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Thawing Interests: The Arctic in U.S. Grand Strategy

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**THAWING INTERESTS: THE ARCTIC
IN U.S. GRAND STRATEGY**

A Master's Thesis

Presented to

The Graduate College of

Missouri State University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science, Defense and Strategic Studies

By

Ben Murray

December 2023

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THAWING INTERESTS: THE ARCTIC IN U.S. GRAND STRATEGY

Defense and Strategic Studies

Missouri State University, December 2023

Master of Science

Ben Murray

ABSTRACT

The thawing Arctic is subject to increasing activity, attention, and a renewal of interests in the region from around the globe. National interests have compelled strategic planning in the Arctic region and are connected to global geopolitics. A concept of grand strategy is distilled from theories of past authors, understood within the modern context. That concept includes a terminological framework consisting of interests and threats to inform an ends, ways, and means design of strategy, composed of all instruments of state power, blending policy with strategy, and across the peace-war continuum. Then fundamental precepts of existing U.S. grand strategy are presented within that grand strategic framework as derived from Congressional and Executive understandings. Next, contemporary Arctic strategy is similarly studied, and qualitative connections between Arctic and U.S. grand strategy are discussed. I conclude that the U.S.'s Arctic strategy is conceptually inseparable from and instrumental towards its grand strategy. The Arctic regional strategy must be subordinately connected to objectives outside the region. Existing U.S. Arctic pronouncements demonstrate ambition for high levels of attention, loosely understand the connection between regional interests and grand strategic objectives, are disjointed and uncoordinated from each other, fail to utilize a coherent set of terminology of strategic theory, and risk falling prey to distractions and diversions. Even so, current programs regarding the region are mostly appropriate.

KEYWORDS: U.S., Arctic, grand, national, strategy, policy, security, defense, China, Russia

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In the interest of academic freedom and the principle of free speech, approval of this thesis indicates the format is acceptable and meets the academic criteria for the discipline as determined by the faculty that constitute the thesis committee. The content and views expressed in this thesis are those of the student-scholar and are not endorsed by Missouri State University, its Graduate College, or its employees.

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INTRODUCTION

The purpose of this paper is to answer the question of what role might the Arctic play in U.S. grand strategy. Grand strategy, used here practically as a synonym for National strategy¹, is meant to frame theater strategy as definitionally “minor” or “peripheral” in service of a grand strategy’s “ulterior” “objectives.”² This thesis will argue that for the United States, the Arctic region is not home to nationally vital economic interests, and geopolitical interests there are not ends in and of themselves, but both economic and geopolitical regional interests may serve grand strategic objectives globally. The broad basis of the argument is that disparate geographic regional strategies can and must be connected in service of a governing grand strategy if they are to be strategically relevant.³ The conclusion ties the U.S.’s Arctic strategic interests to its global grand strategy.

The first chapter of this paper offers an overview of the Arctic region and a summary of Alaska’s military history. Understanding how the Arctic has been viewed in the past is a useful foundation to understand its strategic relevance today.

¹ Lukas Milevski, *The Evolution of Modern Grand Strategic Thought*, (Oxford University Press, 2016), page 97. Milevski observes that some authors during the first half of the Cold War, such as Herman Kahn’s *Thinking About the Unthinkable*, equated “national strategy,” “grand strategy,” and even “national policy.” Note also the claim of synonymy does not include the Executive branch’s National Security Strategy.

² Julian Stafford Corbett, *Some Principles of Maritime Strategy*. (Urbana, Illinois: Project Gutenberg, 2005). Accessed December 30, 2022 at <https://www.gutenberg.org/cache/epub/15076/pg15076-images.html>.

³ John Lewis Gaddis, “What is Grand Strategy?” (Karl Von Der Heyden Distinguished Lecture, Duke University, February 26, 2009, the keynote address for a conference on “American Grand Strategy after War,” sponsored by the Triangle Institute for Security Studies and the Duke University Program in American Grand Strategy). Accessed on July 21, 2023 at https://www.iicseonline.org/Grand_Strategy1.pdf. Recalls the concept of “theateritis” deplored by General George C. Marshall.

The second chapter will outline significant concepts and terminology of grand strategy as a framework. Within this thesis, the choices and assumptions made in establishing that framework are not intended to provide a universal conceptual theory of grand strategy, but rather to tailor theories of grand strategy into a model usable specifically to outline current U.S. grand strategy. A basic assumption is that grand strategy is taken to be a usable concept. Although extremely fluid as we will see, there seems to be no more consistent alternative structure of strategy. It is the most usable concept for framing ways and means, including military power, in pursuit of ends as a matter of national interest in a geographic region as part of a global total.⁴ Interests and threats inform strategy by answering “why and for what purpose is the strategy?” The “how” of strategy is answered by defining ends and the ways and means to create those ends. Objectives are the intermediate measurable progressive steps.

The third chapter aims to fill the conceptual mold of grand strategy with current U.S. grand strategy, distilled from available official proclamations and general analysis. Present grand strategy will be defined by combining Executive branch directions such as the National Security Strategy (NSS) with Congressional branch acts and pronouncements to bridge the policy-strategy divide. It is not meant to be a proposal or recommendation, but an explicit supposition. A basic assumption is that the ulterior interest, or direction and motivation, of U.S. grand strategy for at least 70 years and continuing into the foreseeable future (although subject to significant turbulence) can generally be labeled as Wilsonianism. The most significant contemporary threat to that end accepted within this thesis is what has generally been called great-power competition

⁴ J. W. Meiser, “Ends+Ways+Means=(Bad) Strategy,” *The US Army War College Quarterly: Parameters*, December 1, 2016, 46 (4), pages 81-91 criticizes the ends-ways-means formulation, suggesting instead to define strategy as “a theory of success.” However, the paper’s condemnation is based on examples of failures to comprehensively develop the strategic framework without a refutation of the theoretical basis.

with China and Russia. The ways and means of the U.S. grand strategy is taken to include all instruments of power, available during any time (peace and war).

The fourth chapter will then undertake a similar exercise as the third, only focused specifically upon the Arctic context. Primarily using National Arctic strategic documents from the White House, DoD, military service branches, and Congressional actions, a concept of U.S. Arctic strategy will be presented. The connections of that strategy to the preceding grand strategy will be discussed. The Arctic strategies of China and Russia will also be briefly summarized.

Finally, the concluding chapter will summarize how Arctic programs can play a role in the U.S. grand strategy.

ARCTIC OVERVIEW – PAST AND PRESENT INTERESTS IN THE ARCTIC

There is no consensus defining geographic boundaries for the Arctic as a region. Various delineators, such as geophysical, climatic, environmental, and political, are used depending on the context.⁵ The Arctic Circle is a latitudinal circle directly correlated to the tilt of the Earth's rotation about its axis that varies slightly over relatively long periods of time, currently approximately 66 degrees North of the equator. Other geophysical boundaries often used include river drainages, such as the Yukon river in Alaska, and maritime boundaries as far South as Hudson Bay. Climatic definitions can rely on isotherms, or cartographical lines drawn based on average temperatures, and environmental definitions can study tree line boundaries. Political definitions draw regional boundaries along administrative borders, such as Russian districts⁶, or along contiguous zones such as along the Aleutian Islands chain.⁷ See Figure 1 for a depiction of some cartographical definitions of the Arctic.

Most U.S. policy definitions of the “Arctic” jut far south of the Arctic circle, encompassing the entirety of Alaska including all the Aleutian Islands.⁸ The southernmost Aleutian Island, Adak, at 52°N Latitude, is over 1000 miles from the Arctic circle. At the same time, U.S. officials regularly mock China's claim to be a “near-Arctic” state. Deputy Assistant

⁵ “Arctic Weather and Climate – Overview,” National Snow and Ice Data Center. Accessed on January 5, 2023 at <https://nsidc.org/learn/parts-cryosphere/arctic-weather-and-climate>.

⁶ “About the Arctic Zone of the Russian Federation,” Russian Far East and Arctic Development Corporation. Accessed January 5, 2023 at <https://erdc.ru/en/about-azrf-old/>.

⁷ Dee M. Williams and Christopher L. Richmond, *Maps of the Arctic Alaska Boundary Area as Defined by the U.S. Arctic Research and Policy Act—Including Geospatial Characteristics of Select Marine and Terrestrial Features*, (U.S. Department of the Interior, U.S. Geological Survey, USGS Publications Warehouse, 2021), under “Map Sheet 1,” doi: 10.3133/sim3484.

⁸ Pub. L. 98–373, Title I, “Arctic Research and Policy,” §112, 98 Stat. 1248 (July 31, 1984) defines the Arctic to include the entire Aleutian Island chain.

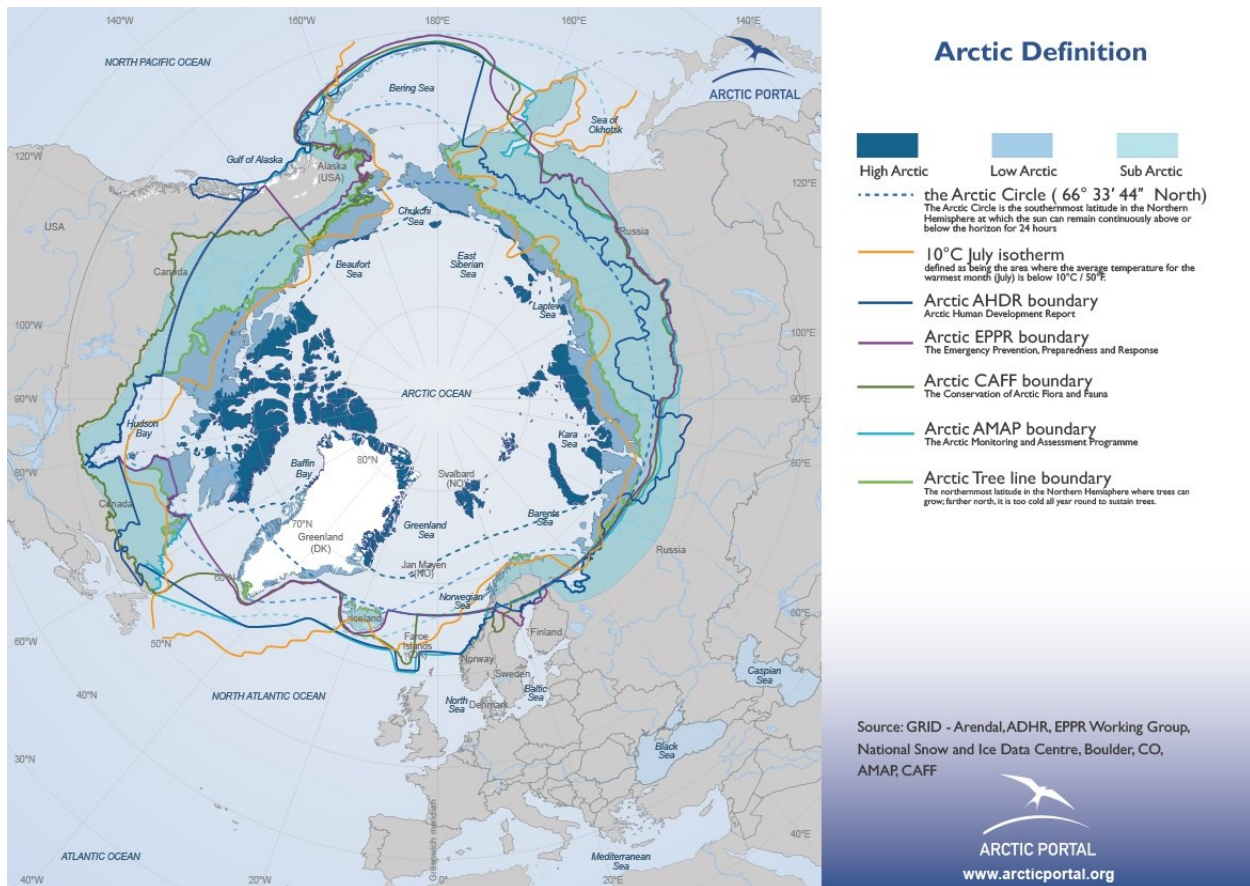


Figure 1. Definitions of the Arctic. (“Arctic Definitions Combined,” Arctic Portal, last updated April 2016. Accessed on July 21, 2023 at <https://arcticportal.org/maps/download/arctic-definitions/2426-arctic-definitions/>.)

Secretary of Defense for Arctic and Global Resilience said “they [the Chinese] aren’t remotely near the Arctic.”⁹ The Army Arctic strategy calls the Chinese near-Arctic claim “questionable.”¹⁰ The Air Force’s Arctic Strategy, in referring to China’s near-Arctic claim, mistakenly points out that China’s “northernmost city, Mohe [52°58’], shares roughly the same latitude of Philadelphia

⁹ Jim Garamone, “DOD Establishes Arctic Strategy and Global Resilience Office,” *DOD News*, September 27, 2022. Accessed on July 21, 2023 at <https://www.defense.gov/News/News-Stories/Article/Article/3171173/dod-establishes-arctic-strategy-and-global-resilience-office/>.

¹⁰ United States Army, “Regaining Arctic Dominance: The U.S. Army in the Arctic,” January 19, 2021, page 19.

[39°57'] and Dublin [53°21'].”¹¹ Ironically, the Air Force document also includes the COBRA DANE radar on Shemya Island as an Air Force Arctic “equity” despite it being at 52°41’, further south than both Mohe and Dublin. The geographical mistake and arbitrary definition over what is or is not “Arctic” or “near Arctic” is compounded by jigsaw definitions of the region drawn according to satisfy arbitrary political ideas. If the United States characterizes Shemya Island as “Arctic,” a glance at a globe would suggest that the same latitude in China would logically be at least “near Arctic.” In the view of this author, 52° is certainly not “Arctic” and doubtfully “near” Arctic. To discredit the Chinese “near Arctic” claim, the United States should redefine its conception of “Arctic” to be far north of any latitude that crosses Chinese territory. The Arctic circle is recommendable as a scientifically agreed upon, widely understood, and technically simple definition.

