by diplomatic protests filed by the U.S. State Department. For many of those states’ claims, the United States exercised multiple assertions and protests in each year. Through the FON program, the United States has been and continues to exercise its rights to “ensure that customary adherence to excessive sea claims do not, by default, become international law.”¹² Although Russian and Canadian claims in the Arctic have not been subjects for operational assertions, increased maritime traffic in the Arctic could create the need for expanded FON operations.

⁸ George Bush, "National Security Directive 49: Freedom of Navigation Program" (Washington, DC: The White House, October 12, 1990), 5.

⁹ Ibid., 2.

¹⁰ Ibid.

¹¹ U.S. Department of Defense, *Freedom of Navigation Operational Assertions*, <http://policy.defense.gov/USDPOffices/ASDforGlobalStrategicAffairs/CounteringWeaponsofMassDestruction/FON.aspx> (accessed December 11, 2013).

¹² James K. Greene, *Freedom of Navigation: New Strategy for the Navy's FON Program*, Thesis, U.S. Naval War College (Newport, RI: U.S. Naval War College, 1992), ii.

In 1986, Canada declared its Arctic territories as internal waters by establishing base lines around its Arctic archipelagic islands. Due to the strategic implications and limitations on freedom of navigation through the Northwest Passage that this action infers, the United States and other states protested Canada's claim.¹³ Similarly, Russia claimed sovereignty over the Northern Sea Route, but the United States and the European Union both claim it is an international strait.¹⁴ In both situations, should Canada and Russia's claims become solidified through international mechanisms or de facto acquiescence, freedom of navigation through the Arctic will be severely limited by Canadian and Russian control over these strategic sea lines of communication.

Sea Lines of Communication

Sea lines of communication (SLOC) are primary sea routes used for shipping, maritime transportation, and navies to move freely around the world.¹⁵ Throughout maritime history, vessels from all nations have etched historical sea routes into nautical charts and nations have sought their preservation through international mechanisms and naval protection. Alfred Thayer Mahan was one of the first naval strategists to identify the importance of SLOC. "The first and most obvious light in which the sea presents itself . . . is that of a great highway . . . on which some well-worn paths . . . have led them to choose certain lines of travel . . . called trade routes."¹⁶ Although the term sea lines of communication was not introduced until more recently, Mahan recognized in 1890 the

¹³ Arctic Council, *Arctic Marine Shipping Assessment 2009 Report*, (Arctic Council, April 2009), 51.

¹⁴ Margaret Blunden, "Geopolitics and the Northern Sea Route," *International Affairs* (Blackwell Publishing) 88, no. 1 (2012): 116.

¹⁵ John J. Klein, "Maritime Strategy Should Heed U.S. and UK Classics," *U.S. Naval Institute Proceedings* 133, no. 4 (2007): 67-69.

¹⁶ Alfred Thayer Mahan, *The Influence of Sea Power Upon History 1660-1783*, (New York: Dover Publications, Inc., 1987), 25.

strategic importance of trade routes and identified them as an imperative for Naval strategic interests: “The necessity of a navy . . . springs, therefore, from the existence of a peaceful shipping, and disappears with it When for any reason sea trade is again found to pay, a large enough shipping interest will reappear to compel the revival of the war fleet.”¹⁷ Well known routes such as the Panama Canal, Suez Canal, Strait of Malacca, the Strait of Hormuz, and the Strait of Gibraltar have been the most critical of the SLOC. With the opening of Arctic sea lanes, the Northern Sea Route and Northwest Passage have the potential to become critical in the future.

In 2009, a German company made the first non-Russian commercial transit of the Northern Sea Route with two ships, reducing by a total of 3,000 nautical miles the distance of the traditional Suez Canal transit. This historic transit saved the company approximately \$300,000 and demonstrated the potential economic benefit of using Arctic sea lanes. Between 2010 and 2012, 84 commercial vessels have used the Arctic sea lanes and these numbers are predicted to increase in subsequent years.¹⁸ This trend represents a clear example of an emerging SLOC and history proves that changes in shipping routes also results in dynamic re-balancing of economic, political, and military efforts.¹⁹

Although much speculation exists as to the feasibility for shipping companies to take on the additional risks of transiting ice-laden remote waters, realistic scenarios abound that may change the risk-gain matrix. Margaret Blunden presents one such scenario. Piracy, other organized crime, jihadists, and other terrorists’ activities could threaten the security of tankers and other vessels transiting the Suez Canal, thus driving

¹⁷ Mahan, *The Influence of Sea Power Upon History 1660-1783*, 26.

¹⁸ Scott Borgerson, "The Coming Arctic Boom," *Foreign Affairs* 92, no. 4 (July 2013): 76-89 and Arctic Council, *Arctic Marine Shipping Assessment 2009 Report*, (Arctic Council, April 2009), 90.

¹⁹ Blunden, "Geopolitics and the Northern Sea Route," 117.

shipping insurance costs up. “Developments such as these, no longer unthinkable, would provide a powerful incentive to overcome the present obstacles to the commercial use of the [Northern Sea Route].”²⁰ With these real world geopolitical situations, the Arctic SLOC may become increasingly attractive. The opening of the Arctic trade routes, not surprisingly, appears to be reviving both the Russian and Chinese navies. The United States must recognize the important role the Navy and Coast Guard play in protecting Arctic SLOC.

Arctic Militarization

Increased militarization is an additional challenge to U.S. interests in the Arctic. In the last few years, many Arctic nations are increasing their capabilities to conduct military operations in the Arctic. Canada is procuring up to eight Arctic patrol ships; Russia launched a new ballistic missile submarine for its Northern fleet; Norway procured five new frigates; Denmark is developing a new class of ice capable patrol vessels; and even the United States retrofitted some of its submarines with improved navigational capabilities for the Arctic.²¹ Of all these countries, Russia is the most important to U.S. security concerns in the Arctic. In addition, China is demonstrating significant interest in the Arctic and is another important security concern for the United States.

²⁰ Blunden, "Geopolitics and the Northern Sea Route," 119-120.

²¹ Frederic Lasserre, Jerome Le Roy and Richard Garon, "Is there an arms race in the Arctic?," *Journal of Military and Strategic Studies* 14, no. 3 & 4 (2012), 2.

Russia

Of the five Arctic nations, Russia arguably has more at stake in the Arctic than any other nation. With approximately 3,500 miles of Arctic coastline and almost two million people living within Russia's Arctic territories, Russia accounts for 34 percent of the Arctic landmasses and 49 percent of the Arctic population.²² Thawing of the Arctic ice has led Russia to look at the Arctic as "a vast marine area more open for use, and, potentially, integrated with the world economy."²³ Accordingly, Russian Arctic policy specifically identifies the Northern Sea Route as a national interest and, in March 2010, Russia announced it was creating a federal agency to regulate and collect fees for use of the Northern Sea Route by shipping companies.²⁴ Furthermore, Russia intends to solidify its influence in Arctic shipping by developing "infrastructure, including ports, customs facilities and marine checkpoints, along its 17,500 kilometre Arctic coastline."²⁵ From a strategic viewpoint, any nation that develops the means to curtail freedom of navigation through "marine checkpoints" is creating an inherent threat to global trade routes. Should the Northern Sea Route become a viable trade route and regional instability threaten the Suez or Panama canals, Russia's exclusive control of the route could upset the energy security of nations, including the United States. This scenario would be a direct national

²² James Dunnigan, *Russia Finds A New Island in the Arctic*, November 5, 2013, <http://www.strategypage.com/dls/articles/Russia-Finds-A-New-Island-In-The-Arctic-11-5-2013.asp> (accessed January 6, 2014) and Dmitry Bogoyavlenskiy and Andy Siggner, *Arctic Human Development Report*, (Akureyri: Stefansson Arctic Institute, 2004), 27.

²³ Lawson W. Brigham, "Russia opens its maritime Arctic," *U.S. Naval Institute Proceedings* 137, no. 5 (May 2011): 50-54.

²⁴ Ariel Cohen, "From Russian Competition to Natural Resources Access: Recasting U.S. Arctic Policy," *Backgrounders* (The Heritage Foundation), no. 2421 (June 2010), 9.

²⁵ Blunden, "Geopolitics and the Northern Sea Route," 115-116.

security threat to all of the Arctic nations (and potentially China as well), which could lead to conflict.

As the prospect of an ice-free Arctic increased over the last decade, Russia developed its national Arctic policy. *The Foundations of the Russian Federation's State Policy in the Arctic Until 2020 and Beyond* was released in March 2009. Analysis of this policy indicates Russia is placing a heavy emphasis on economic development in the Arctic and, due to limited abilities and financial resources to exploit the resources, international cooperation. Russia's Arctic priorities are listed as:

- Usage of the Arctic Zone of the Russian Federation as a strategic resource base, allowing for the solution of problems of socio-economic development;
- Safeguarding the Arctic as a zone of peace and cooperation
- Conservation of the Arctic's unique ecosystems
- Usage of the Northern Sea Route as a national integrated transport-communication system of the Russian Federation in the Arctic.²⁶

Russia's Arctic policy asserts a move to bolster its military presence in the region with "an armed forces contingent and other general-purpose military units."²⁷ This militarization of the Arctic was subsequently reinforced a few months later when President Medvedev signed Russia's security strategy, *National Security of the Russian Federation Through 2020*, in May 2009. This new strategy states "The attention of international politics in the long-term will be concentrated on controlling the sources of energy resources in the Middle East, on the shelf of the Barents Sea and other parts of the Arctic."²⁸ More alarming to national security interests is the policy's strong stance on using military means to protect its claim to energy resources: "In case of a competitive

²⁶ Cari Enav, *Russia's Arctic Policy and Its Implications for the United States*, Research Paper, National War College (Washington, DC: National Defense University, 2012), 1.

²⁷ Konstantin Voronov, "The Arctic Horizons of Russia's Strategy," *Russian Politics and Law* (M.E. Sharpe, Inc.) 50, no. 2 (March-April 2012): 59.

²⁸ Cohen, "From Russian Competition to Natural Resources Access," 8.

struggle for resources it is not impossible to discount that it might be resolved by a decision to use military might. The existing balance of forces on the borders of the Russian Federation and its allies can be changed.”²⁹ This declaration is significant in that it contradicts parts of Russia’s Arctic Policy, which states, “Russia’s strategic national interests are served by preserving the Arctic as a zone of peace and cooperation.”³⁰ Furthermore, it contradicts President Putin’s claim to seek peaceful solutions to the division of Arctic territory.³¹ Russia’s current diplomacy efforts do indicate it seeks peaceful cooperation in the Arctic. However, Russia most recently demonstrated its resolve to protect its national interests using military force in the Ukraine and, as laid out in its national security and Arctic policies, Russia also appears willing to use military options to protect its claim to Arctic resources.

In 2001, Russia submitted a claim to the Commission on the Limits of the Continental Shelf, as provided in Article 76 and Annex II of UNCLOS, asserting its continental shelf extended all the way to the North Pole. Although the Commission has yet to approve this claim and requested additional scientific data in support, if approved it would result in approximately 460,000 square miles of Arctic territory and natural resources being annexed to Russia.³² In addition to Russia, as of 2009, 21 claims have been submitted to the Commission and several non-Arctic states, including China, Ireland, and Australia, have shown interest in resolving these claims.³³ Viktor Litovkin, military affairs editor of the Moscow daily *Nezavisimaya Gazeta* observed, “This has

²⁹ Cohen, "From Russian Competition to Natural Resources Access," 8.

³⁰ Voronov, "The Arctic Horizons of Russia's Strategy," 59.

³¹ Fred Weir, "Russian navy returns to the Arctic. Permanently.," *The Christian Science Monitor*, September 16, 2013.

³² Cohen, "From Russian Competition to Natural Resources Access", 6.

³³ Voronov, "The Arctic Horizons of Russia's Strategy," 64-65.

prodded Russia into action, to hang on to our priority and legitimate rights.”³⁴ The release of Russia’s Arctic policy followed on the heels of a 2007 Russian Arctic scientific exploration, where, some argue Russia conducted a rather political stunt by placing a Russian flag on the ocean floor at the North Pole.³⁵ The purpose of this exploration was to collect soil samples from the ocean floor in support of Russia’s claim to the Commission on the Limits of the Continental Shelf for an extension of its continental shelf.³⁶ Russia’s highly publicized zeal in making claims to the Arctic has not gone unnoticed. Some have described this scientific exploration, and subsequent flag planting, as a signal of Russia’s “return to the Arctic.”³⁷ Should Russia’s claim be denied or reduced in size by the Commission and/or other states’ claims, it’s possible Russia would resort to other means to secure what it perceives as legitimately Russia’s.