Historical Significance of the Arctic

To understand contemporary security and defense attention towards the Arctic, it is necessary to first understand its role in past strategies and conflicts. The United States recognized strategic utility of the Arctic prior to the Civil War. Under the concept of Manifest Destiny, “an impenetrable defense ring circling through Alaska, Greenland and Panama” was envisioned.¹² That defensive concept was assured to persist following the purchase of Alaska from Russia in 1867 shortly after the conclusion of the Civil War. Alaska remained militarily insignificant, however, until the advent of air power and World War II. Brigadier General Billy Mitchell, a resolute preacher on the significance of emerging air power, emphasized the

¹¹ The Department of the Air Force, “Arctic Strategy”, July 21, 2020, page 5-6.

¹² John J. Teal, Jr., “Alaska, Fulcrum of Power,” *Foreign Affairs*, October 1, 1948.

importance of Alaska in arguing before the U.S. House Committee on Military Affairs in 1935 that “Alaska is the most central place in the world for aircraft, and that is true of Europe, Asia, or North America. I believe in the future, he who holds Alaska will hold the world, and I think it is the most strategic place in the world.”¹³

The “strategic triangle” (Alaska, Hawaii, and Panama) Pacific defense concept was developed and partly implemented in the years leading up to and during World War Two.¹⁴ Pre-war planners understood that Alaska was of strategic value for Japan, Russia, and the United States as a means to militarily command the Pacific, therefore compelling the construction of airfields, bases, and roads, and the stationing of personnel and equipment including tanks in Anchorage, Fairbanks, Kodiak, Unalaska, Sitka, and elsewhere. Resources were limited, however, by the necessity to share resources with the other two points of the triangle.¹⁵ The Japanese bombing and occupation of some Aleutian Islands beginning six months after the attack on Pearl Harbor thrust Alaska into the heat of the war.¹⁶ Liddell Hart’s view of the Aleutian campaign, fought over “bleak and rocky islands, often covered in fog or battered by storms, [quite] unsuitable as air or naval bases for a trans-Pacific advance”, is that it was a psychological win for the Japanese at little cost, a “diversionary initiative.”¹⁷ Hart further calls the expulsion of the Japanese from the Aleutians a “move so remote as to carry no promise of effect on the course

¹³ Office of Governor Sean Parnell, *Alaska's Advantage to the Armed Services*, (Juneau, AK: Alaska State Capitol, 2012).

¹⁴ Mark Skinner Watson, *United States Army in World War II, The War Department: Chief of Staff: Prewar Plans and Preparations*, (Washington, D.C.: United States Army, Center of Military History, 1991), under “The Nation’s Outlying Defenses in 1941.” Accessed on August 3, 2023 at <https://history.army.mil/books/wwii/csppp/index.htm>.

¹⁵ Watson, *United States Army in World War II*.

¹⁶ National Park Service, “World War II in Alaska.” Accessed July 17, 2023 at <https://www.nps.gov/articles/world-war-ii-in-alaska.htm>.

¹⁷ B.H. Liddell Hart, *History of the Second World War*, (New York: G. P. Putnam's Sons, 1970), pages 352, 500-501.

of the war. It was secondary...Its only value was psychological...a flagrant example of bad economy of force.” However, the war affected Alaska far beyond the Aleutians. To wage war against Japan, implement the Lend-Lease program with Russia, and avoid the dangers of the North Atlantic shipping route, the 1,420-mile Alaska Highway and airports throughout the Alaskan territory were constructed. Ultimately, nearly 8,000 aircraft were shuttled to Russia by leapfrogging through Alaska.¹⁸ Nearly half of Lend-Lease aid destined for Russia was sent through the North Pacific from ports on the United States West coast.¹⁹ Between 1940 and 1950, the population of Alaska doubled,²⁰ and “roughly” 300 military installations were constructed.

The European Arctic was also a theater of significant activity in World War Two. Mahan and Corbett’s stated relationship between commercial and military, specifically naval, interests (discussed more later) was dramatically born out through Allied convoy and blockade operations and German U-boat attacks in the North Atlantic and Arctic seas. The Allied Arctic convoy operations, designated PQ, QP, JW, and RA, shuttled goods to Russia from Scottish and Icelandic ports²¹, and were relentlessly attacked by German submarines.²² From neither the German nor Allied perspective was the Arctic an ulterior end of the war, rather a way and mean to achieve objectives towards their ulterior ends elsewhere. This thesis submits that truth remains today, simply because the Arctic remains a geographic intersection between competing nations. Modernized technology alters the strategic concept, however.

¹⁸ Michael McCarthy, “Reviewed Work(s): The Alaska-Siberia Connection: The World War II Air Route by Otis.” *Air Power History*, (Air Force Historical Foundation 45:2, 1998).

¹⁹ Alexander B. Dolitsky, ed., *Pipeline to Russia: The Alaska-Siberia Air Route in World War II*, (Anchorage, AK: Alaska Affiliated Areas Program, National Park Service, 2016), page xix.

²⁰ National Park Service, “World War II in Alaska.”

²¹ “A 5-Minute History Of Arctic Convoys,” Imperial War Museums. Accessed July 17, 2023 at <https://www.iwm.org.uk/history/a-5-minute-history-of-arctic-convoys>.

²² E.B. Potter, *Sea Power A Naval History*, (Annapolis: United States Naval Institute, 1981).

Strategic interest in the Arctic was maintained throughout the Cold War for both the Soviet Union and NATO alliance. The United States utilized Alaska to train conventional ground forces, as a base and potential overflight path of bombers and missiles, to detect atomic testing, and extract mineral resources.²³ Theoretically, Soviet bombers barely had sufficient range to attack the mainland United States, but that range could be extended by capturing Alaskan territory, thus justifying the need for air defense and early warning systems.²⁴ U.S. bombers could be deployed from Eielson AFB, constructed after World War Two, but were not stationed there permanently until the 1960s. Fighter interceptors, anti-aircraft guns, and later Nike Hercules missile batteries were stationed throughout the state. Air monitoring radars compiled as the Aircraft Control and Warning System were constructed, including the Distant Early Warning line of 29 radar sites across 3000 miles from the coasts of Northwest Alaska to East Canada, with more added in Greenland and England later following the advent of ballistic missile technology.

Before improved missile and submarine technology was deployed in the 1970s, to target the mainland United States, Soviet submarine patrols necessarily approached close to United States territory to maintain a credible deterrent.²⁵ Given the year-round ice free transit route between the Soviet submarine base in Severomorsk, Russia and the Barents, Norwegian, and North Seas, the Greenland-Iceland-U.K (GIUK) was heavily monitored and barricaded.²⁶ Figure 2 illustrates the Soviet “bastion” concept and the GIUK defensive line. U.S. strategic thought held that the Soviet submarines would need to transit the GIUK gap to threaten Allied homelands

²³ Laurel J. Hummel, “The U.S. Military as Geographical Agent: The Case of Cold War Alaska,” *The Geographical Review*, 2005, 95 (1), pages 47-72.

²⁴ John Haile Cloe, “The Cold War Years (1946-1991),” The Alaska Historical Society. Accessed July 17, 2023 at <https://alaskahistoricalsociety.org/discover-alaska/glimpses-of-the-past/the-cold-war-years-1946-1991/>.

²⁵ J. R. Hill, *Anti-Submarine Warfare*, 2nd ed., (Annapolis: Naval Institute Press, 1989), page 21.

²⁶ Hill, *Anti-Submarine Warfare*, pages 96-108.



Figure 2. 1982 GIUK defense concepts. (Bradford Dismukes, “The Return of Great-Power Competition—Cold War Lessons about Strategic Antisubmarine Warfare and Defense of Sea Lines of Communication,” *Naval War College Review*, 73 (3), Summer 2020.)

and usage of the North Atlantic seas, as the Germans did in World War Two. Thus, the Allies could contain and threaten the Soviet submarine capabilities by barricading the gap.²⁷ Soviet submarines eventually adopted a bastion strategy, remaining in the defendable Barents and Okhotsk Seas and hiding under the Arctic ice where the United States struggled to track them.

In 1994, President Clinton recognized that while the end of the Cold War allowed “a significant shift of emphasis in the U.S. Arctic policy,” “the United States continues to have basic national security and defense interests in the Arctic.”²⁸ Additionally, the policy saw

²⁷ Rebecca Pincus, “Towards a New Arctic,” *The RUSI Journal*, 2020, 165 (3): 50-58, page 52.

²⁸ William J. Clinton, “Presidential Decision Directive/NDC-26: United States Policy on the Arctic and Antarctic Regions,” June 9, 1994.

interests in maintaining peace and stability, free and open seas and airspace, and to operate militarily. Beyond meeting those security interests, the directive set out objectives to protect the environment, sustainably develop economies, strengthen institutions including all Arctic nations, include indigenous peoples in decision making, and further scientific understanding of the environment. It suggests that cooperating with Russia “will help reduce the risk of a resurgence of traditional threats.”

President George Bush’s 2009 Arctic policy resembles many of the strategic documents of today. It views security and defense interests for “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.”²⁹ It’s lines of effort include developing capabilities, increasing domain awareness, the exercise of sovereign rights, maintaining freedom of seas, peacefully resolving border disputes, maritime transport, and realizing economic potential mainly from energy resources. All of those issues will be assessed in detail later. Uniquely, the 2009 document considers a “vulnerability” to terrorist attack in the Arctic, and, relative to today, makes little mention of critical minerals.

Barack Obama’s 2013 Arctic strategy largely resembles that of Bush’s 2009 strategy.³⁰ It similarly recognizes national interests for national security, energy, environmental conservation in the face of climate change, and as a theater in which principles of freedom of navigation across sea and space are challenged. Like Bush’s, the strategy supports U.S. ascension to the U.N. Convention on the Law of the Sea to “maximize legal certainty” in securing its extended continental shelf claims. However, the document makes no mention of border disputes with

²⁹ George W. Bush, “NSPD-66/HSPD-25: National Security Presidential Directive and Homeland Security Presidential Directive: Arctic Region Policy,” January 9, 2009.

³⁰ Barack Obama, “National Strategy for the Arctic Region,” May 2013.

Canada as Bush's did. It also mentions "vast quantities of mineral resources" and cites the claim to a USGS document that in fact makes no mention at all of minerals – the exact same citation for a claim about critical minerals is used by the 2020 Air Force Arctic Strategy which will be discussed later. Other lines of effort to further US. security interests include "tailored" infrastructure and response capacity development, and enhanced domain awareness.

The 2013 DoD Arctic Strategy accompanying Obama's national level strategy "reflects the relatively low level of military threat" in the region.³¹ It is aimed to the end state of safeguarding U.S. national interests and maintaining a secure and stable region. Its primary objective prioritizes "comprehensive engagement" with alliance and partner relations, and seeks "low-cost, small-footprint approaches" where possible. In December 2016, the DoD published an update "in light of significant changes in the international security environment."³² "In light of the Russian violation of sovereignty and territorial integrity of Ukraine, Georgia, and Moldova," the strategy notably adds "strengthen deterrence at home and abroad" to its 2013 list of "ways and means."

Donald Trump's memorandum on Arctic interests focused entirely on icebreakers.³³ To maintain presence for "the full range of national and economic security missions," the mission of the icebreakers was to include the defense against near-peer threats. The document repeatedly mandates that the icebreakers "meet the objectives of this memorandum," but those objectives are never clearly defined. Nonetheless, in supporting those objectives, the icebreakers were intended to "use" the following: "unmanned aviation, surface, and undersea systems; space

³¹ Department of Defense, "Arctic Strategy," November 2013.

³² Department of Defense, "Report to Congress on Strategy to Protect United States National Security Interests in the Arctic Region," December 2016.

³³ Donald J. Trump, "Memorandum on Safeguarding U.S. National Interests in the Arctic and Antarctic Region," June 9, 2020.

systems; sensors and other systems to achieve and maintain maritime domain awareness; command and control systems; secure communications and data transfer systems; and intelligence-collection systems.”

In the post-Cold-War period, the Arctic policy and strategy documents of the United States have been remarkably consistent in their recognition of interests. The perception of threats has notably changed, however. From Clinton’s hope that cooperation would maintain peace with Russia, to Bush’s concern over terrorist threats, to Obama’s concern over the environment. Presidents Trump and Biden shifted the threat perception to that of “near-peer” competition though many objectives have remained consistent. Recently, though, the emphasis on military (including Coast Guard) capabilities has increased, in response to near-peer competition and other human activities accelerating as sea-ice melts.

Drivers of Renewed Interests in the Arctic Today

The evolution of interests in the Arctic from historical precedent to today can be attributed mostly to two changing landscapes: political (in particular, recent shifts in relative power and threat perceptions) and climatic. Those changing landscapes have drawn attention to the ice-free near-coastal periphery of the Arctic and for prescriptive planning to leverage a new navigable ocean unveiled as the polar zone continues to melt.

Political. A coalescing consensus in the West that the international order is under stress by the revisionist efforts of authoritarianism, specifically China and Russia, is accompanied by a reassessment of Arctic security. For example, Chair of the NATO military committee, Admiral Bauer, remarked in October 2022 on the “strategic relevance” of the Arctic at a time when the “rules-based order has been uprooted and NATO is responding by implementing measures to

strengthen our collective defence.”³⁴ The Biden administration’s 2022 Arctic Strategy “acknowledges increasing strategic competition in the Arctic since 2013” when the last Arctic Strategy was published.³⁵ The DoD³⁶, Army³⁷, Air Force³⁸, and Homeland Security³⁹ Arctic Strategies all mention “great power” “competition,” “activity,” and/or “aggression”, while the Navy’s⁴⁰ opts for the synonymous term “major” power competition. The Coast Guard’s⁴¹ says “the renewal of global strategic competition has coincided with dramatic changes in the physical environment of the Arctic. The interaction of these drivers has made the Arctic a strategically competitive space for the first time since the end of the Cold War.” While some characterize the geopolitical environment in the Arctic as a “new Cold War,” others argue that the old one never ended.⁴² In either case, tensions in and strategies for the Arctic are a representative microcosm of the global geopolitical rivalry between Russia, China, and the West. As the economic, political, and military dimensions of those rivalries manifest globally, so too will they emerge in the Arctic. Specific regional interests within those dimensions will be explored in a later chapter; for now, it will suffice to recognize that the strategic competition between Russia, China, and the

³⁴ “Chair of the NATO Military Committee Highlights the Strategic Importance of the Arctic,” North Atlantic Treaty Organization, October 16, 2022. Accessed July 21, 2023 at https://www.nato.int/cps/en/natohq/news_208099.htm.