Beginning in 2007, Russia resumed Northern strategic bomber patrols in the Arctic and skirted Alaska’s air defense zone 18 times in 2007 and 2008.³⁸ In February 2013, two Russian strategic bombers patrolled the Arctic region for 20 hours, including two in-flight refuelings.³⁹ A further indication of Russia’s militarization of the Arctic is the Russian Navy’s return to the Arctic. Russia is commissioning new submarines, armed with nuclear missiles, and has announced that it will reinstate regular submarine patrols. Most of these submarines will be stationed in the Russian Arctic port of

³⁴ Fred Weir, "Russian navy returns to the Arctic."

³⁵ Ibid.

³⁶ Cohen, "From Russian Competition to Natural Resources Access," 7.

³⁷ Voronov, "The Arctic Horizons of Russia's Strategy," 56-57.

³⁸ "Russian Strategic Bombers Patrolling Arctic," *Interfax*, June 9, 2008 and Rowan Scarborough, *Russian Flights Smack of Cold War*, June 26, 2008, <http://www.washingtontimes.com/news/2008/jun/26/russian-flights-smack-of-cold-war> (accessed Oct 29, 2013).

³⁹ Voice of Russia, *Two Russian strategic bombers effectively patrol Arctic water area*, Feb 06, 2013, <http://www.strategic-culture.org/news/2013/02/06/two-russian-strategic-bombers-effectively-patrol-arctic-water-area.html> (accessed Nov 17, 2013).

Murmansk.⁴⁰ These increased bomber and submarine patrols may be part of an overall reinvigorated nuclear deterrence strategy, and not necessarily part of an Arctic strategy, however, Russia is also increasing its surface vessel activity in the Arctic, correlating directly with its Arctic policy agenda.

In 2008, Russia began regular icebreaker patrols of the Arctic and announced a plan to build new nuclear-powered icebreakers starting in 2015.⁴¹ Russia's increased Arctic presence reached a climax in 2013 when ten warships and nuclear-powered icebreakers transited along 2,000 miles of Russia's Arctic coastline. This armada was led by Russia's flagship *Peter the Great*, a guided-missile cruiser. According to Russia's Deputy Defense Minister, "The flotilla's mission was part of a larger mission for the development and improvement of the Northern Sea Route and the Arctic zone around it."⁴² Russian officials described this patrol as "the start of a new, permanent naval presence in the thawing region."⁴³ This demonstration of Russian sea power in the Arctic has also been accompanied by an increased air power capability as Russia actively rebuilds an airbase on Kotelnny Island off the northeastern Siberian coast. According to Russia's Deputy Defense Minister, Russia aims "to restore polar aviation and its infrastructure, including bases on the continent and on islands."⁴⁴ These increased naval and air power capabilities are a direct result of Russia's new national security and Arctic strategies. According to the military affairs editor of the Moscow daily *Nezavisimaya Gazeta*, "The Russian leadership has made a political decision to return to the Arctic.

⁴⁰ Rob Huebert, *It's time to talk about Arctic militarization*, Jun 05, 2013, <http://fullcomment.nationalpost.com/2013/05/06/arctic-piece-1-for-monday/> (accessed 11 17, 2013).

⁴¹ Cohen, "From Russian Competition to Natural Resources Access," 8.

⁴² Weir, "Russian navy returns to the Arctic."

⁴³ Ibid.

⁴⁴ Ibid.

We'll be restoring airfields, reviving Soviet-era hydro-meteorological services, and deploying the naval means to convoy ships and defend Russia's economic zones of interests."⁴⁵

More disturbing than this increased militarization is Russia's warning in its national security strategy that "within a decade nations could be at war over resources in the Arctic Ocean" and those resources will become the "critical point for the world military balance."⁴⁶ It further proclaims, "In case of a competitive struggle for resources it is not impossible to discount that it might be resolved by a decision to use military might."⁴⁷ Furthermore, in December 2013, Russian President Vladimir Putin said, "The U.S. navy's capability in the Arctic is a key reason for Russia to beef up its presence in the region."⁴⁸ Although Putin has stated Russia must cooperate with other countries and the United States, he added "But the [U.S.] submarines are there, and they do carry missiles."⁴⁹ Sergey Shoigu, Russia's Defense Minister, followed up President Putin's decree stating, "There are plans to create a group of troops and forces to ensure military security and protection of the Russian Federation's national interests in the Arctic in 2014."⁵⁰ This rhetoric coming from Russia's national leadership should be a clear warning to Western powers that Russia will not shy away from resorting to military

⁴⁵ Weir, "Russian navy returns to the Arctic."

⁴⁶ James Kraska, *Northern Exposure: The widening competition for Arctic resources and access begs U.S. policy coherence*, May 1, 2010, <http://www.the-american-interest.com/articles/2010/05/01/northern-exposures/> (accessed January 31, 2014).

⁴⁷ Cohen, "From Russian Competition to Natural Resources Access," 8.

⁴⁸ Vladimir Isachenkov, *Putin Says Russia Needs to Beef Up Arctic Presence*, December 03, 2013, <http://m.military.com/daily-news/2013/12/03/putin-says-russia-needs-to-beef-up-arctic-presence.html> (accessed December 05, 2013).

⁴⁹ Ibid.

⁵⁰ RT.com, *Putin Orders Arctic Military Build-up in 2014*, December 10, 2013, <http://on.rt.com/kpqz0a> (accessed December 16, 2013).

options to protect its claim to Arctic resources. If there is any doubt, Russia clearly demonstrated its resolve to protect national interests with military force in the Ukraine.

Although it appears Russia is taking a firm stance on its Arctic interests, there should be optimism that peace and security will remain in the forefront of international cooperation. First, all current events demonstrate Russia's resolve to use international mechanisms to achieve its Arctic goals. Russia, along with all the Arctic states, has indicated it will comply with the provisions of the UN Convention on the Law of the Sea, presumably, to adjudicate its claims to an extended continental shelf and the Arctic seabed.⁵¹ Second, Russia's Arctic policy recognizes its limitations to exploit the Arctic natural resources without foreign investment and modern technology.⁵² It is not in Russia's strategic interest to isolate itself from the international community through aggressive action; rather, it must promote international cooperation and peaceful resolutions to contentious issues in the Arctic. Third, Russia understands the implications of making military threats in the Arctic with respect to the North Atlantic Treaty Organization (NATO). Any perceived threat or militarization of the Arctic for offensive purposes would undoubtedly prompt NATO to invoke its articles for collective defense and potentially prompt another cold war stand-off between Russia and the NATO countries.⁵³ Finally, there is much speculation about the significance of the relative size of Russia's icebreaker fleet compared to that of the United States. Russia's fleet is much larger, and many argue this is Russia's militarization of the Arctic, however, when put in context with geography and population centers it provides a different perspective:

⁵¹ Voronov, "The Arctic Horizons of Russia's Strategy," 61.

⁵² Ibid., 60.

⁵³ Thomas Gagnon, *Russian Arctic Strategy Assessment and Recommendations*, Research Paper, National War College (Washington, DC: National Defense University, 2012).

About half of the Arctic's four million inhabitants live in Russia's sprawling northern coastline. The Northern Sea Route is an integral part of Russia's transportation infrastructure and is used for deliveries of food, fuel, building materials, and other necessities. It is also an important export route for timber, ores, oil, and other natural resources.⁵⁴

Given the vital importance of Siberia and the Arctic region to Russia's economy and society, it is not surprising they should make such extensive investments in developing it.

China

China is actively seeking and gaining a foothold in Arctic affairs. Although China has not made a public statement as to its Arctic strategy, much of its global activity reflects its push to develop global economic ventures and diversify its energy and mineral supply chains. Because China is the second-largest consumer of oil in the world, "China fears that supply disruptions or shortages could derail its continued economic momentum, thus causing social unrest and threatening the survival of the regime."⁵⁵ To broaden its economic and energy security, China is turning to the Arctic as its next venture.

To date, China's approach to the Arctic includes research, cooperation, and partnership efforts. Since 1999, China has conducted four Arctic expeditions and founded its first Arctic station in Norway.⁵⁶ In addition, China has the world's largest non-nuclear icebreaker and intends to expand its Arctic expeditions with a new icebreaker scheduled for service starting in 2014. With these two ships, China will have

⁵⁴ U.S. Department of Defense, *Report to Congress on Arctic Operations and the Northwest Passage*, Congressional Report, OUSD (Policy) (Washington, DC: Department of Defense, 2011), 26-27.

⁵⁵ Hongyi Harry Lai, "China's Oil Diplomacy: Is It a Global Security Threat?," *Third World Quarterly* 28, no. 3 (2007): 519 and Shiloh Rainwater, "Race to the North: China's Arctic Strategy and Its Implications," *Naval War College Review* 66, no. 2 (2012): 64.

⁵⁶ Olga Alexeeva and Lasserre Frederic, "The Snow Dragon: China's Strategies in the Arctic," *China Perspectives* 2012, no. 3 (2012): 62-63.

larger and more modern icebreakers than the United States or Canada.⁵⁷ China's cooperative and partnering efforts in Norway in 2001, Denmark in 2010, and Iceland in 2010 included agreements on Arctic navigation, natural resource extraction, and research.⁵⁸ Interestingly, Iceland, which is in a key strategic location at the entrance to the Arctic sea-lanes from the North Atlantic Ocean, is home to an "unusually large" Chinese embassy.⁵⁹

According to research by Olga Alexeeva and Lasserre Frederic, Chinese scholars have published many studies on the Arctic, primarily on climate change and ecology. However, since 2007 most Chinese studies have focused on the Arctic's economic and geostrategic potential for China.⁶⁰ These publications hint at new political posturing and suggest China should develop a more assertive approach to the international debates on controlling the Arctic. As an example, Professor Li Zhenfu from Dalian Maritime University stated, "Whoever has control over the Arctic route will control the new passage of world economics and international strategies."⁶¹ This new political posturing is also reflected in the Chinese Navy. Admiral Zhuo Yin recently stated, "the Arctic belongs to all people of the world and no states should have sovereignty rights over it."⁶² Although this change in language comes from the Chinese academic and military

⁵⁷ See *New York Times*, *China's Arctic Ambitions*, May 24, 2010, http://ideas.blogs.nytimes.com/2010/05/24/chinas-arctic-ambitions/?_r=0 (accessed October 03, 2013) and Wang Qian, *New icebreaker to improve China's polar research*, November 04, 2011, www.chinadaily.com.cn/cndy/2011-11/04/content_14034714.htm (accessed October 03, 2013).

⁵⁸ Alexeeva, "The Snow Dragon," 63.

⁵⁹ Helena Spongenberg, *Nordic Countries Get an International Voice in the Arctic*, June 23, 2011, <http://www.norden.org/en/analys-norden/tema/the-fight-for-the-arctic/nordic-countries-get-an-international-voice-in-the-arctic> (accessed October 03, 2013).

⁶⁰ Alexeeva, "The Snow Dragon," 62.

⁶¹ Linda Jakobson, "China Prepares for an Ice-Free Arctic," *SIPRI Insights on Peace and Security* 2010, no. 2 (March 2010), 6.

⁶² Gordon G. Chang, "China's Arctic Play," *The Diplomat*, March 09, 2010, <http://thediplomat.com/2010/03/09/china%E2%80%99s-arctic-play> (accessed on 03 October 2013).

communities, it could indicate a future change to the Chinese government's strategic policies. Some will argue China's dependence on foreign oil can be leveraged for greater international cooperation, however, others contend China will protect these interests even at the expense of conflict.⁶³

China has solid reasons for interest in opening the Arctic. China is highly dependent on sea lines of communication. More than 80 percent of China's oil imports move by sea and 77 percent of that oil is transported through the Strait of Malacca.⁶⁴ This creates a situation in which China is perilously dependent on a single sea line of communication for its energy resources; thus, it is susceptible not only to the political agendas of Indonesia, Malaysia, and Singapore, but also to other nations protecting their own sea lines of communication. As such, China has begun looking for strategies to minimize risks to its energy security.⁶⁵

The director of the Centre for Strategic Studies at the Polar Research Institute of China presented a strategic rationale for a strong presence in the Arctic:

Being one of the largest energy consumers, China must improve its status in the Arctic and explore cooperation opportunities proactively with countries in the region Based on International Law, the Arctic does not belong to any particular country However, countries bordering the region have ambitiously sought to expand their influence in that part of the world, which until now has been free China must thus turn to the international community and show its capacity and determination to defend its interests in the area of natural resource extraction and the development of trade routes in the Arctic.⁶⁶

⁶³ Shiloh Rainwater, "Race to the North: China's Arctic Strategy and Its Implications," *Naval War College Review* 66, no. 2 (2012): 65.

⁶⁴ Andrew S. Erickson and Gabriel B. Collins, "China's Oil Security Pipe Dream," *Naval War College Review* 63, no. 2 (2010): 89-112 and ZhongXiang Zhang, "China's energy security, the Malacca dilemma and responses," *Energy Policy* 39, no. 12 (Dec 2011): 7613.

⁶⁵ ZhongXiang Zhang, "China's energy security, the Malacca dilemma and responses," *Energy Policy* 39, no. 12 (Dec 2011): 7613.

⁶⁶ Alexeeva, "The Snow Dragon," 65.

This sentiment was echoed in the Chinese media. An editorial stated, "it is unimaginable that non-Arctic states will remain users of Arctic shipping routes and consumers of Arctic energy without playing a role in the decision-making process and an end to the Arctic states' monopoly of Arctic affairs is now imperative."⁶⁷

Senior Chinese military leaders are also expressing the need to prepare for possible conflict in the Arctic. Senior Colonel Han Xudong stated that the "possibility of use of force cannot be ruled out in the Arctic due to complex sovereignty disputes."⁶⁸ Furthermore, Rear Admiral Zhang Huachen stated, "With the expansion of the country's economic interests, the navy wants to better protect the country's transportation routes and the safety of our major sea lanes."⁶⁹ Although these senior military leaders indicate a change in Chinese strategy, the level of commitment the Chinese government will make to the Arctic remains unclear. China's aggression over disputed territories in the South China Sea is a clear example of its willingness to use military means to secure access to natural resources deemed in its national interest.

China is very active in the international community regarding Arctic affairs. In May 2013, it solicited and obtained observer status in the Arctic Council, and acknowledged the requirement to gain approval of Arctic states, such as Russia and Canada, to navigate Arctic waters.⁷⁰ Studies of China's grand strategy support this cooperative approach:

⁶⁷ China.org.cn, *Arctic Aspirations*, August 30, 2011, http://www.china.org.cn/wap/2011-08/30/content_23312862.htm (accessed November 12, 2013).

⁶⁸ Jakobson, "China Prepares for an Ice-Free Arctic," 7.

⁶⁹ Edward Wong, "Chinese Military Seeks to Extend Its Naval Power," *New York Times*, April 23, 2010: A1 and Avery Goldstein, *Rising to the Challenge: China's Grand Strategy and International Security* (Stanford, CA: Stanford University Press, 2005).

⁷⁰ Alexeeva, "The Snow Dragon," 64.

. . . designed to sustain the conditions necessary for continuing China's program of economic and military modernization as well as to minimize the risk that others, most importantly the peerless United States, will view the ongoing increase in China's capabilities as an unacceptably dangerous threat that must be parried or perhaps even forestalled.⁷¹

Should China become dependent on Arctic resources and the Arctic SLOC, the United States and its allies could one day see Chinese naval vessels in the Arctic to protect their national interests.⁷² As one observer of Arctic geopolitics has observed, “One possible scenario of Chinese naval vessels, tasked with protecting Chinese merchant ships, in the seas north of Russia or in the North Atlantic, would confront Russia and NATO with a challenging new security environment.”⁷³

As this review indicates, the United States must prepare for the potential militarization of the Arctic. This chapter identified the threats, challenges, and conditions that make up the emerging strategic environment in the Arctic. It is clear other countries recognize the importance of the Arctic and are positioning themselves to protect their national interests. Russia and China have embarked on an assertive track to secure their geo-strategic position in the Arctic. Both countries established national policies to guide their instruments of national power; they are developing the infrastructure, resources, and technology to operate in the Arctic; and they are positioning their industrial strength to tap into the vast Arctic mineral and resource reserves. It still appears both China and Russia intend to pursue their Arctic interests through peaceful international cooperation; however, they also are positioning their militaries to protect those interests. The U.S. approach to the Arctic must take into account the current peaceful political, economic,

⁷¹ Avery Goldstein, *Rising to the Challenge: China's Grand Strategy and International Security* (Stanford, CA: Stanford University Press, 2005), 12.

⁷² Rainwater, "Race to the North," 68.

⁷³ Blunden, "Geopolitics and the Northern Sea Route," 116.

and social realities of the region, but must also prepare for conflict in the Arctic. Figure 1 illustrates the four issues at stake that require, or may one day require, a combatant commander to use military capabilities to protect U.S. national interests in the Arctic.

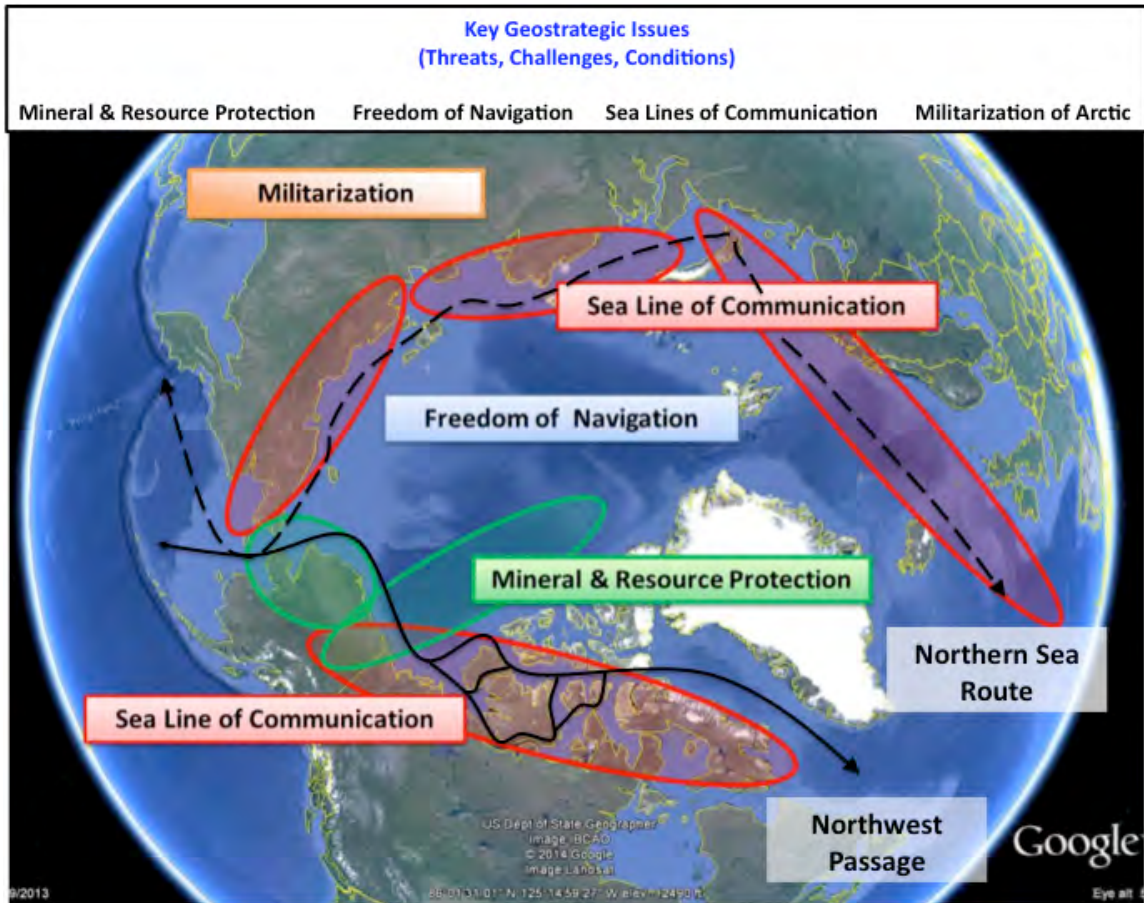


Figure 1: Arctic Geostrategic Issues

CHAPTER 2: U.S. ARCTIC STRATEGY

The collection of policies and documents addressing U.S. goals and objectives in the Arctic will allow an assessment of the U.S. strategy for coherence and clarity. Analyzing the current U.S. Arctic strategy, and how it addresses the geostrategic issues at stake in the Arctic, provides some insights into the dilemmas facing USNORTHCOM, the combatant commander tasked with implementing this strategy. It also provides overarching policy guidance for the combatant commander in developing defense lines of effort.

U.S. Arctic Region Policy and U.S. Arctic Strategy

The evolution of U.S. strategic interests in the Arctic began with the National Security Presidential Directive 66 / Homeland Security Presidential Directive 25 (NSPD-66 / HSPD-25), *Arctic Region Policy*. Signed in January 2009 by President George W. Bush, the Arctic Region Policy provided specific strategic objectives in the Arctic and shaped our National Arctic Strategy. The overall objectives outlined in this directive are summarized as follows:

The United States has broad and fundamental national security interests in the Arctic region and is prepared to operate either independently or in conjunction with other states to safeguard these interests. These interests include such matters as missile defense and early warning; deployment of sea and air systems for strategic sealift, strategic deterrence, maritime presence, and maritime security operations; and ensuring freedom of navigation and overflight.¹

NSPD-66/HSPD-25 also specifically highlights freedom of the seas as the top national priority:

¹ George W. Bush, "National Policy on Arctic Region," *National Security Presidential Directive 66 / Homeland Security Presidential Directive 25 (NSPD-66/HSPD-25)* (Washington, DC: The White House, January 9, 2009).

The Northwest Passage is a strait used for international navigation, and the Northern Sea Route includes straits used for international navigation; the regime of transit passage applies to passage through those straits. Preserving the rights and duties relating to navigation and overflight in the Arctic region supports our ability to exercise these rights throughout the world, including through strategic straits.²

In 2010, President Obama signed the U.S. National Security Strategy. Regarding the Arctic, the National Security Strategy simply states:

The United States is an Arctic Nation with broad and fundamental interests in the Arctic region, where we seek to meet our national security needs, protect the environment, responsibly manage resources, account for indigenous communities, support scientific research, and strengthen international cooperation on a wide range of issues.³

HSPD-66/HSPD-25 specifically identified U.S. national interest in the Arctic as missile defense, strategic sealift, strategic deterrence, maritime presence, maritime security, and freedom of navigation. These interests align well with the geostrategic issues at stake in the Arctic, including military defense requirements. However, the National Security Strategy overlooks the interests identified in HSPD-66/HSPD-25 and does not re-define or elaborate on national security requirements. Furthermore, the five Arctic interests identified in the National Security Strategy are focused on resource management, environmental protection, and scientific research. Lacking is any acknowledgement of the need to defend the geostrategic issues at stake.

In May 2013, President Obama signed the U.S. Arctic Strategy. The Arctic Strategy did not rescind NSPD-66/HSPD-25; rather, it shaped lines of effort and

² Bush, "National Policy on Arctic Region."

³ Barack Obama, "National Security Strategy" (Washington DC: Government Printing Office, May 2010).

supporting objectives “in furtherance of established Arctic Region Policy.”⁴ Table 1 illustrates the linkages between the geostrategic issues at stake in the Arctic, the National Security Strategy’s Arctic interests, and the National Arctic Strategy’s lines of effort.

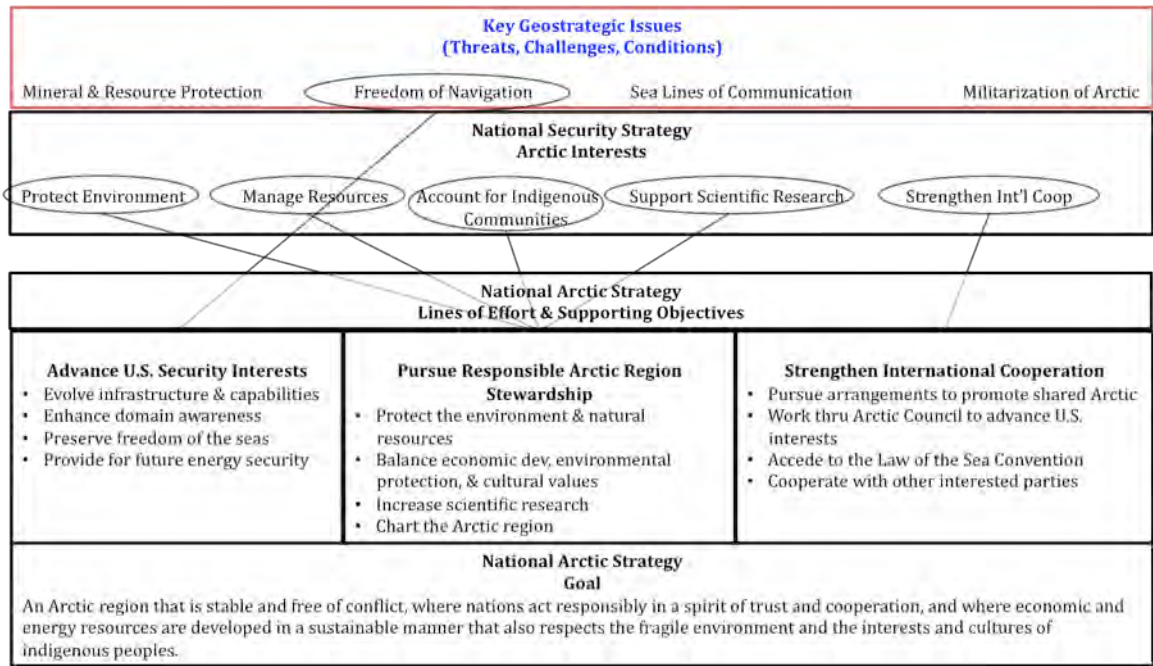


Table 1: Geostrategic Issues, National Security, and National Arctic Strategy Linkages

As illustrated, subsequent to NSPD-66/HSPD-25, the national strategies do not address the geostrategic issues of mineral and resource protection, sea lines of communication, or militarization of the Arctic. Furthermore, all linkages between the National Security Strategy and National Arctic Strategy point to responsible stewardship, not defense of national interests. The Arctic Strategy does state an objective to provide for future energy security, however, this is not related to protecting Arctic minerals and resources. Energy security, as defined in the Arctic Strategy, is related to developing future sources of energy, not defending those sources:

⁴ Obama, "National Strategy for the Arctic Region" (Wasington DC: Government Printing Office, May 2013), 6.