³⁵ The White House, “National Strategy for the Arctic Region,” October 2022, page 3.

³⁶ Department of Defense Office of the Under Secretary of Defense for Policy, “Report to Congress: Department of Defense Arctic Strategy,” June 2019, pages 2, 5.

³⁷ United States Army, *Regaining Arctic Dominance*, pages 1, 15, 16, 21, 24, 26, 44, 48.

³⁸ The Department of the Air Force, “Arctic Strategy,” July 21, 2020, pages 2, 4, 6.

³⁹ U.S. Department of Homeland Security Office of Strategy, Policy, and Plans, “Strategic Approach for Arctic Homeland Security,” January 11, 2021, pages 4, 6, 10, 16, 19.

⁴⁰ Department of the Navy, “A Blue Arctic: A Strategic Blueprint for the Arctic,” pages 2.

⁴¹ United States Coast Guard, “Arctic Strategic Outlook,” April 2019, page 9.

⁴² Rob Hubert, “A New Cold War in the Arctic?! The Old One Never Ended!” (2019), in *Debating Arctic Security: Selected Writings by Rob Huebert and P. Whitney Lackenbauer: 2010-2021*, (Peterborough, Ontario, Canada: North American Arctic Defence and Security Network, 2021), pages 415-419.

West is obviously not contained to the Arctic, but that the Arctic can become a competitive space if their respective grand strategies see utility for the region. Given historical precedence and the geographic position of the region, that should be expected, particularly if the region’s climate continues to warm.

Climatic. At least as far back as 2009, through George W. Bush’s Arctic Region Policy (NSPD-66), U.S. national policy acknowledged climate change affecting the Arctic and, in the same sentence, noted an increase in human activity in the region but stopped short of causally relating those developments.⁴³ The suggestion being made here is not that human activity contributes to climate change, rather that a changing climate (melting sea ice) enables more human activity in the Arctic. A 2016 Coast Guard study on routes through the Bering Strait noted the linkage explicitly, stating: “over the preceding decade the Coast Guard has observed and responded to a steady increase in interest in Arctic activities and attributes this increased interest to a climatic trend towards less ice in the Arctic Ocean and Chukchi Sea.”⁴⁴ See Figure 3 for an illustration of potential routes through the Arctic and alternative distances taken from that report. The illustration highlights the geographic significance of transport routes possible through the Arctic in the absence of sea ice.

The NOAA Arctic Program’s Arctic Report Card 2021 is headlined “Rapid and pronounced warming continues to drive the evolution of the Arctic Environment.” It also specifically notes “substantial decline in Arctic sea ice extent since 1979”, sea surface warming trends from 1982-2021, eight consecutive years of above average surface air temperature, 15

⁴³ President George W. Bush, “NSPD-66/HSPD-25,” The White House, January 9, 2009.

⁴⁴ United States Coast Guard, “Preliminary Findings: Port Access Route Study: In the Chukchi Sea, Bering Strait, and Bering Sea,” Seventeenth District, December 26, 2016, page 19. Accessed July 21, 2023 at https://navcen.uscg.gov/sites/default/files/pdf/PARS/Bering_Strait_PARS_General.pdf.

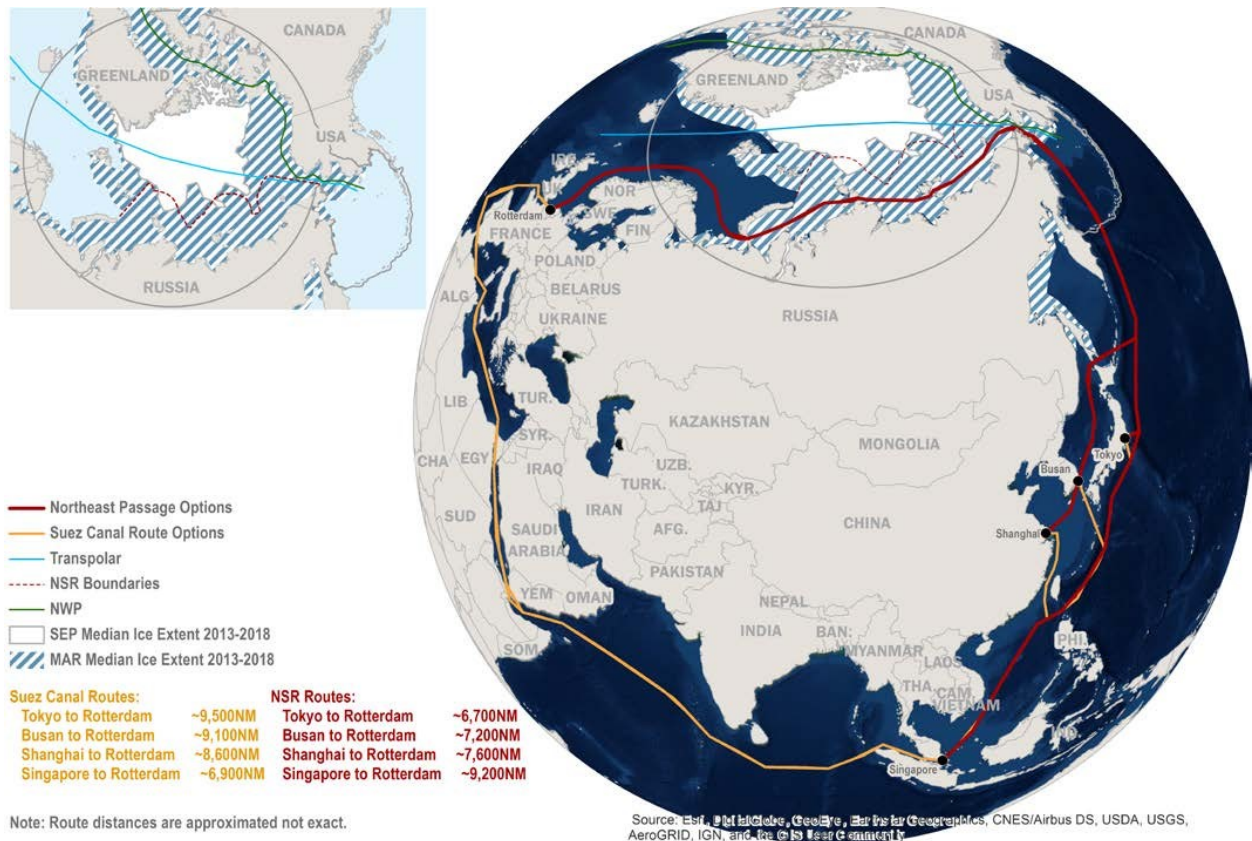


Figure 3. Northern sea routes and sea ice extent. (United States Coast Guard, “Arctic Strategic Outlook,” page 12.)

consecutive years of below average land snow cover, and that receding sea ice enables increased ship traffic.⁴⁵ The Arctic Council’s Arctic Monitoring and Assessment Programme summarizes climate models saying that “[u]nder most emission scenarios, the vast majority of CMIP6 models project the first instance of a largely sea-ice-free Arctic in September occurring before 2050.” The report further notes the potential of that climate trend to increase activity from tourism, fishing, and access to resources including oil, gas, and minerals.⁴⁶

⁴⁵ T. A Moon, M. L. Druckenmiller, and R. L. Thoman, eds., “Arctic Report Card 2021: Rapid and Pronounced Warming Continues to Drive the Evolution of the Arctic Environment,” NOAA, December 2021, pages 1-7.

⁴⁶ Arctic Monitoring and Assessment Programme (AMAP), “Arctic Climate Change Update 2021: Key Trends and Impacts: Summary for Policy-makers,” Tromsø, Norway, 2021, page 16.

CONCEPTUAL AND TERMINOLOGICAL THEORY OF GRAND STRATEGY

To analyze the relevance of the Arctic to U.S. grand strategy, this chapter contributes by defining grand strategy. Lukas Milevski offers a comprehensive terminological history of the concept of grand strategy, proposing its original usage in English by 1834 was synonymous with Napoleonic strategy.⁴⁷ Milevski prefaces his book by recalling that the impetus for his project came about after attempting to apply grand strategy and realizing “that there were simply too many distinct and even mutually contradictory definitions of grand strategy simply to “use” grand strategy as a conceptual basis for analysis.”⁴⁸ This chapter submits conceptual principles of grand strategy leveraging the study Milevski ultimately published so that grand strategy can be “used”.

The first principle, adapted mostly from Julian Corbett’s *Some Principles of Maritime Strategy*, is that strategy can generally be framed as interests and threats informing the establishment of ends to be pursued using ways and means. Objectives employ ways and means in measurable progressive steps towards the ends of the strategy; the development of new ways and means could be intermediate objectives towards those ends. Second, grand strategy employs all instruments of state power, and, in a similar vein, should be characterized as unlimited, at least geographically. The third principle is that policy and strategy are often indistinguishable. Finally, grand strategy takes place during peace as well as war, and, if effectively designed and communicated, may even deter war.

The concept is not intended to be a universal theory, but instead is to be used for a

⁴⁷ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 9.

⁴⁸ Milevski, *The Evolution of Modern Grand Strategic Thought*, page vii.

contemporary instantiation based on official statements and general analytic consensus. The endeavor, in Milevski's words, is to create a "personal interpretation" of grand strategy: "[g]eopolitical and strategic concerns, history and its identified lessons, and the intellectual landscape itself of strategic studies have all significantly influenced theorists' personal interpretations of grand strategy, of its purpose, its ideational content, and its conceptual limits."⁴⁹The four outlined principles of grand strategy are this author's personal interpretation to be used later in the context of understanding how the Arctic interacts with current U.S. grand strategy. This chapter aims to justify those principles.

Julian Corbett's Definitions and Framework

The terminological and conceptual framework presented by Julian Corbett, heavily influenced by Clausewitz, was the most systemically structured and usable approach found by this author and is therefore the primary model adopted by this thesis. Corbett submits that policy, by defining ways, means, and objectives, governs strategy, which employs ways and means to obtain objectives and achieve ends out of national interest.

According to Corbett, "we seek our ends by directing force upon certain objects."⁵⁰ An object is "the end of a system of operations" while an objective is "the end of some particular movement or operation." An objective is a step to the attainment of an object. Objects and objectives must be things we do not "already possess," they are "some definite point which we wish to get from the enemy or prevent his occupying, or some part of his strength which we wish to destroy." In other words, an objective is measurable. The development or production of means

⁴⁹ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 6.

⁵⁰ Corbett, *Some Principles of Maritime Strategy*, pages 134-139.

can be an objective – for example, the conversion of one means (money) to procure other means (widgets) is a process that could be described as an objective. Although Corbett’s distinction between “objects” and “objectives” may be useful to develop a comprehensive set of terminology of strategy, for conciseness and simplicity within this thesis, “objective” will generally be used in reference to both.

Corbett ranks strategy as “major” (which he at times synonymously calls “grand”), dealing with “ulterior” objectives, and “minor”, dealing with “primary” objectives. Primary objectives, though the province of minor strategy, are selected by major strategy, and must aid the attainment of ulterior objectives.⁵¹ Figure 4 is the author’s illustrated interpretation of the relation between the elements of strategy as defined by Corbett.

Identifying interests and threats must precede the design of strategy to answer, “why and for what purpose is the strategy?” The strategy then conscripts ways and means to create desirable ends states through intermediate objectives. This framework will be used in the following chapters to outline and illustrate existing U.S. grand and Arctic strategies and understand how they interface.

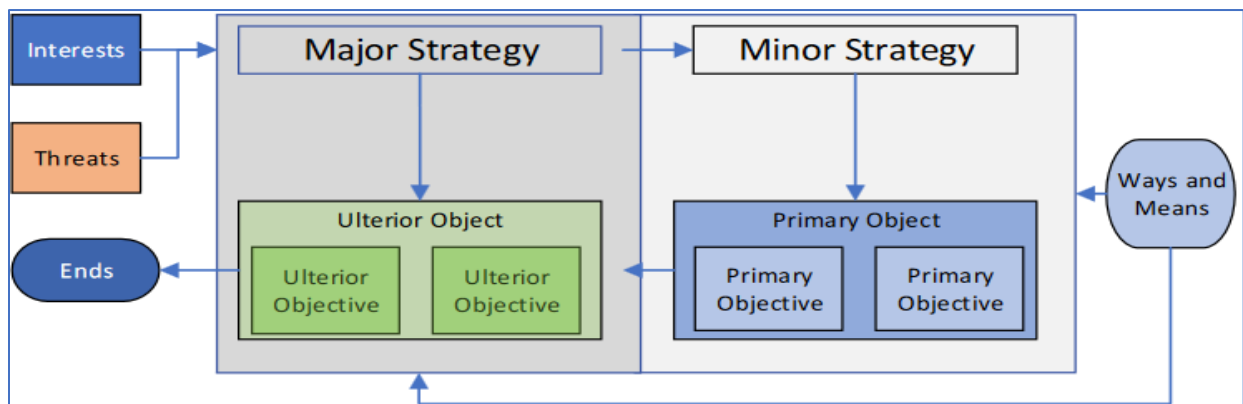


Figure 4. Julian Corbett’s strategy framework (Author’s interpretation and illustration.)

⁵¹ Corbett, *Some Principles of Maritime Strategy*, page 122.

Contributions by other theorists, including Alfred Mahan, Liddell Hart, Edward Mead Earle, Barry Posen, Paul Kennedy, and Colin Gray, will be discussed below in chronological order of their work within the thematic threads of continuity identified by Milevski, to further build a concept of grand strategy. The threads include the instruments of power employed in grand strategy and the closely related idea of limiting war, the policy-strategy relationship, and the peace-war continuum.

All Instruments and (Un)Limited War

Milevski credits Alfred Mahan and Julian Corbett for broadening the concept of grand strategy from only military power to include all instruments - today that remains characteristic of most contemporary concepts of grand strategy⁵² and will be accepted into the concept used in the following Arctic context. Closely related is the notion of limiting war – some hypothetical avenues of limitation include instruments employed, geographic boundaries, or economic means appropriated.

Towards the expansion of the concept of grand strategy beyond military power, Mahan's contribution was primarily in his recognition of the peace and wartime effect of maritime power on commerce and economics.⁵³ That recognition remains valid in the contemporary Arctic context, where economic activities can be dual-use for military purposes and additionally are a form of "presence" as an aspect of political sovereignty; both of these ideas will be explored more deeply in the later chapter on Arctic strategy.

Corbett, after studying Clausewitz, saw grand strategy as to intentionally flex the

⁵² Milevski, *The Evolution of Modern Grand Strategic Thought*, page 27.

⁵³ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 30.

limited/unlimited boundaries of war: “to establish...and thereafter to manipulate them [the boundaries of war]...to expand them beyond the enemy’s means, to contract them to limit the enemy’s ways, or to match one’s ends to one’s own limitations in ways or means.”⁵⁴ That concept in the context of contemporary great power competition can be applied to consider the geographic significance of the Arctic. For example, how might the U.S. establish strength over Russian economic dependence on the Arctic? Might China credibly challenge and distract the U.S. in the Arctic, making excessive sovereign claims in a similar manner to the South China Sea, building islands and aggressively claiming fishing rights?

“To the attainment of political ends”, grand strategy, including “the whole resources of the nation for war,” is the directed “application of force” upon ulterior or primary objects,”⁵⁵ and “no question of grand strategy can be decided apart from diplomacy, and vice versa.”⁵⁶ Corbett clearly saw utility in non-military power towards grand strategic ends. That view is shared by many later theorists as a significant evolutionary step from Clausewitz’s war-centric concept of (not-explicitly-grand) strategy: “[s]trategy is the use of the engagement for the purpose of the war.”⁵⁷ Liddell Hart, for example, protested Clausewitz’s claim that “blood is the price of victory” arguing instead that “perfection of strategy would be...to produce a decision without any serious fighting” and agreed in part with Corbett in concluding that “military means is only one of the means to the end of grand strategy.”⁵⁸ In the contemporary Arctic, this line of thought

⁵⁴ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 38.

⁵⁵ Corbett, *Some Principles of Maritime Strategy*, page 134.

⁵⁶ Corbett, *Some Principles of Maritime Strategy*, page 122.

⁵⁷ Carl Von Clausewitz, *On War*, (New Jersey: Princeton University Press, 1976), page 177.

⁵⁸ B.H. Liddell Hart, *Strategy*, Second Revised, (London: Penguin Group, 1967), pages 324-325; Milevski, *The Evolution of Grand Strategic Thought*, page 45 attributes Hart’s emotional focus on limiting war as “an end in its own right” to the consequent loss of life and economic hardship World War One had on Britain.

suggests that the development of non-military power during peace could deter conflict or be instrumental if deterrence fails. Namely economic and diplomatic regimes can establish positions of strength and will be studied in the Arctic context later.

The late and post-Cold War decades saw a renewed interest in grand strategy. Edward Luttwak viewed military power as the predominate characteristic of grand strategy, the one that distinguished it from international relations, but grand strategy, in his view a synonym for “military-focused statecraft”, was an “integrated and coherent system” of capabilities, including alliances, infrastructure, and diplomacy.⁵⁹ Barry Posen, citing Edward Mead Earle, argued that “grand strategy is a political-military, means-ends chain, a state’s theory about how it can best ‘cause’ security for itself...[it] must identify likely threats to the state’s security and it must devise political, economic, military, and other remedies for those.”⁶⁰ Paul Kennedy argued “[t]he crux of grand strategy lies therefore in policy, that is, in the capacity of the nation’s leaders to bring together all the elements, both military and non-military, for the preservation and enhancement of the nation’s long-term (that is, in wartime and in peacetime) best interests.”⁶¹

Milevski concludes his study with a consideration on the enduring value of grand strategy as a concept, saying, in part:

“Although grand strategists frequently invoke the comprehensive approach of integrating military and non-military instruments into a single strategy, the task has yet to be done justice. There has yet to be any study of what such integration might look like, of what effect non-military instruments might impose on armed conflict, and of what effect the introduction of military power into political competition might have on the efficacy of non-military instruments.”⁶²

⁵⁹ Milevski, *The Evolution of Modern Grand Strategic Thought*, pages 114-115.

⁶⁰ Barry R. Posen, *The Sources of Military Doctrine*, (Ithaca, New York: Cornell University Press, 1984), page 13.

⁶¹ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 120.

⁶² Milevski, *The Evolution of Modern Grand Strategic Thought*, page 152.

Indeed, U.S. strategy documents today explicitly conscript more than just military power through such statements in the NSS as “[o]ur approach encompasses all elements of national power—diplomacy, development cooperation, industrial strategy, economic statecraft, intelligence, and defense.”⁶³ The National Arctic Strategy similarly calls for a “Whole of Government ... Approach.”⁶⁴ The Joint Chiefs of Staff also recognizes that “The United States leverages all instruments of national power to pursue its national interests.”⁶⁵

In the abstract, “all instruments” (assumed to be synonymous with “whole of government”) suggests unlimited access to instruments, or ways and means, of power, such as diplomatic, economic, and military, to obtain ends. However, in reality, of course resources are zero sum, must be budgeted, and not every objective is ulterior nor every war total. Thus, “some of every instrument” might be a more precise descriptor than “all instruments,” short of total war. On the other hand, war might demand “unlimited” or “all of every” instrument. The concept includes logical space for the notion that ways and means are not necessarily limited geographically – according to John Lewis Gaddis, “grand strategy “does not simply break up the world into regions and say that we have an approach for this region and an approach for that region.”⁶⁶ However, that seems to be the exact purpose of such regional strategy documents published by the United States and its DoD components, including their Arctic strategy documents. It is a conclusion of this thesis that an Arctic strategy should not narrowly focus on just military power in the Arctic , but should consider all instrumental means towards political

⁶³ The White House, “National Security Strategy,” September 2022, page 11.

⁶⁴ The White House, “National Strategy for the Arctic,” page 4.

⁶⁵ Joint Chiefs of Staff, “Joint Doctrine Note 2-19 Strategy,” 2019, page vi. Note that Joint Doctrine Notes are guidance not part of existing joint doctrine publications.

⁶⁶ Public Broadcasting Service, “Interview: John Lewis Gaddis,” January 16, 2003. Accessed July 21, 2023 at <https://www.pbs.org/wgbh/pages/frontline/shows/iraq/interviews/gaddis.html>.

ends including ways in distant geographic regions. Or vice versa, the Arctic may serve ways and means towards ends in distant geographic regions.

The Policy-Strategy Relationship

In the forthcoming discussion of present grand and Arctic strategies, a reasonable criticism would be that certain initiatives deemed significant by this author are matters of policy, not strategy. The purpose and conclusion of this section is to argue that the distinction is ambiguous and insignificant, and that policy and strategy are inseparable and must be considered together.

Mahan obscured the division between strategy and policy as he classified maritime power as both a mean and an end⁶⁷: “naval strategy had as its goal the defence and expansion of commerce, but war’s greatest import on global economy was threat and destruction.”⁶⁸ Corbett warned that friction between war and politics is “inherent...and is called the deflection of strategy by politics. It is usually regarded as a disease,”⁶⁹ but was nonetheless certain of the subservience of strategy to policy: “policy is always the object; war is only the means by which we obtain the object, and the means must always keep the end in view.”⁷⁰ Liddell Hart similarly suggested two levels of policy: “fundamental” policy which governs the objects of war, and the “policy in execution”, which “guides the conduct of war” and is “practically synonymous” with grand strategy.⁷¹

Late and post-Cold War strategic thought increasingly considered policy subservient to

⁶⁷ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 30.

⁶⁸ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 34.

⁶⁹ Corbett, *Some Principles of Maritime Strategy*, page 134.

⁷⁰ Corbett, *Some Principles of Maritime Strategy*, page 11.

⁷¹ Hart, *Strategy*, pages 321-322.

grand strategy, the logic of which was that for grand strategy “to coordinate non-military instruments of power it had to control all of those policy areas.”⁷² However, Milevski finds during this resurgent period of grand strategic scholarship, the debates focused not on strategic concepts but prescriptions, ideological divisions, between such camps as realism and idealism, isolationism and engagement, and primacy and cooperation. As Milevski highlights, contemporary theorists often frame grand strategy as the governor of policy; for example, Hal Brands claims that:

“[g]rand strategy inevitably shapes a nation’s foreign policy...Policy-makers who are doing grand strategy are...operating in accordance with a more structured and coherent idea of what their nation is out to accomplish in international affairs. Dedicated grand strategists should have a clear understanding of their country’s most essential interests, the primary threats to those interests, and the extent and limits of the resources available...From this intellectual calculus flows policy, the various initiatives—diplomacy, the use of force, and others.”⁷³

On the other hand, Joint Force Doctrine Note (JDN) 2-19 holds that “The objective of strategy, in the modern sense, is to serve policy”⁷⁴, and analyst Colin Gray’s Principle 1 states “[g]rand strategy is the direction and use made of many or all the assets of a security community, including its military instrument, for the purposes of policy decided at a political level.”⁷⁵

Milevski concludes that the original intent of grand strategy, to understand the conduct of war, its “generalship”, had expanded and evolved largely to consider instead the political utility of war. Furthermore, rather than a strategic study, as a theory of political science divided by

⁷² Milevski, *The Evolution of Modern Grand Strategic Thought*, pages 127-130.

⁷³ Hal Brands, *The Promise and Pitfalls of Grand Strategy*, (Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, 2012), page 4.

⁷⁴ Joint Chiefs of Staff, “Joint Doctrine Note 2-19 Strategy,” page v.

⁷⁵ Colin S. Gray, *Theory of Strategy*, (New York, NY: Oxford University Press, 2018), page 44.

schools of international relations, grand strategy falsely “implies a conceptual and methodological coherence which is not actually shared between strategic studies and most of the rest of international relations, much less the wider field of political science” and fails to appreciate the conduct of war.⁷⁶

The abstract theoretical relation between policy and strategy is less consequential in the context of this thesis than the real mechanisms through which policy and strategy are implemented – this thesis is not a proposal of a universal theory of grand strategy but an instantiation at a point in time in a specific context. Thus, the semantic epistemological distinction between policy and strategy is, for the intents of this paper, practically a false dichotomy. Without the preceding discussion and this conclusion, however, much of the following discussion of contemporary grand strategy and strategy in the Arctic could be criticized as policy, not strategy. However, given their inseparability, no attempt will be made at distinguishing between them, and they will be taken together as a blended whole. In other words, grand and Arctic strategy could reasonably be synonymously called grand and Arctic policy.

In the United States, the constitution’s mandates for a bicameral legislature, representative democracy, election cycles, and political control of the military impede a mechanistic subjugation of policy to grand strategy. Although political leadership may develop policy as an instrument with strategic intent, that decision is ultimately politically accountable to their constituents, and no one branch or party is empowered to establish grand strategy for the entire government⁷⁷; for specific example: while the President may establish a wishful grand

⁷⁶ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 146.

⁷⁷ “In the contemporary period, the very nature of the governmental structure introduces an element of rigidity which operates more or less independently of the convictions of statesmen or the ideology which they represent.” Kissinger, *American Foreign Policy*, page 17.

strategy (like the NSS⁷⁸), it is subject to the influence of Congress⁷⁹, for example, through appropriation of ways and means.⁸⁰ In this view, policy is a synonym for laws, directives, proclamations, and any other real mechanisms through which policymakers can implement a grand strategy. Grand strategy is an ephemeral interpretation of that collection of Congressional and Presidential Executive policies.⁸¹ Grand strategy is the implied, explicit, and deduced intent and actual consequence of the collective action of the entire United States government, a product inevitably of compromise. While that conclusion will be the basis of the U.S. grand and Arctic strategy analysis in this paper, other governments may operate differently, such as a military dictatorship, and that could be consequential for U.S. grand strategy.

The Peace-War Relationship, and Deterrence

Mahan noted his agreement with the quote that “[naval strategy] differs from military strategy in that it is as necessary in peace as in war. Indeed, in peace it may gain its most decisive victories by occupying in a country, either by purchase or treaty, excellent positions which would perhaps hardly be got by war.”⁸² Mahan, according to Milevski, also found value in a peacetime

⁷⁸ “The National Security Strategy...represents, at best, a list of aspirational goals by an administration...When I read the U.S. National Security Strategy for the first time, I assumed it was a subset of a larger national ‘grand strategy.’ But, I was wrong.” Ronis, “Introduction,” in *Forging an American Grand Strategy*,” page 4.

⁷⁹ “Examples abound of congressional initiatives with significant national security implications, and where members of Congress drove an issue that had major consequences for U.S. defense policy, with or without the support of the administration.” David J. Trachtenberg, *The Lawgivers’ Struggle: How Congress Wields Power in National Security Decision Making*, (Fairfax, VA: National Institute Press, 2020), page 14.

⁸⁰ U.S. Constitution, Art I, § 8.

⁸¹ “Grand strategies are almost never stated in such rigorous form, but the analyst may be guided by this conceptualization in his attempt to ferret out the grand strategy of a state, and to compare the strategies of states.” Posen, *Military Doctrine*, page 13.

⁸² A T. Mahan, *The Influence of Sea Power Upon History, 1660-1783*, (Urbana, Illinois: Project Gutenberg, 2004), page 31.

maritime force in that being prepared for war may deter war.⁸³ In the contemporary Arctic context, the argument is that as sea ice recedes and a “new” ocean emerges, presence and capabilities established during peacetime constitute grand strategic and war time relevance. Specifically, peaceful economic activity and the necessary accompanying international agreements, law enforcement, and search and rescue services could be dual use during war and may deter war by demonstrating credible strength.

J.F.C. Fuller, inspired to limit war following the devastation of World War One on Britain, uniquely considered that grand strategy was “almost exclusively a peacetime activity”⁸⁴ - the strategist’s task was to undermine the enemy by planning. Liddell Hart, heavily influenced by Fuller, in one context declared “the object” of grand strategy is “a better peace, a peace of security and prosperity.”⁸⁵ Milevski recognizes that Hart’s “idea of grand strategy thus sought to protect the economic and manpower resources of the nation in war to preserve the nation’s future peacetime readiness for war to deter potential aggressors.”⁸⁶

Edward Mead Earle wrote that “strategy...is not merely a concept of wartime, but is an inherent element of statecraft at all times...grand strategy [is] that which so integrates the policies and armaments of the nation that the resort to war is either rendered unnecessary or is undertaken with the maximum chance of victory.”⁸⁷ His view concluded that policy goals of grand strategy were continuous throughout peace and war.⁸⁸ Milevski concludes that Earle “pushed the [grand strategic] concept into the realm of peacetime policy and strategy making to

⁸³ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 35.