Continuing to responsibly develop Arctic oil and gas resources aligns with the United States ‘all of the above’ approach to developing new domestic energy sources . . . we are committed to . . . explore the energy resource base . . . to enable the environmentally responsible production of oil and natural gas as well as renewable energy.⁵

Identified as a top national priority, the Arctic Strategy clearly identifies U.S. objectives for freedom of navigation:

Preserve Arctic Region Freedom of the Seas. The United States has a national interest in preserving all of the rights, freedoms, and uses of the sea and airspace recognized under international law. We will enable prosperity and safe transit by developing and maintaining sea, under-sea, and air assets and necessary infrastructure. In addition, the United States will support the enhancement of national defense, law enforcement, navigation safety, marine environment response, and search-and-rescue capabilities⁶

Although freedom of navigation is an enabler for national defense *means*, the Arctic Strategy only mentions a requirement to enhance national defense through freedom of navigation and does not clarify any defense objectives in the Arctic. The U.S. Department of Defense Arctic Strategy provides a little more clarity regarding defense requirements, but still lacks the *ways* and *means* in support of defensive lines of effort.

U.S. National Military Strategy and Department of Defense Arctic Strategy

The U.S. National Military Strategy (NMS) provides no specific guidance to the Services or combatant commanders relevant to the Arctic:

Working with Canada and Mexico, we will remain prepared to deter and defeat direct threats to our North American homeland. We will also partner with Canada on regional security issues such as an evolving Arctic. . . .⁷

Daniel Chiu, Deputy Assistant Secretary of Defense for strategy, has stated,

⁵ Obama, "National Strategy for the Arctic Region," 7.

⁶ Ibid., 6-7.

⁷ U.S. Joint Chiefs of Staff, National Military Strategy (Washington DC: Government Printing Office, February 08, 2011), 11.

Our overarching emphasis is on sustaining a peaceful, stable, and conflict-free Arctic region in support of the National Strategy In the near term, this means DOD will be prepared to support civilian authorities responding to an incident or natural disaster of such magnitude that it outstrips the local and state response capabilities. Over the longer term, the department will continue to prevent and deter conflict in the region and be prepared to respond to a wide range of contingencies [Department of Defense] sees the opening of the Arctic waters . . . as a prime opportunity to work cooperatively in multilateral forums . . . to promote a balanced approach to improving human and environmental security in the region⁸

In response to the U.S. National Arctic Strategy published in May 2013, DoD published its Arctic Strategy in November 2013. Table 2 highlights DoD's strategic approach, its end state, the supporting objectives, and the *ways* and *means* to achieve the end state. Table 2 also illustrates those linkages to the National Arctic Strategy most relevant to defensive lines of effort. Each of the *ways* and *means* provide more granularity to the combatant commander on how to achieve national objectives, but the DoD approach also fails to provide specific defense requirements. Specific to sovereignty and protecting the homeland it states, "remain prepared to detect, deter, prevent, & defeat threats" and "continue to support the exercise of U.S. sovereignty."⁹ It does not identify the threats or clearly articulate the *means* by which the military is to achieve these *ways*. It largely assumes we are already prepared to counter threats and protect U.S. sovereignty.

⁸ American Forces Press Service, *Official Explains DOD's Role in National Arctic Strategy*, May 10, 2013, <http://www.defense.gov/news/newsarticle.aspx?id=120001> (accessed Nov 19, 2013).

⁹ Chuck Hagel, "U.S. Department of Defense Arctic Strategy" (Washington, DC: Government Printing Office, November 2013).

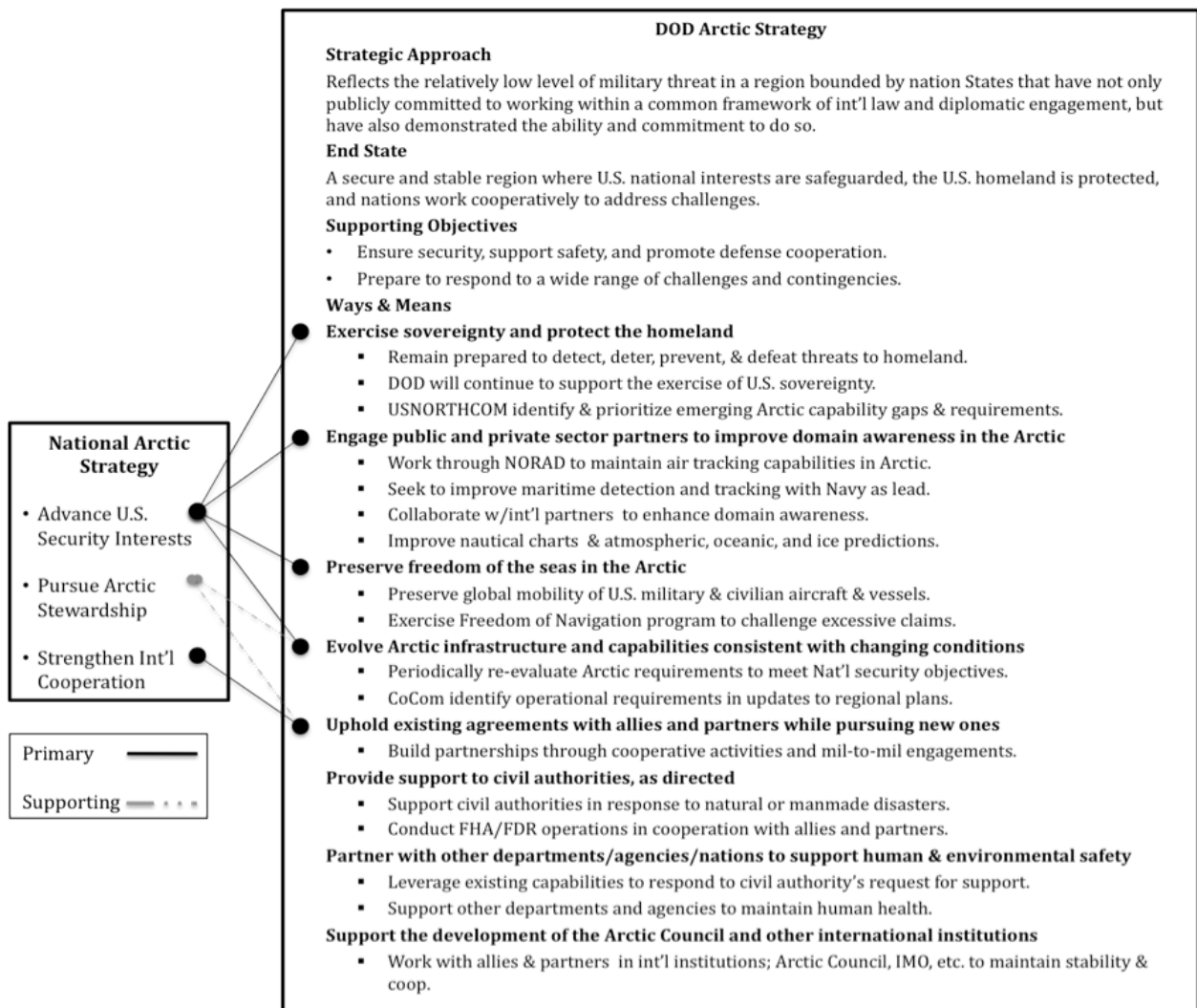


Table 2: DoD Arctic Strategy¹⁰

The overall strategic approach to DoD's Arctic Strategy provides some context to the lack of emphasis placed on defense.

[The strategic approach] reflects the relatively low level of military threat in a region bounded by nation States that have not only publicly committed to working within a common framework of international law and diplomatic engagement, but have also demonstrated the ability and commitment to do so.¹¹

¹⁰ Hagel, "U.S. Department of Defense Arctic Strategy."

¹¹ Ibid., 4.

Furthermore, the challenges and risks identified in the strategy may also contribute to DoD placing less focus on defensive lines of effort:

- Projections about future access to and activity in the Arctic may be inaccurate.
- Fiscal constraints may delay or deny needed investment in Arctic capabilities and may curtail Arctic training and operations.
- Political rhetoric and press reporting about boundary disputes and competition for resources may inflame regional tensions.
- Being too aggressive in taking steps to address anticipated future security risks may create the conditions of mistrust and miscommunication under which such risks could materialize.¹²

One of the biggest challenges, and speculatively DoD's reason for a slow approach to the Arctic, is the uncertainty about if or when the Arctic will indeed become ice-free and allow significant human activity:

The challenge is to balance the risk of having inadequate capabilities or insufficient capacity when required to operate in the region with the opportunity cost of making premature and/or unnecessary investments. Premature investment may reduce the availability of resources for other pressing priorities, particularly in a time of fiscal austerity. The key will be to address needs in step with the rate at which activity in the Arctic increases while balancing potential investments in Arctic capabilities with other national priorities.¹³

It can be derived from our national and DoD Arctic strategies that the United States has not identified any immediate threats to national security in the Arctic requiring defensive lines of effort. Russia and China's current activities of working through international organizations and in cooperation with other Arctic nations do support this strategic approach. This approach also affords DoD decision space as it tries to balance competing demands for military forces and develop the resources and technology for future conflicts, all in an austere budget environment. However, the threats and

¹² Hagel, "U.S. Department of Defense Arctic Strategy," 12-13.

¹³ Ibid., 12.

challenges identified in Figure 1: Arctic Geostrategic Issues, cannot be ignored as the Arctic becomes increasingly active.

The challenge for a combatant commander is to develop lines of effort, under the current strategic approach and budget limitation, that will position DoD in the next 10-15 years so it can rapidly evolve into defensive lines of effort if or when needed. To do so, the combatant commander should focus on developing *means* that support those *ways* in the DoD Arctic Strategy which most contribute to adequate defensive posturing in 10-15 years. As illustrated by the linkages in Table 2, the *ways* that most directly support defensive lines of effort are listed in Table 3 and, therefore, should be the focus of a combatant commander. Before specific recommendations are made on developing lines of effort to adequately posture defensive forces in the Arctic, an analysis must be completed on USNORTHCOM's responsibilities; the current Arctic command and control organization; existing Arctic infrastructures; and the service's Arctic capabilities.

DoD Arctic Strategy Ways in Support of Defensive LOE
• Exercise sovereignty and protect the homeland. • Engage public and private sector partners to improve domain awareness in the Arctic. • Preserve freedom of the seas in the Arctic. • Evolve Arctic infrastructure and capabilities consistent with changing conditions. • Support existing agreements with allies and partners while pursuing new ones.

Table 3: DoD Arctic Strategy Ways in Support of Defensive LOE

CHAPTER 3: ARCTIC RESPONSIBILITIES AND CAPABILITIES

Without a clear strategy for defensive lines of effort, the Combatant Command responsible for the Arctic faces significant challenges. By examining USNORTHCOM's responsibilities and its approach to an Arctic theater strategy, it is possible to take the next step in making specific recommendations.

Unified Command Plan

In April 2011, the President approved a modification to the Unified Command Plan (UCP) and split the areas of responsibilities in the Arctic between U.S. Northern Command (USNORTHCOM) and U.S. European Command (USEUCOM). Prior to 2011, the Arctic areas of responsibilities were split three ways and included the U.S. Pacific Command (USPACOM). The modified UCP also designated USNORTHCOM as the “singular advocacy responsibility for Arctic capabilities . . . as such, [USNORTHCOM] will be responsible for Arctic planning, identification of future capabilities, and requirements or engagement with other relevant national and international agencies and governing bodies.”¹

The UCP modification is significant for two reasons. First, it recognized the geostrategic importance of the Arctic to the U.S. homeland, primarily Alaska, and USNORTHCOM's responsibilities as the lead combatant commander for homeland security and defense. Second, the UCP modification recognized the importance of consolidating DoD's efforts to identify and advocate for future Arctic capabilities and

¹ U.S. Department of Defense, *Report to Congress on Arctic Operations and the Northwest Passage*, Congressional Report, OUSD (Policy) (Washington, DC: Department of Defense, 2011), 20.

requirements under a single Combatant Command. USNORTHCOM has interpreted this change in the following statement:

[The commander, USNORTHCOM] has a responsibility to advocate requirements not just within his particular combatant command, but rather he can also advocate and endorse requirements that may come from another combatant command, another service, that are in support or could be used to facilitate activities and operations in the Arctic . . . [the] declaration or authority that's been vested in the Commander provides a degree of coherence in ensuring that we can invest in the right capabilities today so that we're poised and positioned to execute on the Arctic operations of tomorrow.²

This UCP modification was a great first step in recognizing the strategic importance of the Arctic by restructuring the responsibilities for the Arctic from three combatant commanders to two.