⁸⁴ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 48.

⁸⁵ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 54.

⁸⁶ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 57.

⁸⁷ Edward Mead Earle, *Makers of Modern Strategy*, (Princeton, NJ: Princeton University Press, 1943), page viii.

⁸⁸ Earle, *Makers of Modern Strategy*, page 72.

deter, even to preclude, the necessity of waging war at all.”⁸⁹

Arctic strategies today generally acknowledge their applicability across the peace-war spectrum, including through deterrence. For example: “[t]he United States will maintain and...refine and advance military presence in the Arctic in support of our homeland defense, global military and power projection, and deterrence goals”⁹⁰; and Russian “structures of strategic deterrence forces are located in the Arctic zone to prevent aggression.”⁹¹ The significant takeaway in analyzing Arctic strategy today is to consider the peacetime, deterrence, and war time interests and threats it aims to address.

Through the remainder of this thesis, the four principles of grand strategy defined in this chapter will be referenced regularly and taken for granted. First is the terminological framework closely resembling that thoroughly posited by Julian Corbett – namely, interests and threats are the precursors to a strategic design formulated as the employment of ways and means to achieve ends through intermediate objectives. Second, grand strategy should make all ways and means available – “all instruments” means all types but not necessarily limitless quantities of power. Third, policy and strategy in this context are indistinguishable. Finally, grand strategy should be conceived of as continuous from peace through war. These principles will underpin the following chapters’ distillation of existing U.S. grand strategy, then Arctic strategy.

⁸⁹ Milevski, *The Evolution of Modern Grand Strategic Thought*, page 80.

⁹⁰ The White House, “National Strategy for the Arctic,” page 9.

⁹¹ Vladimir Putin, “Strategy for Development of the Arctic Zone of the Russian Federation and Provision of National Security for the Period up to 2035 (Revised) 26 October 2020 (Amended 27 February 2023)” trans. A. Davis and E. Holland, (Newport, RI: Russia Maritime Studies Institute, United States Naval War College), p.7. Accessed July 21, 2023 at https://dnmlgwick.blob.core.windows.net/portals/0/NWCDepartments/Russia%20Maritime%20Studies%20Institute/16MAR23_20201026_ENG_RUS_Arctic%20Strategy2035_FINAL_16MAR23.pdf?sv=2017-04-17&sr=b&si=DNNFileManagerPolicy&sig=VVtz%2B1QraImnJxQv369b3nYP0QMbWsSnSu%2Bp10U6Stc%3D.

EXISTING U.S. GRAND STRATEGY

This chapter is meant to partially instantiate the framework of grand strategy with existing U.S. grand strategy – to explicate U.S. interests, threats, ends, objectives, ways, and means. Included are all instruments, both policy and strategy, applicable during peace or war. The intent is not to propose or comment on the wisdom of U.S. grand strategy; the intent is to put forth what is, in fact, in assumption, and in deduction, the U.S. grand strategy as declared and demonstrated. Nor is the intent to be completely exhaustive, rather merely illustrative. U.S. grand strategy is undoubtedly vaster and more complex than can be modeled by this or perhaps any systemic strategic framework, especially in a single chapter. The intent here is to illustrate a concept of how U.S. grand strategy can be modeled. The following chapter will discuss how the Arctic may interface into this grand strategy, and use the identified grand strategic interests, threats, ends, ways and means as a basis for how to design a strategy for the Arctic.

Figure 5 illustrates the author’s summary of the NSS molded into the generalized framework previously introduced in Figure 4. The graphic is meant to provide a visualization of the NSS’s strategic concept by categorizing its components and linking them into a systemic or procedural framework. While the illustrated linkages, categorizations, and ultimate layout of the figure was at this author’s discretion and interpretation, the terminology and verbage are mostly direct quotes from the NSS – “terrorism” and “technology” are not self-evidently “objectives” like “countering terrorism” and “invest in technology” would be, alas that is the terminology used in the NSS. Although the visualization could reasonably be criticized as helplessly complex, that in and of itself supports the argument in favor of a standardized set of terminology and framework for strategy formulation. To be communicable and coherent, the

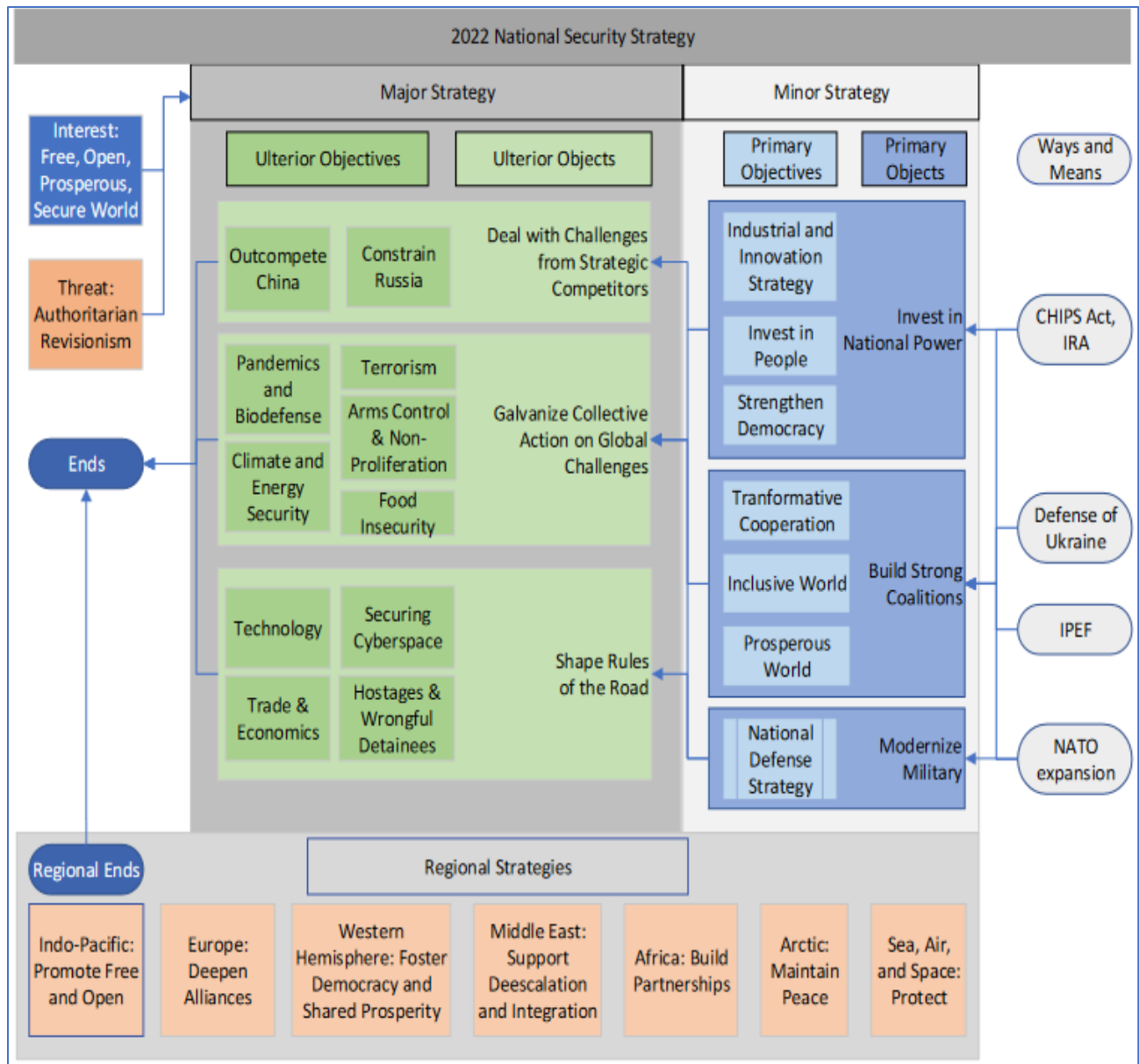


Figure 5. 2022 NSS molded into Corbett’s framework (Author’s interpretation and illustration.)

concepts and components of strategy should obviously interface and support the overarching interests. As explicated in the NSS, and later in the Arctic strategy documents, those connections are only made loosely and subjectively illustrated in the figure by this author.

Terminology of strategy, specifically in U.S. strategy and policy documents including in the context of the NSS and Arctic, is often used incoherently and without definition. “Interests”

are sometimes conflated with “values”; what some call an “objective” others call an “end” or an “interest”; “ways” are sometimes synonymous with “lines of effort,” “objectives”, or “goals”, while “goals” can also mean “interest” or “end.” Interests are sometimes portrayed as means, for example: “The laws, principles, and values of the United States are strategic advantages in great power competition with authoritarian foreign...because such laws, principles, and values increase the appeal of the governance model of the United States, and the United States-led international order.”⁹²

In the figure, interests, threats, and objects are taken from the high-level outline of the NSS which are explained in its introductory Part 1. The objectives are explored in its later chapters, where some example ways and means are given through such statements as “a prime example of an inclusive coalition is IPEF [Indo-Pacific Economic Framework].”⁹³ The NSS, and the graphic by proxy, should not be understood to convey the entirety of U.S. grand strategy. It is useful, however, as a basis for understanding the intent of the Executive branch’s grand strategic approach. The remainder of this chapter will study how other Executive and Congressional acts can be understood as a more general “whole of government” grand strategy.

Interests

For conciseness, the overarching grand strategic interest of U.S. grand strategy will be taken to be Wilsonian idealism. President Wilson’s vision for a post-World-War-One world order can be molded into a grand strategic framework: an interest in avoiding a repeat of global conflagration, towards the end of an enduring peace instead of a “new balance of power”, with

⁹² Consolidated Appropriations Act of 2021, H.R.2471, 117th Congress (2021-2022), March 15, 2022.

⁹³ The White House, “National Security Strategy,” 2022, page 18.

the ways and means of a rules-based international institutional system to enforce and uphold self-determination, national sovereignty, liberal economics, and human rights.⁹⁴ In *World Order*, Henry Kissinger maintains that the Wilsonian vision of world order, “with minor variations”, has been the American “program” since its inception at the end of World War One.⁹⁵ Kissinger asserts that “all twelve post [World War Two] presidents have passionately affirmed an exceptional role for American in the world...both political parties have proclaimed the applicability of American principles to the entire world.”⁹⁶

The ends sought and objectives employed by the United States to pursue that interest has been subject to debate, setback, and Faustian bargains. For example, “Nixon, inveterate anti-Communist”, on reproachment with China, “had decided that the imperatives of geopolitical equilibrium overrode the demands of ideological purity.”⁹⁷ The takeaway from this example is that minor interests may be forgone in favor of the grand strategic interest. There may be instances where Arctic priorities can be conceded for more major strategic gain – such a proposal is offered later in making concessions to Canada’s Arctic sovereignty claims.

Contemporary commentary and analysis from the past ten years, generally beginning in the mid-2010s, have seen fractures in the consensus towards the existing world order, from within and without⁹⁸ – populism, protectionism, deglobalization, geopolitical rivalries, and other

⁹⁴ National Archives, “President Wilson's Message to Congress, January 8, 1918,” Records of the United States Senate, RG 46. Accessed July 21, 2023 at <https://www.archives.gov/milestone-documents/president-woodrow-wilsons-14-points>.

⁹⁵ Kissinger, *World Order*, pages 256-257.

⁹⁶ Kissinger, *World Order*, page 276.

⁹⁷ Kissinger, *World Order*, page 305.

⁹⁸ Joseph S. Nye, “Will the Liberal Order Survive? The History of an Idea,” *Foreign Affairs* (Jan/Feb 2017), pages 10-16; The Economist, “Slowbalisation: The Steam Has Gone Out of Globalisation,” January 2019; Patrick M. Stewart “Trump and World Order: The Return of Self-Help,” *Foreign Affairs* (March/April 2017), pages 52-57; Richard Hass, “How a World Order Ends: And What Comes in Its Wake,” *Foreign Affairs* (Jan/Feb 2019), pages 22-30.

factors, in the view of some analysts, signal the collapse or loss of consensus towards the archaic world order. Even while the foreign policy vision of President Trump particularly could be seen as the end of the U.S.'s uninterrupted pursuit of Wilson's ideals⁹⁹, which instead embraced an "America First" policy, his 2017 National Security Strategy continued to resemble Wilsonian principles:

"We are prioritizing the interests of our citizens and protecting our sovereign rights as a nation.... We will pursue this beautiful vision—a world of strong, sovereign, and independent nations, each with its own cultures and dreams, thriving side-by-side in prosperity, freedom, and peace... We will promote a balance of power that favors the United States, our allies, and our partners. We will never lose sight of our values and their capacity to inspire, uplift, and renew...An America First National Security Strategy is based on American principles...of principled realism...the view that peace, security, and prosperity depend on strong, sovereign nations that respect their citizens at home and cooperate to advance peace abroad. And it is grounded in the realization that American principles are a lasting force for good in the world."¹⁰⁰

President Biden again embraced Wilsonian idealism as an ulterior interest in the 2022 NSS, alternatively at times calling it an "enduring vision," "goal," and "objective":

"This National Security Strategy lays out our plan to achieve a better future of a free, open, secure, and prosperous world. Our strategy is rooted in our national interests: to protect the security of the American people; to expand economic prosperity and opportunity; and to realize and defend the democratic values at the heart of the American way of life.... We seek an order that is free in that it allows people to enjoy their basic, universal rights and freedoms. It is open in that it provides all nations that sign up to these principles an opportunity to participate in, and have a role in shaping, the rules. It is prosperous in that it empowers all nations to continually raise the standard of living for their citizens. And secure, in

⁹⁹ Walter Russell Mead, "The End of the Wilsonian Era: Why Liberal Internationalism Failed," *Foreign Affairs*, (Jan/Feb 2021), pages 123-137; Ian Bremmer, *Superpower : Three Choices for America's Role in the World*, (Portfolio/Penguin, 2016), pages xv-xvi.