Although splitting the area of responsibilities between two combatant commanders has inherent weaknesses, DoD argues that having one combatant commander would be damaging to other allies:

Although multiple CDDRs with responsibility in the Arctic Ocean makes coordination more challenging, having too few would leave out key stakeholders, diminish long-standing relationships, and potentially alienate important partners. Aligning the entire Arctic Ocean under a single CDDR would disrupt progress in theater security cooperation achieved over decades of dialogue and confidence building by USEUCOM . . . with regional interlocutors.³

There are four entrances to the Arctic, the Bering Strait, the Davis Strait west of Greenland, the Denmark Strait between Greenland and Iceland, and the Norwegian Sea between Iceland and northwestern Europe. The Bering Strait, and the Alaskan and Canadian Arctic coasts, squarely fall into the realm of USNORTHCOM's mandate for

² Defence IQ, *U.S. Northern Command*, May 02, 2013, <http://www.northcom.mil/Newsroom/Speeches/tabid/4237/Article/2967/interview-with-brig-gen-alexander-meinzinger-norad-and-usnorthcom-deputy-direct.aspx> (accessed Nov 19, 2013).

³ U.S. Department of Defense, *Report to Congress on Arctic Operations*, 20.

homeland security and defense. Conversely, the North Atlantic entrances and the European Arctic coasts are geostrategically important to NATO and our European allies. Accordingly, the USEUCOM commander, with the dual responsibility as the NATO Supreme Allied Commander Europe, has key strategic interests in the Arctic relative to the allies and partner nations within USEUCOM's AOR. While USEUCOM's partnership and security cooperation with NATO and European allies is an instrumental part of an overall Arctic strategy, USNORTHCOM has primacy to define requirements and capabilities.⁴

USNORTHCOM

USNORTHCOM's Arctic strategy has made the best interpretation of weak strategic guidance in the DoD Arctic Strategy for defensive lines of effort: "One of the directed end states that we have from Washington on the USNORTHCOM side is, as an aspirational end state, all of our activities are to contribute to the peaceful opening of the Arctic in a manner that serves to strengthen international cooperation."⁵

To meet this intent, USNORTHCOM's strategy was developed with three lines of effort: safety, security, and defense. Along the line of safety, USNORTHCOM provides DoD resources in support of other government agencies such as the U.S. Coast Guard for search and rescue or to the State of Alaska for natural disaster assistance such as in response to an earthquake. Similarly, the security line of effort focuses on assistance to civil authorities on issues such as "illegal fishing, perhaps an oil spill, or the sorts of

⁴ U.S. Department of Defense, *Report to Congress on Arctic Operations*, 20.

⁵ Defence IQ, *U.S. Northern Command*.

activities that breach international regulations and codes.”⁶ For the defense line of effort USNORTHCOM is prepared to defend national interests in the Arctic region;⁷ however, despite the announcements and activities of Russian and Chinese military figures, the National Security Strategy does not identify defense of the geostrategic issues at stake in the Arctic as a U.S. national interest. The interests identified are: protecting the environment, managing resources, accounting for indigenous populations, and strengthening international cooperation.⁸ Similarly, the National Arctic Strategy’s lines of effort do not include defense as a key issue: advance U.S. security interests, pursue responsible Arctic region stewardship, and strengthen international cooperation.⁹ This approach to the Arctic resonates in USNORTHCOM’s strategic direction as best described by the deputy commander of USNORTHCOM; “We don't consider that [defense of the Arctic] to be a priority in the sense that that's a real concern. We're very much fixed on the safety and security aspects.”¹⁰

Recognizing that neither DoD nor USNORTHCOM view defense of the Arctic as an imminent threat, the United States must still prepare itself for the possibility of a future conflict in the Arctic. Russia and China’s Arctic strategies clearly identify defense of Arctic resources and SLOC as a national interest. Russia demonstrated its willingness to use military force to annex the Crimean peninsula in the Ukraine and China continues to use military aggression to reinforce its claim to disputed islands in the South China Sea. As history has proven, Russia and China may one day threaten U.S. interests in the

⁶ Defence IQ, *U.S. Northern Command*.

⁷ Ibid.

⁸ Obama, "National Security Strategy."

⁹ Obama, "National Strategy for the Arctic Region."

¹⁰ Defence IQ, *U.S. Northern Command*.

Arctic and the United States cannot afford a passive approach in defense of these interests. The key to preparedness is developing lines of effort in the next 10-15 years that support defense of the Arctic in the future.

In order to shape USNORTHCOM's lines of effort to prepare for Arctic defense in the future, a better understanding of the directed *ways* and *means* in the DoD Arctic Strategy is required. Accordingly, focus should remain on the *ways* that most directly support defensive lines of effort, as identified in Table 3.

Exercise sovereignty and protect the homeland. The DoD Arctic Strategy states, "the Department will maintain and enhance [sovereignty and homeland defense] by continuing to conduct exercises and training in the region."¹¹ This strategy specifically identifies Commander USNORTHCOM to collaborate with other combatant commands, the Joint Staff, other military services, and defense agencies to identify and prioritize emerging Arctic capability gaps and requirements.¹²

Improve domain awareness. The strategy states that DoD "has responsibilities for awareness across all domains: air, land, maritime, space, and cyberspace."¹³ It recognizes that NORAD already maintains air-tracking capabilities in the Arctic and directs the Navy to take the lead in coordinating DoD maritime detection and tracking capabilities.¹⁴

Preserve freedom of the seas. The DoD Arctic Strategy clearly articulates the military's role in achieving the national objective for freedom of navigation. "The Department will preserve the global mobility of United States military and civilian

¹¹ Hagel, "U.S. Department of Defense Arctic Strategy," 8.

¹² Ibid.

¹³ Ibid., 9.

¹⁴ Ibid.

vessels and aircraft throughout the Arctic, including through the exercise of the Freedom of Navigation program to challenge excessive maritime claims asserted by other Arctic States when necessary.”¹⁵ Specifically, the strategy calls for DoD to challenge excessive claims in the Arctic through the U.S. Freedom of Navigation (FON) program. This has the greatest military implication on national security, because it requires U.S. military aircraft and warships to challenge other states’ claims and could lead to a military confrontation.¹⁶

Evolve Arctic infrastructure and capabilities. Combatant commanders are to identify Arctic operational requirements in their regional plans and once those requirements are defined, seek solutions that use existing “U.S. Government, commercial, and international facilities to the maximum extent possible in order to mitigate the high cost and extended timelines associated with the development of Arctic infrastructure.”¹⁷ Of particular interest, the strategy states “If no existing infrastructure is capable of sufficiently supporting the requirement, modifications to existing bases, such as the addition of a new hangar, will be made as part of the military construction or facilities sustainment, restoration, and modernization processes.”¹⁸

Uphold existing agreements with allies and partners while building confidence with key regional partners. The strategy emphasizes the importance of security cooperative activities and other military to military engagements to “maintain international relations and the partnerships necessary to meet security challenges and

¹⁵ Hagel, "U.S. Department of Defense Arctic Strategy," 10.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Ibid.

reduce the potential for friction.”¹⁹ It highlights the 2012 and 2013 Northern Chiefs of Defense meetings and the Arctic Security Forces Roundtable workshops as examples of cooperative partnerships to enhance Arctic security. It also calls for enhanced interagency collaborative approaches and states, “cooperation with the Department of State, DHS (in particular, the U.S. Coast Guard), and other relevant agencies, the Department will continue to build cooperative strategic partnerships that promote innovative, affordable security solutions and burden-sharing in the Arctic.”²⁰ Furthermore, it seeks to “increase bilateral exchanges . . . and take advantage of multilateral training opportunities with Arctic partners to enhance regional expertise and cold-weather operational experience.”²¹

With a clearer understanding of the directed *ways* and *means* in the DoD Arctic Strategy, we can make the connection between the National Arctic Strategy, the DoD Arctic Strategy, and USNORTHCOM’s lines of effort that most contribute to defensive posturing. Table 4 shows these primary and supporting connections.

¹⁹ Hagel, "U.S. Department of Defense Arctic Strategy," 10.

²⁰ Ibid.

²¹ Ibid., 10-11.

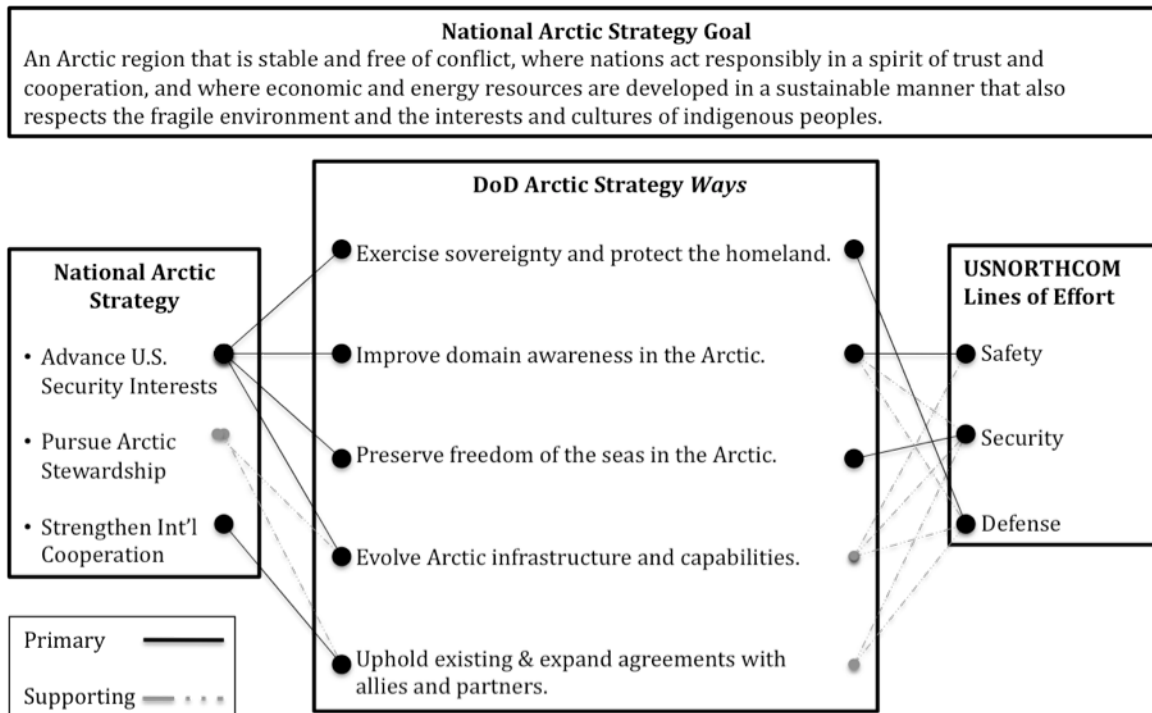


Table 4: National Arctic Strategy, DoD Arctic Strategy, and USNORTHCOM LOE

Focusing on the connections in Table 4 provides a road map for enhancing future U.S. defensive posture in the Arctic. The most significant obstacle to operationalizing USNORTHCOM's lines of effort is a gap in Arctic capabilities; most significantly in maritime capabilities. Prior to the UCP modification in 2011, in a May 2008 memo the commanders of USPACOM, USTRANSCOM and USNORTHCOM stated:

[The U.S.] needs assured access to support U.S. national interests in the Arctic. Although this imperative could be met by regular U.S. Government ships in open water up to the marginal ice zone, only ice-capable ships provide assured sovereign presence throughout the region and throughout the year. Assured access in areas of pack ice could also be met by other means, including submarines and aircraft.²²

Four years later, in March 2012 the USNORTHCOM Commander and the U.S. Coast Guard Commandant signed a report identifying gaps in communication, domain

²² U.S. Department of Defense, *Report to Congress on Arctic Operations*, 27-28.

awareness, infrastructure, and presence. As noted by General Alexander Meinzinger, the Director for USNORTHCOM's Strategy, Policy and Plans, the report helps "guide investments to prepare for the eventual opening of the Arctic, including infrastructure that . . . often takes four times longer and costs four times as much as similar projects in less isolated and demanding environments."²³ The importance of preparing for the Arctic opening has not gone without notice by the USNORTHCOM Commander as he conveyed to the Senate Armed Services Committee in 2012; "We have an opportunity, while we watch the Arctic begin to open up, to get ahead of potential security requirements Security interests follow closely behind economic interests, and we will be participating in a number of venues to help lead that for the Department of Defense."²⁴ Although much discussion has occurred on the need for maritime Arctic capabilities since 2008, little progress has been made. The next section of this chapter will focus on the current Arctic command and control organization, existing Arctic infrastructures, and the service's Arctic capabilities.