¹⁰⁰ The White House, "National Security Strategy," December 2017, pages I-1.

that it is free from aggression, coercion and intimidation.”¹⁰¹

Congress also regularly demonstrates its continued interest in Wilson’s idealistic principles. The 2018 Asia Reassurance Initiative Act (ARIA) of 2018 recognized “The core tenets of the United States-backed international system are being challenged... without strong leadership from the United States, the international system, fundamentally rooted in the rule of law, may wither, to the detriment of United States, regional, and global interests.”¹⁰² The Congressional Research Service (CRS) suggests the ARIA, which is “mostly symbolic”, “shows congressional support for many elements of the Administration’s approach to China as a strategic competitor.”¹⁰³ The Senate in 2022 proclaimed that “the United States of America is a beacon for the values of freedom, democracy, and human rights across the globe,”¹⁰⁴ and “[reaffirmed] unwavering United States support for a secure, democratic, and independent Ukraine.”¹⁰⁵

Thus, the grand strategic interest of the United States, for the purposes of this paper, will be taken to be the maintenance and strengthening of the Wilsonian world order, which may also be called the “liberal”, “U.S.-led”, or “Western-led” “world order” or “international system.”

¹⁰¹ The White House, “National Security Strategy,” 2022, page 7.

¹⁰² Asia Reassurance Initiative Act of 2018, S.2736, 115th Congress (2017-2018), December 31, 2018.

¹⁰³ Congressional Research Service (CRS), “The Asia Reassurance Initiative Act (ARIA) of 2018,” updated April 4, 2019.

¹⁰⁴ A Resolution Expressing the Sense of the Senate Condemning the Russian Federation, President Vladimir Putin, Members of the Russian Security Council, the Russian Armed Forces, and Russian Military Commanders for Committing Atrocities, Including Alleged War Crimes, Against the People of Ukraine and Others, S.Res.546, 117th Congress (2021-2022), March 15, 2022.

¹⁰⁵ A Resolution Supporting an Independent and Democratic Ukraine Against Any Further Russian Military Invasion, and For Other Purposes, S.Res.519, 117th Congress (2021-2022), February 17, 2022.

That order supports and enables the United States to pursue and achieve its national interests of freedom, peace, security, and prosperity of the homeland and the persistence of its democratic institutions, and to apply those ideals globally. It is an interest therefore also applicable to the Arctic, and the following chapter will relate interests there to this grand interest. Strategic design for the region should be aimed towards this ulterior goal of maintaining and progressing the international application of Wilsonian idealism, as a concise catch-all for the U.S.'s most vital interests. None of this is to say the entire world of nations should be expected to accept the U.S.'s vision, that the vision is certain to persist into the future, nor that the vision is inarguable. The intent of this thesis is not to challenge whether Wilsonian idealism should be the guiding interest of the U.S. grand strategy. The purpose of this section was simply to justify the acceptance of that vision as a target, to understand how the Arctic might support the U.S.'s aim.

Threats

The executive branch has identified authoritarianism generally and namely China and Russia as the most concerning threats to the Western-led world order through multiple administrations. A 2018 Government Accountability Office (GAO) survey of long-term national security threats as perceived by Federal agencies listed Chinese and Russian global expansions first and second, respectively.¹⁰⁶ President Trump's 2017 NSS summarizes that "in short, they [China and Russia] are contesting our geopolitical advantages and trying to change the international order in their favor."¹⁰⁷ President Biden's 2022 NSS perceives the primary threat to

¹⁰⁶ U.S. Government Accountability Office, "National Security: Long-Range Emerging Threats Facing the United States as Identified by Federal Agencies," GAO-19-204SP, December 13, 2018.

¹⁰⁷ The White House, "National Security Strategy," 2017, page 11.

national interests as the authoritarian revisionist policies that are “waging or preparing for wars of aggression, actively undermining the democratic political processes of other countries, leveraging technology and supply chains for coercion and repression, and exporting an illiberal model of international order.” The NSS goes on to call out Russia and the Peoples’ Republic of China (PRC) for seeking to “remake the international order to create a world conducive to their highly personalized and repressive type of autocracy.”¹⁰⁸

In the legislative branch, Congress recognizes threats like those viewed by the Executive. A May 11, 2022 Senate resolution recognized a security environment characterized by “competition with revisionist powers such as the Peoples’ Republic of China and the Russian Federation which seek to destabilize the international system.”¹⁰⁹ Announcing his appointment as chair of the forthcoming Select Committee on the Strategic Competition Between the United States and the Chinese Communist Party, Mike Gallagher stated, in part, “the greatest threat to the United States is the Chinese Communist Party.”¹¹⁰ One month later, the House of Representatives passed Resolution 11 to establish that committee with a 365-65 vote.¹¹¹

Given the consensus view that the primary threat to U.S. interests emanates from China and Russia, the preceding Arctic discussion will focus on how the region can be instrumental in addressing those threats.

¹⁰⁸ The White House, “National Security Strategy,” 2022, pages 8-9.

¹⁰⁹ A Resolution Reaffirming the Importance of United States Alliances and Partnerships, S.Res.122 - 117th Congress (2021-2022), May 11, 2022.

¹¹⁰ Mike Gallagher, “Gallagher Announced as Chairman of the Select Committee on China.” December 8, 2022. Accessed July 21, 2023 at <https://gallagher.house.gov/media/press-releases/gallagher-announced-chairman-select-committee-china>.

¹¹¹ Clerk of the United States House of Representatives, “Roll Call 26: H. Res. 11,” 118th Congress, 1st Session, January 10, 2023.

Ends and Objectives

The 2022 NSS does not explicitly define “objectives” nor “ends” within a relevant context. It does, however, define “lines of effort” (objectives) to achieve the “goal” (interest): investing in sources of power, building a coalition of allies, and modernizing and strengthening the military. Those lines of effort are later recharacterized as “capabilities” that will be used for three newly defined “lines of effort”: outcompete strategic competitors, galvanize collective action on global challenges, and shape the rules of the road for technology, cybersecurity, and trade and economics. Because the former lines of effort are subordinate prerequisites for greater ends, the first lines of effort are interpreted as primary objectives and those greater ends/latter lines of effort (“outcompete” ... “galvanize” ... “shape”) as ulterior objectives, as illustrated above.

While the NSS also does not use the term “objective” in a relevant context, it does nonetheless explicitly outline a hierarchy of what will be interpreted as objectives subordinate to each object. For example, to address the ulterior object, challenges from strategic competitors, the United States will “outcompete” China and “constrain” Russia; and to address the primary object, investing in national power, the objectives are to create a modern industrial and innovation strategy (a self-proclaimed strategy within the strategy), invest in people, and strengthen democracy. To modernize and strengthen the military, the strategy refers to the National Defense Strategy (NDS) and says the military will “safeguard vital U.S. interests” by “backstopping diplomacy, confronting aggression, deterring conflict, projecting strength, and protecting the American people and their economic interests.”¹¹² Those military objectives in the National context are echoed in the Defense Department component Arctic strategy documents,

¹¹² The White House, “National Security Strategy,” 2022, page 20.

and therefore the regional strategy can be seen as directly interfacing to the National strategy.

The final section of the NSS describes “strategies by region.” Those strategies mostly resemble a priority list of already stated objects and objectives specific to each region, and only links them to the rest of the strategy by saying “we are stronger in each region because of our affirmative engagement in the others. If one region descends into chaos or is dominated by a hostile power, it will detrimentally impact our interests in the others.”¹¹³ The objectives set out by the NSS serve as a guide and priority list for the development of the Arctic strategy, as will be discussed in the following chapter.

Ways and Means

The remaining element to be explored is the ways and means available and employed to pursue objectives. This thesis is not intended to exhaustively distill the entire efforts of the United States to pursue its grand strategy in every domain. To illustrate the conceptual framework of strategy which will be relied upon for the next section’s discussion of the Arctic as a component of that grand strategy, only some examples of economic and diplomatic initiatives will be given; the military category of national power is forgone here because it is exceedingly complex, obvious, and will be covered specifically in the Arctic context.

Economic. The United States has demonstrated economics to be crucial for its grand strategic peacetime whole of government approach, through actions in both Congress and the Executive branches. At a Senate appropriates committee hearing in May 2023, Commerce Secretary Gina Raimondo reiterated: “competing with China requires everyone on the field operating as a whole of government and working in a bipartisan way with Congress. It requires

¹¹³ The White House, “National Security Strategy,” 2022, page 11.

the use of the full extent of our economic, diplomatic, and military tools.”¹¹⁴ That approach was similarly implemented under President Trump. For example, to uphold its interest in democracy and target offenses by China, because “support for democratization is a fundamental principle of United States foreign policy...it naturally applies to United States policy toward Hong Kong,” the U.S. implemented the Hong Kong Autonomy Act. Signed into law in July 2020, the Act imposed sanctions on “foreign persons involved in the erosion of certain obligations of China with respect to Hong Kong.”¹¹⁵ The United States treasury exercised its sanctions authority under the Act on August 7, 2020, designating 11 individuals.¹¹⁶ As a favored tool of U.S. economic power, it is worth considering how sanctions might be useful in the Arctic, such as by sanctioning entities engaging in illicit economic activity or to restrict the adversaries’ utility of the Arctic transport corridors. This will be discussed in the following chapter as one of the United States’ ways and means.

The interrelation between the instruments of economics and U.S. national security strategy is additionally evident in recent technology sector policies mean to stifle adversary capabilities and ensure domestic capacity. For example, in seeking to ensure the United States has access to a North American supply chain for batteries and “enhance national security by reducing the reliance of the United States on foreign competitors for critical materials and

¹¹⁴ Secretary U.S. Department of Commerce Gina M. Raimondo, “President’s FY 24 Budget Request: Investing in US Security, Competitiveness, and the Path Ahead for the U.S. and PRC Relationship,” video of statement before the Senate Committee on Appropriations, 50:31-50:51, May 16, 2023. Accessed August 3, 2023 at <https://www.appropriations.senate.gov/hearings/a-review-of-the-presidents-fy-24-budget-request-investing-in-us-security-competitiveness-and-the-path-ahead-for-the-us-china-relationship>.

¹¹⁵ Hong Kong Autonomy Act, H.R.7440 - 116th Congress (2019-2020), July 14, 2020.

¹¹⁶ U.S. Department of Treasury, “Treasury Sanctions Individuals for Undermining Hong Kong’s Autonomy,” August 7, 2020. Accessed July 21, 2023 at <https://home.treasury.gov/news/press-releases/sm1088>.

technologies,” the 2021 Infrastructure Investment and Jobs Act prioritizes U.S. entities that “will not use battery material supplied by or originating from a foreign entity of concern,” including China.¹¹⁷ The Department of Energy, after receiving scrutiny from Congress, canceled at least one battery factory funding award due to connections to China.¹¹⁸

Similarly, the Chips and Science Act (CHIPS Act) seeks to limit “material expansion of semiconductor manufacturing capacity in the People’s Republic of China [(PRC)] or any other foreign country of concern.” Section 10612 of the act additionally seeks to direct science and technology research and industrial development plans (including export controls, workforce development, and public-private partnerships) towards supporting national security strategy and defense goals.¹¹⁹ Two months after the CHIPS Act became law, the Department of Commerce announced new export controls “to protect U.S. national security and foreign policy interests...[to] restrict the PRC’s ability to obtain advanced computing chips, develop and maintain supercomputers, and manufacture advanced semiconductors.”¹²⁰

Beyond filling in the concept of current U.S. grand strategy, this section is useful for illustrating how economic policy might be utilized in the Arctic context. As will be explored later, critical mineral deposits in Alaska particularly relate to current U.S. efforts to diversify

¹¹⁷ Infrastructure Investment and Jobs Act, H.R.3684, 117th Congress (2021-2022), November 15, 2021.

¹¹⁸ James Bikales and Kelsey Tamborrino, “DOE Won’t Award \$200 Million to Battery Company Criticized by GOP Over China Links,” *Politico*, May 23, 2023. Accessed July 21, 2023 at <https://www.politico.com/news/2023/05/23/energy-department-microvast-china-00098286>.

¹¹⁹ Chips and Science Act, H.R.4346, 117th Congress (2021-2022), August 9, 2022.

¹²⁰ U.S. Department of Commerce Bureau of Industry and Security, “Commerce Implements New Export Controls on Advanced Computing and Semiconductor Manufacturing Items to the People’s Republic of China (PRC),” October 7, 2022. Accessed July 21, 2023 at <https://www.bis.doc.gov/index.php/documents/about-bis/newsroom/press-releases/3158-2022-10-07-bis-press-release-advanced-computing-and-semiconductor-manufacturing-controls-final/file>.

those supply chains by developing domestic production capacity. Energy, fishing, tourism, and transportation logistics are additional Arctic industries explored later that could be instrumental in the economic sense.

Diplomatic. Congressional acts demonstrate bicameral and bipartisan support for the idea that a robust alliance network will help defend the values and interests of the United States. The Senate resolution cited previously for its recognition of the PRC and Russia as destabilizing to the international order “reaffirmed” the “strategic advantage” and “primary importance” of alliances and partnerships as “among the Nation’s most precious assets” in the defense of shared values and interests.¹²¹ In another resolution underpinned by Wilsonian values, the Senate asked of the President to ensure the Ninth Summit of Americas “strengthens democratic governance by building...efforts to enhance regional cooperation...[and] institutional capacity” having recognized “[deep concern] about the negative, often predatory effects of China’s growing political, economic, military, and technological influence throughout the region.”¹²²

In 2021 the House recognized “the need to strengthen the democracies of NATO members, partners, and aspirant countries” to “uphold” NATO’s founding principles of “democracy, individual liberty, and rule of law” against “external threats from authoritarian regimes such as Russia and China and internal threats from proponents of illiberalism.”¹²³ Additionally, in supporting Finland and Sweden’s accession to NATO following the “upending”

¹²¹ A Resolution Reaffirming the Importance of United States Alliances and Partnerships, S.Res.122.

¹²² A Resolution Recognizing the Ninth Summit of the Americas and Reaffirming the Commitment of the United States to a More Prosperous, Secure, and Democratic Western Hemisphere, S.Res.120.