Alaska Command and Joint Task Force Alaska

At the operational level, two commands have responsibility for Alaska and the Arctic. The U.S. Alaska Command (ALCOM) is a sub-unified command under USPACOM and has responsibilities for the land and maritime defense of Alaska. In addition, ALCOM is responsible for all air missions not under the Alaska North American Aerospace Defense Command Region (ANR). This primarily consists of air

²³ Donna Miles, *Northcom Strives to Promote Safe, Secure Arctic*, Dec 17, 2012, <http://www.defense.gov/news/newsarticle.aspx?id=118814> (accessed Nov 19, 2013).

²⁴ Ibid.

search and rescue and other civil support missions.²⁵ When USNORTHCOM stood up after the September 11, 2001 attacks, it assumed responsibility for the homeland defense and DoD support to civil authorities. To execute these responsibilities, USNORTHCOM created Joint Task Force-Alaska (JTF-AK) in February 2003 with the mission “to deter, detect, prevent and defeat threats within the Alaska Joint Operations Area in order to protect U.S. territory, citizens, and interests, and as directed, conduct Civil Support.”²⁶ Although most of the military forces and their activities remain under USPACOM and ALCOM, a Command Authorities Agreement between USNORTHCOM and USPACOM was established, whereby ALCOM was given responsibility to man and execute the JTF-AK mission.²⁷ This arrangement essentially creates a multi-hatted commander for ALCOM, JTF-AK, and ANR who is responsible to two combatant commanders for separate missions.²⁸ Although the defense of Alaska is divided between three commands (NORAD, USPACOM, and USNORTHCOM), ALCOM maintains that it provides “unity of command for U.S. and Canadian forces and all of these missions in Alaska through the designation as Commander ANR and JTF-AK.”²⁹ The USNORTHCOM Commander is well aware of all of the nuances of this command structure.

In 2013 the USNORTHCOM Commander, General Charles Jacoby testified before the Senate Committee on the Armed Services and highlighted the significance of

²⁵ U.S. Alaskan Command, *Alaskan Command*, September 26, 2013, <http://www.jber.af.mil/library/factsheets/factsheet.asp?id=5286> (accessed February 09, 2014).

²⁶ U.S. Northern Command, *About NORTHCOM*, December 16, 2013, www.northcom.mil/aboutUSNORTHCOM.aspx (accessed December 16, 2013).

²⁷ U.S. Alaskan Command, *Alaskan Command*.

²⁸ Peter Ohotnicky, Braden Hisey and Jessica Todd, "Improving U.S. Posture in the Arctic," *Joint Forces Quarterly* 4th Quarter, no. 67 (2012).

²⁹ U.S. Alaskan Command, *Alaskan Command*.

ALCOM and the excellent support by USPACOM to execute USNORTHCOM and JTF-AK's mission. In his testimony, he stated, "as both the NORAD commander and the USNORTHCOM commander, I believe that I probably occupy...80 to 85 percent of the ALCOM commander's time."³⁰ Although General Jacoby did not specifically advocate transferring ALCOM to USNORTHCOM, clearly he sees challenges under the current fragmented command structure. Some have argued that U.S. national interests in Alaska and the Arctic would be better served by disbanding JTF-AK, have ALCOM assume JTF-AK's responsibilities, and transfer ALCOM from a sub-unified command under USPACOM to a USNORTHCOM sub-unified command.³¹ This structure would unify command responsibilities for the land and air defense of Alaska and the Arctic under a single combatant commander. USNORTHCOM and ALCOM could then be designated as supporting commands to USPACOM for planning and conducting joint training for rapid long-range deployment missions in support of USPACOM.

U.S. Navy

In 2009, the Chief of Naval Operations directed the establishment of Task Force Climate Change and the development of an Arctic road map for the Navy. Published in November 2009, the *Navy Arctic Roadmap* provided a "holistic, chronological list of Navy action items, strategic objectives, and desired effects regarding the Arctic for Fiscal

³⁰ United States. Congress. Senate., "F.Y. 2013 Southern Command and Northern Command Budgets," in *Hearing before the United States Senate, Committee on Armed Services* (U.S. Government Printing Office, 2013).

³¹ See Peter Ohotnicky, Braden Hisey and Jessica Todd, "Improving U.S. Posture in the Arctic," *Joint Forces Quarterly* 4th Quarter, no. 67 (2012).

Years (FY) 2010-2014.”³² The roadmap is scheduled for review and revision in 2014 to incorporate expected guidance in the FY14 Quadrennial Defense Review.³³

Although somewhat dated, the 2009 Navy Arctic Roadmap provides a summary of the Navy’s focus in preparing for the Arctic during FY 2010-2014. The primary focus areas of the roadmap included:

- Strategy, policy, missions, and plans.
- Operations and training.
- Investments in weapons, platforms, sensors, command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR), installations, and facilities.
- Strategic communications and outreach.
- Environmental assessment and prediction.³⁴

In analyzing the Navy’s current Arctic capabilities and gaps, the roadmap is inconclusive as the results merely identified the *need* to conduct thorough assessments of each focus area, which subsequently would make recommendations on required capabilities. More substantial for this analysis were the Task Force Climate Change assessments on Arctic requirements.

The Oceanographer of the Navy, chair of Task Force Climate Change, acknowledged that shipping routes in the Arctic could potentially alter global maritime routes as companies begin sending ships through the Arctic rather than through the Panama Canal.³⁵ The Task Force Climate Change also assessed that commercial activities in the Arctic will remain relatively low through 2030, with shipping, oil, and

³² U.S. Navy, "Navy Arctic Roadmap," Office of the Vice Chief of Naval Operations (Washington, DC, 10 November 2009).

³³ Ibid.

³⁴ Ibid.

³⁵ David Titley, interview by Science and Transportation Subcommittee on Oceans, Atmosphere, Fisheries and Coast Guard Committee on Senate Commerce, "Oceanographer and Navigator United States Navy," *Congressional Testimony, U.S. Economic Interests in the Arctic*, (July 27, 2011).

gas extraction increasing after 2030.³⁶ Based on this assessment, the Navy asserts: “Existing DoD posture in the region is adequate to meet near- to mid-term U.S. defense needs.”³⁷ The Navy does identify secure access to the Arctic as a national interest, but maintains this can be achieved through existing capabilities using submarines and aircraft.³⁸

A new updated *Arctic Road Map* is expected in 2014 and, among other things, may identify progress by the Office of Naval Research in designing gear to remove ice from the superstructure of surface ships using ice-resistant paints and heating elements in the superstructure. The Navy is also working to strengthen the hull of some ships to make them more ice-capable and assessing prospects for adding more basing infrastructure in the Arctic. Under an accelerated program, the Navy is preparing its fleet to have an increased Arctic presence by the mid-2020s as opposed to the mid-2030s.³⁹

Most pertinent to this paper, the Task Force Climate Change acknowledged that only “U.S.-flagged ice-capable ships”⁴⁰ can exert U.S. sovereignty in the Arctic maritime domain, but emphasizes that the uncertainty of the Arctic’s climate change must be balanced with the costs of increasing naval Arctic capabilities:

Significant uncertainty remains about the rate and extent of climate change in the Arctic and the pace at which human activity will increase. The challenge is to balance the risk of being late- to-need with the opportunity cost of making premature Arctic investments. Not only does early

³⁶ Tim Gallaudet, “The U.S. Navy’s Task Force Climate Change & The Navy’s Arctic Roadmap,” in *4th Symposium on the Impacts of an Ice-Diminishing Arctic on Naval and Maritime Operations* (Washington, DC: U.S. Navy, 2011).

³⁷ Titley, *Congressional Testimony, U.S. Economic Interests in the Arctic*.

³⁸ Ibid.

³⁹ Kris Osborn, *Navy Prepares Fleet for More Arctic Missions*, November 18, 2013, <http://www.dodbuzz.com/2013/11/18/navy-prepares-fleet-for-more-arctic-missions/> (accessed November 22, 2013).

⁴⁰ Titley, *Congressional Testimony, U.S. Economic Interests in the Arctic*.

investment take resources from other pressing needs, but the capabilities would be later in their lifecycle when finally employed.⁴¹

Using this risk-benefit model, the Navy advocates for further assessments on the Arctic before making significant investments in infrastructure or capabilities.⁴² This statement in Admiral Titley's testimony to Congress is also found in the 2011 DoD report to Congress on Arctic Operations and the Northwest Passage (DoD Arctic Report).

The 2011 DoD Arctic Report provided more details on capability gaps, however, in general it echoed the same need for a risk-benefit assessment before making substantial investments. Among other gaps, the report identified two significant needs for future Arctic maritime operations: ice-breaking capabilities and port infrastructure.

The U.S. commercial fleet has no heavy icebreakers and the U.S. Coast Guard only has two operational ocean-capable icebreakers. The U.S. Coast Guard Cutter (USCGC) POLAR STAR is the only heavy-duty icebreaker, but only has seven to ten years of remaining service life. The USCGC HEALY has 18 years of remaining service life, but is only a medium-duty icebreaker.⁴³ The USCGC POLAR SEA is the Coast Guard's third icebreaker, but has been out of service since 2010 due to major engine casualties. With national interests in the Arctic increasing, the decision whether to repair or scrap POLAR SEA is now the subject of congressional debate.⁴⁴ Despite only having two U.S. icebreakers, DoD contends its icebreaking needs are "currently met by foreign-flagged commercial contract vessels or through cooperation with Canada."⁴⁵ Relying on

⁴¹ Titley, *Congressional Testimony, U.S. Economic Interests in the Arctic*.

⁴² Ibid.

⁴³ U.S. Department of Defense, *Report to Congress on Arctic Operations*.

⁴⁴ The Associated Press, *Reprieve for Seattle-based icebreaker Polar Sea*, June 15, 2012, http://seattletimes.com/html/localnews/2018443011_apwacoastguardicebreakers1stldwritethru.html (accessed December 19, 2013).

⁴⁵ U.S. Department of Defense, *Report to Congress on Arctic Operations*.

foreign-flagged vessels, however, does not enhance our ability to exert U.S. sovereignty in the Arctic maritime domain.

The second significant gap identified in the DoD Arctic Report is that of port infrastructure. The report focuses primarily on airfields and recognizes that “U.S. infrastructure capable of supporting current military operations is sparse, particularly in northern Alaska and the Aleutian Islands.”⁴⁶ Specific to ports, it identifies only two locations in Alaska; the commercial port of Dutch Harbor, located approximately 800 nautical miles from the Arctic, and Adak approximately 1,000 nautical miles from the Arctic. Both ports have significant limitations: Dutch Harbor has severe airport runway limits for heavy lift aircraft and Adak is extremely remote and essentially has no commercial support after Naval Station Adak was closed in 2000. Despite identifying no other viable alternatives to support Arctic operations, the DoD report concludes, “with the low potential for armed conflict in the region in the foreseeable future, the existing defense infrastructure (e.g., bases, ports, and airfields) is adequate to meet near- to mid-term U.S. national security needs. Therefore, DoD does not currently anticipate a need for the construction of additional bases or a deep draft port in Alaska between now and 2020.”⁴⁷ It does identify that potential future infrastructure could “consist of dual-use military-civilian facilities” and states this could possibly be completed in partnership with the U.S. Coast Guard.⁴⁸

In response to congressional direction, the Government Accountability Office (GAO) reviewed the DoD Arctic Report and provided recommendations to shape DoD’s

⁴⁶ U.S. Department of Defense, *Report to Congress on Arctic Operations*.

⁴⁷ Ibid.

⁴⁸ Ibid.

strategic planning for the Arctic. The GAO concluded that DoD made progress in identifying “Arctic capability gaps and assess[ing] strategic objectives, constraints, and risks in the Arctic.”⁴⁹ However, it added, “DoD has not yet evaluated, selected, or implemented alternatives for prioritizing and addressing near-term Arctic capability needs.”⁵⁰ In general, the GAO recognized there may not be an immediate need for significant investments in the Arctic, but emphasized that DoD is lacking an investment strategy to identify and prioritize near-term Arctic capability needs. In conclusion, GAO recommended that “DoD develop a risk-based investment strategy and timeline for developing Arctic capabilities needed in the near-term; and establish a forum with the Coast Guard to identify collaborative Arctic capability investments over the long-term.”⁵¹ In summary, DoD and the Navy have adequately identified capability gaps; however, they have not fully developed specific recommendations for the future.

U.S. Coast Guard

The U.S. Coast Guard (USCG), on the other hand, is taking a forward leaning approach to the Arctic and has conducted operations in the Arctic since 2007.⁵² Contrary to DoD’s stance that Arctic defense requirements are not expected in the near future, the Coast Guard has peacetime statutory missions already in play in the Arctic. These missions fall under three primary roles for the Coast Guard: maritime safety, maritime security, and maritime stewardship.⁵³ Already occurring Arctic activities that fall under

⁴⁹ U.S. Government Accountability Office, *Arctic Capabilities*, Report to Congressional Committees (Washington, D.C.: U.S. Government Accountability Office, 2012).