¹²³ Calling on the United States Government to Uphold the Founding Democratic Principles of the North Atlantic Treaty Organization and Establish a Center for Democratic Resilience Within the Headquarters of the North Atlantic Treaty Organization, H.Res.831, 117th Congress (2021-2022), April 5, 2022.

of the “post-WWII European security architecture” by Russia’s 2022 invasion of Ukraine, the House agreed that “a more resilient security architecture in Europe advances democracy, human rights, and values consistent with the North Atlantic Treaty.”¹²⁴

Those Congressional actions taken together with the NSS statements such as “alliances and partnerships around the world are our most important strategic asset”¹²⁵ demonstrate how the U.S. perceives the utility of diplomatic cooperation as a way and mean towards U.S. grand strategic objectives. For example, the NSS describes how a U.N. resolution condemning aggression against Ukraine is part of the “inclusive world” objective under the heading “using diplomacy to build the strongest possible coalition,” which in turn will be used to “outcompete strategic competitors, galvanize collective action on global challenges, and shape rules of the road.” Those logical connections are what is illustrated in Figure 5 at the beginning of this chapter. In a similar fashion, the following chapter will explore the U.S. Arctic strategy, including how diplomatic engagement in the Arctic is essential to further those grand efforts.

¹²⁴ Expressing Support for the Sovereign Decision of Finland and Sweden to Apply to Join the North Atlantic Treaty Organization (NATO) as Well as Calling on All Members of NATO to Ratify the Protocols of Accession Swiftly, H.Res.1130, 117th Congress (2021-2022), July 18, 2022.

¹²⁵ The White House, “National Security Strategy,” 2022, page 11.

EXISTING ARCTIC STRATEGIES¹²⁶

This chapter endeavors to mold the existing official U.S. Arctic security focused strategy documents into the Corbett-inspired abstract strategic framework and connect Arctic initiatives to U.S. grand strategy. First, official strategy publications including the National (White House), DoD, Air Force, Army, Navy, and Coast Guard Arctic Strategy documents will be summarized and the need for a consistent and structured framework highlighted. For the author's illustrated interpretative overview of the National and DoD proclaimed interests, threats, objectives, and end-states for the Arctic, see Figure 6. The image attempts to untangle the inconsistent and incoherent framework and terminology used by each Arctic Strategy document by connecting the design and intent of each into a common framework to visually summarize. The image will also aid in understanding how the identified objects and end states of each contribute to its parent National strategy. Like the NSS illustration in Figure 5, the design and connections are the author's discretion derived logically from the structure of the documents, while verbiage is paraphrased or direct quotes. Once again, the figure can reasonably be criticized as helplessly complex. Despite this author's best efforts at simply presenting the logical connections between Arctic strategy documents, those connections do not simply exist. They are subjectively interpreted, and the resulting complexity is viewed by this author as supporting the argument that U.S. strategic design would be better served by a consistent interfacing set of concepts and terminology.

¹²⁶ The basic research and analysis for this chapter was done by the author for an earlier paper. Ben Murray, "Arctic Strategy as an Instrument of Grand Strategy," Missouri State University Department of Defense and Strategic Studies, (Seminar by Dr. John Rose and Dr. Michaela Dodge, *The North Atlantic Treaty Organization (NATO) and European and Eurasian Security Challenges*, Fall 2022).

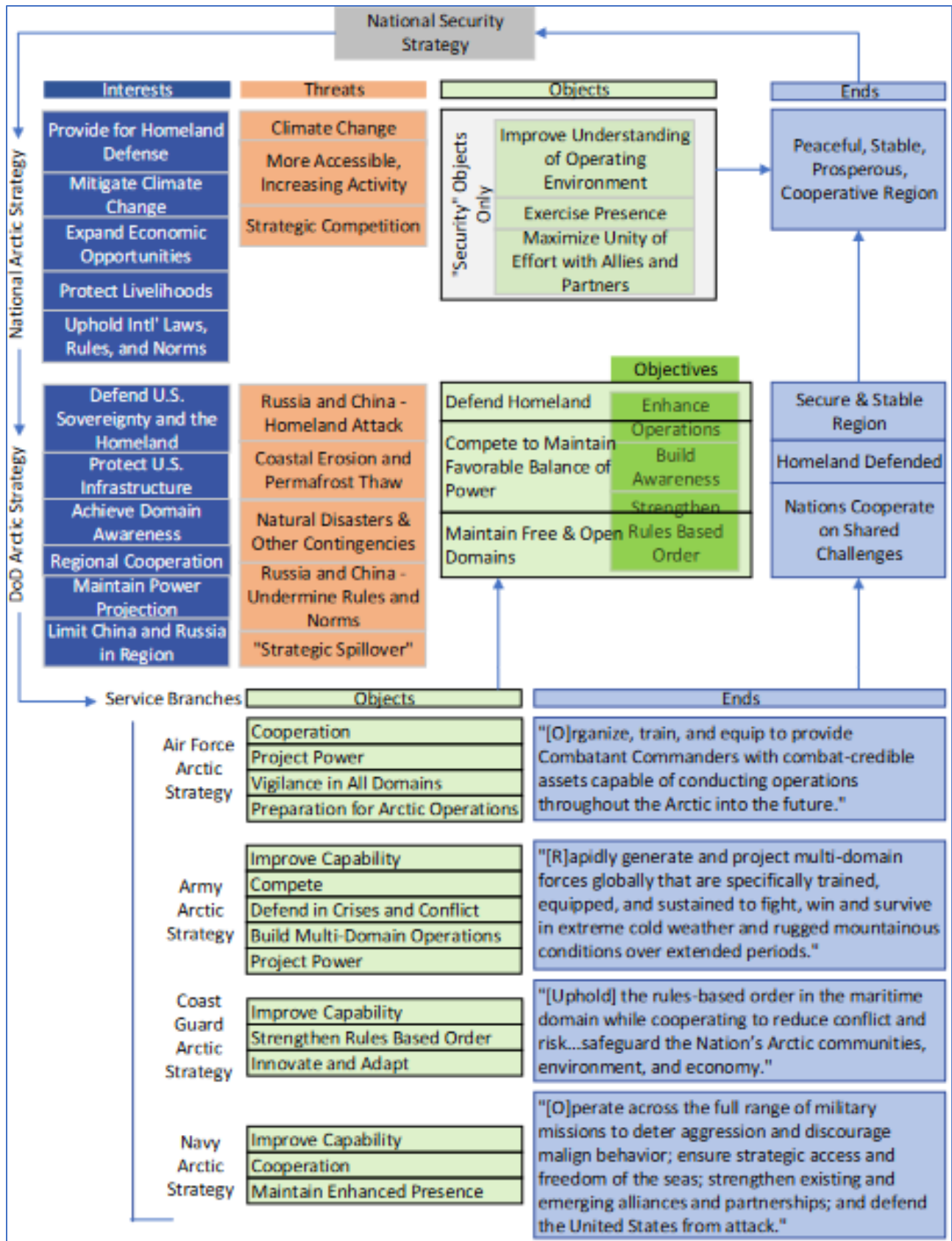


Figure 6. U.S. Arctic Security Strategies, Author's Illustration.

Next, a nuanced study of the most significant aspects of the Arctic within the framework of interests, threats, ends and available ways and means compose the bulk of this chapter. In addition to the Arctic strategy documents, State Department and Congressional Arctic initiatives in addition to a significant volume of other analysis and reporting will also be referenced to objectify Arctic strategic considerations as a test and explanation for the assumptions in the U.S.'s Arctic strategy documents.

Finally, this chapter will briefly consider how the strategic pursuits of China and Russia interact with those of the United States.

Summary of Present Arctic Strategy

The 2022 U.S. National Strategy for the Arctic, released by the Biden administration in October 2022, begins with a “vision”: “The United States seeks an Arctic region that is peaceful, stable, prosperous, and cooperative.”¹²⁷ That vision was reiterated as “ends” and “goals” in May 2023 by Arctic Executive Steering Committee Executive Director Ambassador David Balton.¹²⁸

There is a connection between those ends of the Arctic strategy and the interests of the NSS: peace, stability, prosperity, and cooperation in the Arctic compared to a free, open, secure, and prosperous Nation. The deduction is that the Arctic Strategy “ends” may serve the “interests” of the NSS: the end of “prosperity” in the Arctic Strategy contributes to the NSS’s interest of “prosperity,” and likewise the Arctic Strategy’s end of “peace and stability” contributes to the NSS’s interest of “freedom and security.” Using Corbett’s framework, the ends

¹²⁷ The White House, “National Strategy for the Arctic Region,” page 3.

¹²⁸ David Balton, “VIP Arm Chair National Strategy,” YouTube video of panel discussion (Anchorage, AK: Arctic Encounter Symposium, March 29, 2023), 17:18-18:26. Accessed July 17, 2023 at <https://www.youtube.com/watch?v=jgQLGOW3Zsc>.

of the Arctic strategy contribute to both primary and ulterior objectives of the NSS – for example, cooperation in the Arctic as an end of the Arctic strategy is part and parcel of the NSS’s primary object of building strong coalitions and ulterior object of shaping rules of the road - “we are stronger in each region because of our affirmative engagement in the others.”¹²⁹

The National Arctic strategy does not explicate an exhaustive list of “interests,” saying only the strategy intends to “protect and advance” interests which include “providing for homeland security,” “mitigating” climate change, “expanding” economic opportunities, “protecting and improving livelihoods, including for Alaska Native communities,” and “upholding international law, rules, norms, and standards across Arctic countries.” The strategy highlights climate change as the driver of “transformation” which may present “challenges” to livelihoods, “opportunities” for economic development, and “could intensify strategic competition among countries.” Otherwise, no “threats” were identified.

The strategy is not narrowly a “security” strategy but overlap between Arctic interests with security issues is evident, for example where climate change mitigation calls for improved domain awareness or economic opportunities necessitate infrastructure, each of which may be dual use for security purposes. Generally, because the strategy is not security specific, certain concepts of grand strategy, as defined, should not be expected to apply. For example, “threats” to the interest of expanding economic opportunity (collapse of fishery productivity because of climate change, for example) may not be directly comparable to threats in the security sense, nor should economic development ways and means be expected to apply across a peace-war spectrum. Nevertheless, all instruments including non-security interests such as expanding economic opportunities have a role in a grand strategic sense: those economic opportunities in

¹²⁹ The White House, “National Security Strategy,” 2022, page 11.

the Arctic contribute to the NSS's "invest in people" and "industrial and innovation" objectives.

The Department of Defense (DoD) 2019 Arctic Strategy¹³⁰ presents a structured but self-referencing set of "risks" (threats), ends, ways, objectives, and "strategic approaches." For example, "defending" the United States homeland is an interest, a "defended" homeland is an end-state, and "defend the homeland" is an objective. Similarly, cooperation is an interest, end, and "strategic approach." Those convolutions, circular logics, and self-references highlight the importance of adopting a framework for coherent strategic planning, otherwise interests may become corrupted as ways and means are sought as objectives in and of themselves. For example, the document purports "interests include...achieving domain awareness to protect security interests"—an instance of a self-referencing interest; "domain awareness" would be more correct to characterize as a way or means, as it is an instrument to employ for the pursuit of ulterior ends, not a defense interest in and of itself. Furthermore, the interest in "limiting the ability of China and Russia to leverage the region for...their strategic objectives" is a dangerous confusion of interest with threats. A diversionary vulnerability is created by not defining interests independent of threats; the definition of interests is ceded to the adversary, and the competition becomes an end in and of itself rather than a pursuit of national self-interest.¹³¹ China and Russia could reasonably be seen as a threat to a specific interest only if that threat was clearly explicated in terms of its relation to that interest. However, by describing the limitation of Chinese and Russian usage of the region as an interest, any of their activity in the region is, by definition, a threat absent any reasonable assessment of their intent. The U.S. could therefore be distracted

¹³⁰ Department of Defense Office of the Under Secretary of Defense for Policy, "Report to Congress: Department of Defense Arctic Strategy," June 2019.

¹³¹ Gaddis, *Strategies of Containment*, pages 93-96 note this fallacy in Cold War strategies of containment which failed to connect the objective of imposing "frustration" upon Soviet ambitions to U.S. national interests and instead pursued that as an end in and of itself.

and diverted into countering non-threatening activity. Most of the document's identified interests (listed in Figure 6, above) would similarly be more accurately labeled as objectives.

The Army cites the DoD Arctic Strategy as the foundation of its Arctic strategy¹³², then proceeds to categorize as objectives what the DoD Strategy in fact called end-states. It's "strategic approach" to "support" the DoD's ways are outlined through five "lines of effort": improve Arctic capabilities, compete in the Arctic and globally, defend the "Far North" in crises and conflict, build Arctic multi-domain operations, and project power across the Arctic. The Army's envisioned "end state" is to be "able to rapidly generate and project multi-domain forces globally that are specifically trained, equipped, and sustained to fight, win and survive in extreme cold weather and rugged mountainous conditions over extended periods." It is unclear in what future possible missions the Army envisions utilizing that end state. There is an immeasurable deterrent value to such bold proclamations, which to some extent could be an exaggerated bluff. Such capabilities would clearly contribute to homeland and allied defensive missions in a land invasion scenario, to operate ground-based air and missile defense equipment, maintaining and operating infrastructure, and attacking those Russian Arctic assets.

The Navy's Arctic Strategy¹³³ never clearly explicates what it perceives to be the nation's Arctic interests nor cites those in the DoD Arctic Strategy, but clearly considers them important, using the word "interests" 18 times qualified sporadically as "vital," "shared," "mutual," "common," "regional," "security," "national," and "vested." The Navy is committed to "advance," "protect," "serve," "uphold," and "achieve" those undefined interests which are "challenged," "threatened," and "undermined," by Russia and China. To do so, it outlines three

¹³² United States Army, "Regaining Arctic Dominance: The U.S. Army in the Arctic."

¹³³ Department of the Navy, "A Blue Arctic: A Strategic Blueprint for the Arctic."

objectives: maintain enhanced presence, strengthen cooperative relationships, and build a more capable Arctic force. Those objectives are well designed to support the DoD and National Arctic end states. The value of “presence” towards grand strategic ends will be discussed below, cooperative relationships were identified previously as a primary means of U.S. grand strategy and will be further discussed in the Arctic context below, and a more capable naval force is a militarily useful means within the NSS’s modernized military objective.

The Air Force Arctic Strategy¹³⁴ “embraces” the end-state of the DoD strategy and will “contribute” to its objectives through four “lines of effort:” domain awareness, power projection through a combat credible force, cooperation with allies and partners, and preparation for Arctic operations. All those support an end state of providing capabilities for “conducting operations throughout the Arctic.” The word “throughout” is notable. Although ambiguous, it creates an extra-regional potentiality of operations, such as logistical or attacks passing through Alaska, as opposed to if the word “in” had been used instead which would apply exclusively within the region. Operations “throughout” a region are clearly more expansively inclusive than “in” the region. Air power has historically been the dominant domain of concern in the Arctic, and the Air Force will continue to have important responsibility for air defense, logistical transport, and contingent attack missions against Russian Arctic assets.