⁵⁰ *Ibid.*, 14.

⁵¹ *Ibid.*

⁵² U.S. Department of Defense, *Report to Congress on Arctic Operations*.

⁵³ U.S. Coast Guard, *U.S. Coast Guard Missions*, October 22, 2013, www.uscg.mil/top/missions (accessed December 19, 2013).

Coast Guard responsibilities include: cruise ship voyages, oil and mineral exploration, and increased maritime traffic.⁵⁴ These activities require Coast Guard presence, oversight, regulatory enforcement, and contingency response.⁵⁵ Strategically, the Commandant of the Coast Guard recognizes the importance of the Arctic to national interests and is preparing the service to execute its responsibilities in the Arctic: “The Arctic region is vital to our national interests, economy and security. It is rapidly growing into a navigable sea, attracting increased human activity, and unlocking access to vast economic opportunities and energy resources.”⁵⁶ As such, the Coast Guard was one of the first agencies to release an Arctic Strategy.⁵⁷

Released in May 2013, the U.S. Coast Guard Arctic Strategy focuses on three primary lines of effort: improving awareness, modernizing governance, and broadening partnerships.⁵⁸ A detailed analysis of the Coast Guard’s Arctic Strategy is beyond the scope of this paper, however, a summary of each line of effort provides a synopsis of the Coast Guard’s strategic direction in the Arctic:

Improving Awareness. The U.S. government requires effective understanding of maritime activity in the Arctic region in order to enforce maritime sovereignty and address threats as early as possible.

Modernizing Governance. To advance U.S. interests in the region, the Coast Guard must work with other Federal, State, tribal, and local government entities, international counterparts, relevant industries, and other stakeholders to promote maritime safety, security, and environmental responsibility in the Arctic region.

⁵⁴ Robert J. Papp, "Remarks of the Commandant," *Fifth Symposium on the Impacts of an Ice-Diminishing Arctic*, July 16, 2013, www.uscg.mil/seniorleadership/speeches.asp (accessed December 19, 2013).

⁵⁵ U.S. Coast Guard, "U.S. Coast Guard Arctic Strategy" (Washington DC: Government Printing Office, May 2013).

⁵⁶ Papp, *Remarks of the Commandant*.

⁵⁷ See U.S. Coast Guard, "U.S. Coast Guard Arctic Strategy" (Washington DC: Government Printing Office, May 2013) at www.uscg.mil/seniorleadership/.

⁵⁸ U.S. Coast Guard, "U.S. Coast Guard Arctic Strategy."

Broadening Partnerships. The Coast Guard must foster domestic and international partnerships to specifically increase coordination, enhance efficiency, and reduce risk.⁵⁹

The USCG's Arctic Strategy also identified resource gaps that need to be addressed to achieve the national Arctic objectives. These gaps primarily include the need for additional icebreakers, long-range patrol vessels, and aviation assets; improved communications; better maritime domain awareness capabilities; and forward operating locations.⁶⁰ Despite these resource gaps, the Coast Guard is pressing forward with their Arctic operations and most recently executed Operation Arctic Shield in 2012 and 2013.

Arctic Shield is a seasonal operation off the North Slope of Alaska, where a variety of USCG Cutters, helicopters, planes, and small boats operate or conduct patrols in the Arctic waters. The purpose of Arctic Shield is to conduct outreach to remote Alaskan villages, provide operational response platforms for increased Arctic activity, and conduct Arctic capabilities assessments. To execute Arctic Shield, the Coast Guard relies on State and DoD partnerships for use of forward operating locations in Fairbanks and Barrow, AK, and on the USCG's new National Security Cutters (NSC) as offshore command and control platforms.⁶¹

⁵⁹ U.S. Coast Guard, "U.S. Coast Guard Arctic Strategy," 22-32.

⁶⁰ Ibid.

⁶¹ U.S. Coast Guard Seventeenth District, *Arctic Shield 2013*, July 25, 2013, www.uscg.mil/d17/Arctic%20Shield%202013.asp (accessed December 19, 2013).

CHAPTER 4: RECOMMENDATIONS AND CONCLUSION

The challenge to meeting Arctic National Security concerns in an austere budget environment is reaching a balance between proper preparedness and being excessively prepared at the expense of other national objectives. The Department of Defense and the Coast Guard are already struggling to secure congressional funding to replace aging ships and aircraft. Additional Arctic resource funding requirements will have impacts on other capabilities and, should the predictions for an ice-free Arctic prove wrong, those impacts could weaken DoD and the USCG's effectiveness in other missions to no avail. On the other hand, Russia and China are taking significant steps to secure their Arctic interests and the United States is already behind if Arctic military naval presence is required in the near future. Table 5 is a list of recommendations for USNORTHCOM in preparing defensive lines of effort and correlates how these recommendations align with the DoD Arctic Strategy's ways. They provide a tiered approach for establishing military presence with current resources and capabilities, expanding U.S. Arctic influence in the next 10-15 years, and allowing time for long-term military capability development.

Recommendations for USNORTHCOM	
Command and Control	Disestablish JTF-AK and designate ALCOM a USNORTHCOM sub-unified command. Designate USCG 17th District Commander Joint Force Maritime Component Commander ALCOM.
Exercise sovereignty and protect the homeland and	
Improve domain awareness in the Arctic	U.S. Navy conduct Arctic patrols during USCG Operation Arctic Shield.
Preserve freedom of the seas in the Arctic	U.S. Navy and USCG to conduct Freedom of Navigation Operations.
Evolve Arctic infrastructure and capabilities	USNORTHCOM advocate for Navy & USCG Arctic requirements for the following: - Build an Arctic port on the North coast of Alaska. - Ice-strengthen a complement of U.S. Navy combatant ships. - Build new heavy USCG ice-breakers. - Build two future USCG Offshore Patrol Cutters with ice-strengthened hulls.
Uphold existing & expand agreements with allies and partners	Expand USCG Operation Arctic Shield to include U.S. Navy, Canadian, and Russian naval ships.

Table 5: Recommendations for USNORTHCOM

In essence, this tiered approach provides decision space for national leaders as we assess the future of the Arctic and make long-term budgeting decisions for future resources. Bearing in mind DoD’s strategic approach and USNORTHCOM’s intent of a peaceful opening of the Arctic through international cooperation, these recommendations accomplish four primary objectives: (1) unifying the fractured command structure of Alaska Command and USNORTHCOM, (2) establishing U.S. commitment to our Arctic National interests, (3) developing future Arctic capabilities, and (4) conveying non-escalatory intentions while increasing U.S. military presence in the Arctic.

Command and Control

Designate ALCOM a USNORTHCOM sub-unified command. Unity of command is the first tenant of any military organization. The current command structure between USPACOM, USNORTHCOM, ALCOM, and JTF-AK is far from a unified organization. Commander USNORTHCOM should advocate to the Chairman of the Joint Chiefs of

Staff (CJCS) that ALCOM be transferred from USPACOM and reinstated as a subunified command under USNORTHCOM. At the same time, JTF-AK should be disestablished and all its responsibilities absorbed by ALCOM. ALCOM would continue supporting USPACOM, but would report directly to USNORTHCOM, especially for the defense of Alaska and the Arctic. This new command structure consolidates all responsibilities for Alaska and the Arctic under one commander and, if defensive lines of effort are ever needed, it will significantly enhance unity of effort between USNORTHCOM and ALCOM.

Designate the USCG as Joint Force Maritime Component Commander ALCOM. In addition to reorganizing the USNORTHCOM and ALCOM command structure, Commander USNORTHCOM should advocate to the CJCS to designate the USCG 17th District Commander as the Joint Force Maritime Component Commander (JFMCC) for ALCOM. Already designated Commander, U.S. Naval Forces Alaska, the 17th District Commander is responsible for executing naval responses to contingencies within ALCOM's area of responsibility. Designating the Coast Guard Admiral as Commander JFMCC ALCOM will create the command structure necessary for future joint Coast Guard–Navy Arctic operations. Furthermore, as already established in this paper, there is little reason to believe hostilities will break out in the Arctic anytime in the near future. Accordingly, U.S. national interest in the region consists almost exclusively of domestic peacetime activities under the purview of the USCG and using USCG ships and aircraft. The USCG already has strong operational ties coordinating peacetime maritime operations for law enforcement and maritime domain awareness with the Russian Federal

Border Guard Service (FBS) and the Chinese Coast Guard.¹ Establishing the USCG as JFMCC ALCOM will broaden these already established strong partnerships between the USCG, the Russian FBS, and the Chinese Coast Guard to include ALCOM. This will also portray U.S. Arctic interests in a less confrontational manner under USCG leadership, as opposed to DoD Navy leadership, and serve to strengthen the U.S. position in the Arctic, while promoting better cooperation with Russia and China. To ensure strong continuity for possible defensive lines of effort in the future, designating a Navy Captain as Deputy Commander JFMCC ALCOM would provide naval combat expertise to the USCG Commander for defense contingencies.

Exercise Sovereignty and Protect the Homeland/ Improve Arctic Domain Awareness

U.S. Navy conduct Arctic patrols during USCG Operation Arctic Shield. The USCG Operation Arctic Shield is an already established peace time operation to meet the Coast Guard Arctic Strategy's line of effort for improving Arctic domain awareness. By assigning cutters to patrol the Arctic, the USCG is gaining significant first-hand knowledge and experience on Arctic operations, identifying gaps in Arctic capabilities, and enhancing its Arctic maritime domain awareness. USNORTHCOM, through its Navy component commander, U.S. Navy North (USNAVNORTH), should request the allocation of Navy ships to participate in the USCG's Operation Arctic Shield. USCG cutters have operated in the Arctic during summer months for several years without ice-

¹ See Kevin W. Riddle, "Illegal, Unregulated, and Unreported Fishing: Is International Cooperation Contagious?," *Ocean Development & International Law* 37 (2006): 265-297; U.S. Coast Guard Seventeenth District, *Deck Watch Covers the Russian Northeast border Directorate Visit*, April 09, 2012, <http://alaska.coastguard.dodlive.mil/2012/04/deck-watch-covers-the-russian-northeast-border-directorate-visit/> (accessed February 11, 2014); and U.S. Coast Guard, *China, U.S., Japan Cooperate Against High-Seas Drift Nets*, September 7, 2007, <http://www.uscgalaska.com/go/doc/780/171373/> (accessed February 11, 2014).

strengthened hulls and without incident. The USCG cutters are, however, significantly limited in their capabilities and their operations are strictly limited to ice-free waters. Although the U.S. Navy has no ice-strengthened ships in its inventory, it should leverage these operations to test and evaluate its capabilities and assess future requirements, similar to the USCG. Obtaining first-hand operational Arctic experience through U.S. Navy commanders will significantly enhance the U.S. Navy's ability to improve Arctic domain awareness for USNORTHCOM and exercise U.S. sovereignty in the Arctic. Furthermore, this peacetime Department of Homeland Security operation, under USCG Command, will facilitate DoD's entry to the Arctic while minimizing the appearance of U.S. militarization of the Arctic to other nations, especially Russia and China.

Preserve Freedom of the Seas in the Arctic

Conduct Freedom of Navigation operations. The next recommendation is for the U.S. Navy and USCG to conduct Freedom of Navigation (FON) operations through the Northern Sea Route above Russia and through the Northwest Passage above Canada. As clearly articulated in all the national level Arctic strategies, freedom of navigation is the top U.S. strategic objective for the Arctic. The FON program is the primary means to challenge potential excessive sea claims by other nations. Russia and Canada both indicate some level of intent to control navigation through Arctic international straits in the Northern Sea Route and Northwest Passage. No matter the level of control, this contradicts the U.S. strategic intent to ensure freedom of navigation through the Arctic. Conducting FON operations against one of our closest allies, Canada, and an ever-increasing confrontational peer, Russia, does pose a high level of political and diplomatic risk. However, as a top U.S. strategic objective, the United States cannot ignore the

greater risk of losing freedom of navigation through these critical international straits in the Arctic.

To ease this potential diplomatic risk, commander USNORTHCOM should first advocate to the Commandant of the Coast Guard, through the CJCS, for USCG polar icebreakers to conduct FON operations. The peaceful scientific mission of USCG icebreakers provides ample justification for them to transit the emerging Arctic sea-lanes through the Northern Sea Route and the Northwest Passage. The primary mission of the USCG icebreakers' transits should be scientific in nature, as part of a publicly proclaimed intent to better understand the changing Arctic environment. Beginning in 2017, after the United States establishes a firm presence transiting these straits with USCG icebreakers, USNORTHCOM and USNAVNORTH should make a request for an allocation of ice-strengthened U.S. Navy ships to conduct FON operations in company with the USCG icebreakers. It is only through sheer presence of U.S. naval ships in the Arctic that the United States will secure our freedom of navigation through the Arctic international straits.

As demonstrated by Canada's protest of the USCGC POLAR SEA transiting the Northwest Passage in 1985, the Department of State should be vested fully in the operation and develop a communications strategy to counter diplomatic protests by Russia or Canada.² As an Arctic nation, Canada also has strategic interests in maintaining freedom of navigation in the Arctic. The United States could also propose a combined USCG and Canadian Coast Guard icebreaker transit through both straits to further strengthen U.S. and Canadian Arctic interests. A combined transit would also

² See Phillip J. Briggs, "The Polar Sea Voyage and the Northwest Passage Dispute," *Armed Forces and Society*, April 1990: 437-452.

lessen tensions with our strongest Arctic ally Canada, while further bolstering freedom of navigation in the Arctic.

Evolve Arctic Infrastructure and Capabilities

USNORTHCOM advocate for Navy & USCG Arctic requirements. The importance of securing ice-capable ships and Arctic infrastructure is critical to the U.S. Arctic Strategy. The excessively long lead-time for major acquisitions means the United States must commit to building these resources early or risk being frozen out of the Arctic in the future. Table 6 is a list of recommendations DoD, the USCG, and the U.S. government should commit to now to meet future defensive lines of effort requirements.

Recommended Arctic Infrastructure and Capabilities
▪Build an Arctic port on the North coast of Alaska. ▪Ice-strengthen a complement of U.S. Navy combatant ships. ▪Build new heavy USCG ice-breakers. ▪Build two future USCG Offshore Patrol Cutters with ice-strengthened hulls.

Table 6: Recommended Arctic Infrastructure and Capabilities

The UCP and DoD’s Arctic Strategy designated USNORTHCOM as the lead combatant commander for advocating U.S. Arctic capabilities. The Integrated Priority List (IPL) is the primary means by which a combatant commander formally requests future requirements to meet U.S. strategic interests in its region of responsibility. To meet future requirements for Arctic defensive lines of effort, USNORTHCOM should submit an IPL to the Joint Staff requesting ice-strengthened Navy ships by 2017 and a maritime port on the North coast of Alaska by 2020. Although the current U.S. and DoD Arctic Strategies do not identify defensive lines of effort as an immediate concern, USNORTHCOM must advocate for future capabilities that ensure the U.S. objective for

security and homeland defense is met. When compared to the cost and acquisition timeline for building new ice-capable naval combatant ships, ice-strengthening the hulls of a complement of current U.S. Navy combatant ships is a relatively low cost approach. To ease the cost burden of an Arctic port, a joint venture with the State of Alaska and the USCG would provide a dual use civilian-military port capable of providing maritime services for U.S. commercial vessels, as well as U.S. Navy and USCG ships patrolling the Arctic Ocean.

As part of USNORTHCOM's strategic communications, the commander USNORTHCOM should support the USCG's effort to procure new heavy ice-breaking cutters. The USCG is also in the process of replacing its aging medium endurance cutters with an Offshore Patrol Cutter (OPC).³ Traditionally, the USCG has two cutters homeported in Alaska, which are the primary cutters patrolling the Bering Sea and Arctic Ocean. To ensure these cutters are adequately prepared for future Arctic requirements, Commander USNORTHCOM should advocate for, and the USCG should identify during the acquisition process, a requirement to ice-strengthen the hull of two future OPC's for home-porting in Alaska.

Uphold Existing, and Seek to Expand, Agreements with Allies and Partners
Expand USCG Operation Arctic Shield. USCG Operation Arctic Shield should be expanded to include U.S. Navy Ships and joint combined U.S. – Canada – Russia naval exercises beginning in 2015 or 2016. The advantage of leveraging the USCG operation to include DoD ships and combined multilateral exercises is the same as designating the

³ See U.S. Coast Guard, *Offshore Patrol Cutter*, December 03, 2013, <http://www.uscg.mil/acquisition/opc/default.asp> (accessed February 09, 2014).

USCG as Commander, JFMCC ALCOM. Arctic Shield is clearly a peacetime Department of Homeland Security operation and portrays no military escalation intentions on behalf of the United States. Herein lies one potential downfall of using Arctic Shield as a catalyst for DoD operations; changing the nature and identity of Arctic Shield could adversely affect how future USCG operations are portrayed by Arctic nations. Creating Arctic Shield exercises and transferring the participating assets from USCG District Seventeen tactical control to JFMCC-ALCOM tactical control, under USCG command, solely for the combined exercises could lessen this potentially adverse impact. Having a USCG Admiral as the Commander also diminishes the appearance of a DoD exercise. Another advantage to this approach is the ability to exercise the JFMCC-ALCOM organization for future real-world contingencies.

Under JFMCC-ALCOM Command, the exercises should incorporate U.S. Navy, Canadian, and Russian naval ships to work real-world scenarios and contingencies; i.e. search and rescue, oil pollution, counter-terrorism, securing Arctic SLOC,⁴ etc. These multilateral exercises fully support the national and DoD Arctic Strategies, USNORTHCOM's Arctic Strategy, and the USCG's Arctic Strategy; specifically, promoting international cooperation and DoD supporting USCG and other civilian agencies in safety and security response. The naval exercises are a natural maritime complement to the already established USNORTHCOM air exercise VIGILANT EAGLE.

⁴ An example of an already established exercise in defense of a SLOC is Fuerzas Aliadas PANAMEX. Conducted annually by USSOUTHCOM, PANAMEX is a joint and combined operation to defend the Panama Canal from violent extremist organizations' attacks. See http://www.army.mil/article/109814/Army_South_partner_nations_complete_PANAMAX___/.

USNORTHCOM has sponsored VIGILANT EAGLE, a combined exercise involving the United States, Canada, and Russia, since 2010. The exercise simulates the tracking, intercept, and escorting of a hijacked airliner in the North Pacific and, in 2013, culminated with live sorties of Russian, U.S., and Canadian aircraft. In 2013, the North American Aerospace Defense Command (NORAD) tracked the hijacked airliner departing Anchorage, Alaska and launched Royal Canadian Air Force CF-18 Hornets from Alaska to intercept. The suspect aircraft was then passed off to Russian Sukhoi SU-27 fighter jets over the Bering Strait, which forced the aircraft to land at a Russian Air Force base in Anadyr, Russia. The next day the exercise was repeated as the hijacked aircraft departed Russia and flew to the United States. Throughout the exercise, Russian military officers observed the exercise at NORAD facilities in Colorado Springs and Anchorage, Alaska, while NORAD officers observed at Russian facilities in Khabarovsk, Russia.⁵ VIGILANT EAGLE and similar maritime exercises will significantly enhance the U.S. Arctic objective of enhancing international cooperation, while promoting a peaceful opening of the Arctic.

Conclusion

Over 235 years ago, Captain Cook set sail on a three-year voyage to locate and chart a northern passage linking the Atlantic and Pacific Oceans. The geostrategic importance of Arctic sea lines of communication was as important then as it is today. The realization of rich natural and mineral resources in the Arctic has not only added to

⁵ See Mark Thiessen, *Russian, NORAD forces unite for exercise*, Aug 30, 2013, <http://globalnews.ca/news/810713/russian-norad-forces-unite-for-exercise/> (accessed Nov 19, 2013); Sharbe Clark, *NORAD, Russia Wrap up 'Vigilant Eagle'*, Aug 11, 2010, <http://www.defense.gov/News/NewsArticle.aspx?ID=60393> (accessed Nov 19, 2013); and RIA Novosti, *Defense Russian Air Force to Take Part in Antiterror Drills in U.S.*, Aug 27, 2012, http://en.ria.ru/military_news/20120827/175451589.html?id= (accessed Nov 19, 2013).

the strategic importance of the Arctic, but led Arctic and non-Arctic nations alike to look to these resources as one of the last untapped sources of energy for the modern world.

Nations such as Russia and China are developing their national Arctic strategies, infrastructure, and military capabilities to ensure their strategic interests are protected. The United States is an Arctic nation and as such must be prepared to protect our own national interests. The U.S. has never had a direct existential threat to U.S. sovereignty. Recent events involving Russia in the Ukraine and China in the South China Sea provide historical context to the willingness of nations to use military means to defend their national interests over resources. Without adequate defensive posturing, competition over Arctic resources could become the first direct existential threat to U.S. sovereignty; specifically, Arctic minerals and resources within U.S. sovereign jurisdiction. Should U.S. Arctic strategy fail to protect our interests, the geostrategic issues at stake include protection of Arctic natural resources, freedom of navigation, secure sea lines of communication, and an unbalanced militarization of the Arctic by other nations.

The current national Arctic strategies recognize U.S. interests in the region; however, they do not adequately address all the strategic risks at stake in the Arctic and do not provide clear guidance to DoD for defensive lines of effort to counter the risks. The U.S. strategic approach should recognize the currently stable and conflict free region with lines of effort to maintain this stability, but it should also provide clear guidance to DoD on how to prepare for possible conflict in the future. Lacking this clear guidance in national Arctic strategies, USNORTHCOM must develop its own lines of effort, under the current strategic approach and budget limitation, that will position DoD in the next 10-15 years so the lines can rapidly evolve into defensive lines of effort if or when

needed. To do so, the combatant commander should focus on developing *means* that support those *ways* in the DoD Arctic Strategy which most contribute to adequate defensive posturing in 10-15 years. Table 7 summarizes the recommended *means* for USNORTHCOM to position its defensive lines of effort for success in the future.

Recommendations for USNORTHCOM	
•	Disestablish JTF-AK and designate ALCOM a USNORTHCOM sub-unified command.
	Designate USCG 17th District Commander as Joint Force Maritime Component Commander ALCOM.
•	U.S. Navy conduct Arctic patrols during USCG Operation Arctic Shield.
•	U.S. Navy and USCG to conduct Freedom of Navigation Operations.
•	USNORTHCOM advocate for Navy & USCG Arctic requirements for the following:
•	Build an Arctic port on the North coast of Alaska.
•	Ice-strengthen a complement of U.S. Navy combatant ships.
•	Build new heavy USCG ice-breakers.
•	Build two future USCG Offshore Patrol Cutters with ice-strengthened hulls.
•	Expand USCG Operation Arctic Shield to include U.S. Navy, Canadian, and Russian naval ships.

Table 7: Recommendations for USNORTHCOM

Bearing in mind DoD’s strategic approach, and USNORTHCOM’s intent of a peaceful opening of the Arctic through international cooperation, these recommendations accomplish four primary objectives: (1) unifying the fractured command structure of Alaska Command and USNORTHCOM, (2) establishing U.S. commitment to our Arctic National interests, (3) developing future Arctic capabilities, and (4) conveying non-escalatory intentions while increasing U.S. military presence in the Arctic.

Diminishing ice in the Arctic is bringing new maritime traffic to the region and the United States must position itself to take advantage of its natural resources and its geostrategic location. Through a holistic strategic approach, recognizing the potential for future defensive lines of effort, the United States may one day realize Captain Cook’s endeavor to freely and peacefully navigate the Northwest Passage.

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VITA

A native of Leesburg, Florida, CDR Riddle graduated from the U.S. Coast Guard Academy in 1992 with a Bachelors of Science degree in Civil Engineering. In 2005, he graduated from the University of Rhode Island with a Masters in Marine Affairs.

Prior to attending the Joint Advanced Warfighting School, CDR Riddle served as Commanding Officer of the U.S. Coast Guard Cutter ALEX HALEY in Kodiak, Alaska. There he conducted patrols of the Arctic Ocean, the Bering Sea, and the Gulf of Alaska enforcing federal fishery regulations and providing at-sea search and rescue response. CDR Riddle's previous afloat tours include Executive Officer of USCGC THETIS in Key West, Florida, Commanding Officer of USCGC SANIBEL in Woods Hole, Massachusetts, Executive Officer of USCGC LIBERTY in Juneau, Alaska, and First Lieutenant of USCGC STORIS in Kodiak.

CDR Riddle's shore assignments included the Joint Interagency Task Force South (JIATFS) where he served as the Chief of Targeting. During his tenure at JIATFS, he was responsible for the tactical employment of all Coast Guard, Navy and Allied ships, as well as all Coast Guard, Navy, Air Force, and Customs and Border Patrol aircraft working for JIATFS to interdict illicit narcotics smuggling throughout the Caribbean and Eastern Pacific. He also served as the Coast Guard's Liaison to the U.S. State Department as an advisor for fisheries law enforcement during international negotiations for the management and conservation of fish stocks on the high seas. His other assignments include Commanding Officer of the North Pacific Regional Fisheries Training Center in Kodiak, Alaska and Search and Rescue Controller in the Fourteenth District's Joint Rescue Coordination Center in Honolulu, Hawaii.

After graduation, CDR Riddle will be assigned to the Coast Guard Pacific Area headquarters as the Chief of Operational Forces.