Although the Department of Homeland Security (DHS) and its subordinate Coast Guard are organizationally distinct from the Department of Defense, their Arctic strategies additionally support U.S. security and grand strategic objectives and ends. The DHS Arctic Strategy¹³⁵ defines “vital national interests” in the Arctic as sovereign rights and responsibilities, natural

¹³⁴ The Department of the Air Force, “Arctic Strategy,” July 21, 2020.

¹³⁵ U.S. Department of Homeland Security Office of Strategy, Policy, and Plans, “Strategic Approach for Arctic Homeland Security,” January 11, 2021.

resources, and as a trading route. Its strategic goals are to secure the homeland through presence and domain awareness, improving crises response capacity, and bolstering the rules-based international governance. The Coast Guard's strategy, although published earlier, supports those goals of its parent, aiming to improve capabilities, strengthen the rules-based order, and innovate and adapt.

This section summarizing the existing official U.S. Arctic strategies serves to highlight key concepts and perceptions of the region. The next four sections will analyze those concepts and perceptions in depth according to the structure of strategy defined and used previously: interests, threats, ends, and ways and means. Notably absent are diplomatic and economic components under the national Arctic strategy. The Departments of State and Commerce notionally have a role to play in those fields, respectively. While the absence of a publicly published strategy document does not mean the Departments of State and Commerce are shirking their responsibilities, their absence compared to those of the DoD is conspicuous. The actualization of a whole-of-government Arctic strategy is hindered and consequently military-focused without diplomatic and economic strategy documents. Other Arctic regional plans, from scientific research departments and agencies such as the National Oceanic and Atmospheric Association, and the Department of Interior, were reviewed and some referenced below.

Interests

Categories of national interests in the Arctic generally include sovereignty and economic activities. Sovereign interests include the rights and responsibilities of governing territorial claims in the Arctic, underpinned by the idea previously surmised as universal Wilsonian idealism. Economic, or material, interests include resource extraction such as oil, gas, minerals,

and fish, commercial shipping routes, and tourism. Overlapping and connecting those two groups of interests are the laws and regulations governing, for example, extended economic zones, transit routes, and other access rights. All those sovereign and economic interests just mentioned are referenced explicitly with consensus across all the previously referenced official Arctic strategy documents. It is therefore the purpose of this section to study those interests in depth, to qualify their claims.

In the context of this paper, the most relevant interests should be characterized as those U.S. national interests as they affect U.S. grand strategy. However, particularly given the Federal Republic structure of the U.S. government, it is legally, philosophically, and morally ambiguous to characterize national interests as distinct from international, state, tribal, or local interests. For example, in the context of fishing interests, the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean is a multilateral international agreement banning “high seas” fishing activity in the Arctic.¹³⁶ Within its exclusive economic zone (EEZ), the United States has restricted fishing in Federal waters north of the Bering Strait through the Arctic Fishery Management Plan, while the State of Alaska allows fishing in state managed near-coastal waters north of the Bering Strait. Russia, meanwhile, manages productive fisheries in its adjacent EEZ in the Chukchi Sea¹³⁷ to the consternation of Alaska – the Commissioner of the Alaska Department of Fish and Game said that the multi-jurisdictional nature of the ocean is the top

¹³⁶ U.S. Department of State, “Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean Enters into Force,” June 25, 2021. Accessed July 21, 2023 at <https://www.state.gov/the-agreement-to-prevent-unregulated-high-seas-fisheries-in-the-central-arctic-ocean-enters-into-force/>.

¹³⁷ Trine Jonassen, “Alaska Investigates Possibilities of Commercial Fishing in Arctic Waters,” *High North News*, April 14, 2023. Accessed July 21, 2023 at <https://www.highnorthnews.com/en/alaska-investigates-possibilities-commercial-fishing-arctic-waters>.

“policy barrier at odds with a healthy blue economy” and “we certainly do not want to be left onshore while Russia and other countries go out and fish those waters.”¹³⁸ Meanwhile, Alaska local and tribal interests in this context include subsistence fishing and are maintained by a vast set of individual, private, and governmental organizations such as the North Slope Borough’s Department of Wildlife Management¹³⁹, the Alaska Federation of Natives¹⁴⁰, and the Native Village of Barrow¹⁴¹ to name just a few of countless.

To frame the inseparability of interests across levels of government, a report by the University of Fairbanks Center for Arctic Policy Studies illustrates how the deep-water Port of Nome project crosses scales and types of security; scales being international, national, state, and local; types being environmental, military and homeland, economic, cultural, and personal and physical.¹⁴² The report offers a highly detailed overview of the specific case of the Port of Nome, not only a helpful supplement to the discussion of that port as a “ways and means” in that section of this chapter, below, but it also additionally bolsters the immediate argument being made here that any of the so-called National Arctic interests are doubtfully separable from local, state, and international interests, as the United States is part and parcel of each of those “scales.”

¹³⁸ Doug Vincent-Lang, “Session V: Oceans Fisheries,” YouTube video of panel discussion (Anchorage, AK: Arctic Encounter Symposium, March 29, 2023), 00:30-2:40. Accessed July 21, 2023 at <https://www.youtube.com/watch?v=jgQLGOW3Zsc>.

¹³⁹ North Slope Borough Department of Wildlife Management, “Goals and Objectives,” Accessed July 21, 2023 at https://www.north-slope.org/wp-content/uploads/2022/01/DWM_Mission_Statement.pdf

¹⁴⁰ Alaska Federation of Natives, “Subsistence Action.” Accessed July 21, 2023 at <https://www.nativefederation.org/subsistence-action-workshops/>.

¹⁴¹ Native Village of Barrow, “Wildlife.” Accessed July 21, 2023 at <https://nvb-nsn.gov/department/wildlife/>.

¹⁴² Brandon M. Boylan and Jeremy S. Speight, “Alaska’s Arctic Security Complex and Evolving Dynamics in Nome,” University of Alaska Fairbanks, Center for Arctic Policy Studies, October 2021, page 23. Accessed July 21, 2023 at <https://www.uaf.edu/caps/our-work/CAPS-alaskas-arctic-security-complex-and-evolving-dynamics-in-nome-20Oct2021.pdf>.

Specifically, the port could clearly be an asset for local, state, national, and international commercial, tourism, search and rescue, and military operations.

All the referenced official U.S. Arctic strategy documents profess in various forms that the United States holds sovereign claims of territory and rights in the Arctic, that Arctic nations generally respect each other's sovereign rights, and that sovereign rights may be challenged or threatened. Territorial integrity is the most obvious, concrete example of sovereign interests. However, defining territorial boundaries and rights is politically and philosophically fraught. For example, Canada and the U.S. dispute the maritime boundary of their EEZs¹⁴³, and, as the DoD strategy recognizes, the United States, Canada, and Russia disagree on the sovereign rights afforded by international law to regulate near coastal waters (discussed more later). Those countries may disagree not only on the interpretation of the law but may even disagree on which laws are applicable - the United States has not ratified the UN Convention of the Law and the Sea (UNCLOS). Thus, while "sovereign interests" is a convenient catch all, it is definitionally ambiguous. For conciseness and simplicity, it is expansively interpreted here to mean the universally applied Wilsonian idealism. Nations might disagree and dispute the application and interpretation of rules and laws under that system, but for simplicity, that institutionalized embodiment of principles and values is in line with the grand strategic interest of the United States

U.S. conceptions of sovereignty in the Arctic are inseparable from its concepts of sovereignty globally. Indeed, the Homeland Security Arctic strategy proclaims to "stand with the

¹⁴³ Gregor Sharp, "An Old Problem, a New Opportunity: A Case for Solving the Beaufort Sea Boundary Dispute," *The Arctic Institute*, June 17, 2016. Accessed July 21, 2023 at <https://www.thearcticinstitute.org/an-old-problem-a-new-opportunity-a-case-for-solving-the-beaufort-sea-boundary-dispute/>.

United States' allies and partners in protecting sovereign rights to offshore resources, consistent with obligations under international law and in defense of freedom of the seas and respect for sovereignty." The phrases "international law" and "respect for sovereignty" are each footnoted with the same citation to a July 2020 press statement by then Secretary of State Mike Pompeo entitled "U.S. Position on Maritime Claims in the South China Sea."¹⁴⁴ That logically suggests that the U.S.'s concept of sovereignty perceived to be threatened in the Arctic is practically the same interest perceived to be threatened by China's maritime claims in the South China Sea. It would be reasonable then to contemplate similar potential threats to Arctic sovereignty as those demonstrated by China elsewhere – island building or aggressive claims to resource extraction, for example.

The conceptual sphere of sovereign interests in a territory includes rights and responsibilities of governing that territory. Sovereign rights to Alaska afford the right to, for example, base assets and infrastructure for power projection to other regions, allies, and adversaries. Given its relatively advantageous geographic position, upholding those sovereign rights is thereby a profound strategic interest. Figure 7 illustrates distances between select cities to show the relative efficiency of air or maritime transport (power projection) based in Alaska and therefore its geographic strategic significance (additionally of interest but not immediately relevant is the figure's depiction of the intersection of Combatant Command areas of responsibility within the Arctic). Sovereign responsibilities include those to its people and environment. Fisheries management for subsistence and commercial usage, and crises and emergency response functions, for example, not only offers security to the people but

¹⁴⁴ U.S. Department of Homeland Security Office of Strategy, Policy, and Plans, "Strategic Approach for Arctic Homeland Security," page 20.

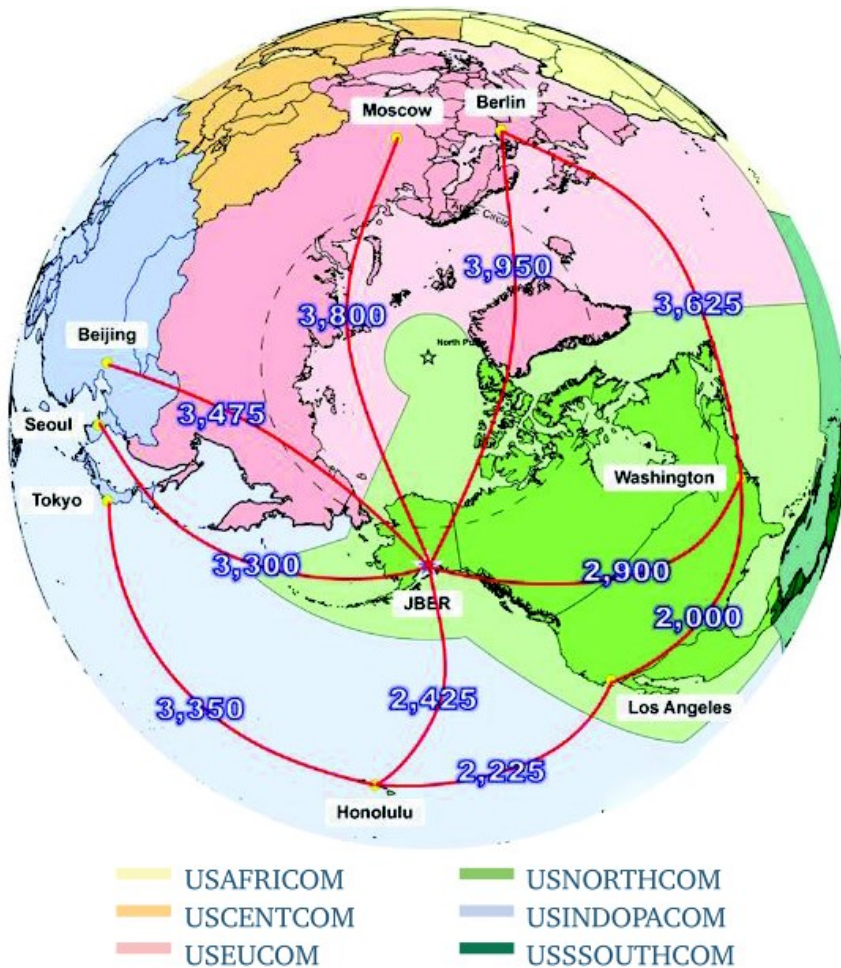


Figure 7. Combatant Command Areas of Responsibility and geographic distances between select cities in nautical miles. (Air Force, “Arctic Strategy,” page 9, credits source as NORAD/NORTHCOM.)

reduces risk for economic activity.

Proclaimed economic interests in the Arctic include oil, natural gas, minerals, fishing, tourism, and trans-Arctic shipping.

Oil. Assessments of oil reserves remaining in Alaska include 3.1 billion barrels of proven reserves¹⁴⁵, 3.6 billion barrels “undiscovered, technically recoverable” within the central North

¹⁴⁵ U.S. Energy Information Administration, “Crude Oil Proved Reserves, Reserves Changes, and Production,” December 30, 2022. Accessed July 21, 2023 at https://www.eia.gov/dnav/pet/pet_crd_pres_dcu_SAK_a.htm.

Slope¹⁴⁶, and 3.75 billion barrels “undiscovered, economically recoverable” offshore and 24 billion barrels conventionally recoverable offshore.¹⁴⁷ See Figure 8 for a map of the North Slope, which “typically” produces over 95% of Alaska’s oil.¹⁴⁸ The image provides reference for the relative position of the oil and gas reserves and active production units.

In 2022, Alaska produced 160 million barrels of crude oil, 3.7% of the nation’s 4.3 billion total.¹⁴⁹ The shale drilling boom drove down the price of Alaskan oil¹⁵⁰, and has made lease sales in the National Petroleum Reserve Alaska less attractive.¹⁵¹ Separately, lease sales in the Alaska National Wildlife Refuge Coastal Plain were first conducted in 2021 and attracted minimal interest - half of the tracts offered were sold, with 11 out of 13 bids coming from the State of Alaska through the Alaska Industrial Development and Export Authority (AIDEA).¹⁵²

¹⁴⁶ USGS, “Assessment of Undiscovered Oil and Gas Reserves in the Central North Slope of Alaska, 2020: Fact Sheet 2020-3001,” January 2020. Accessed July 21, 2023 at <https://pubs.er.usgs.gov/publication/fs20203001>.

¹⁴⁷ U.S. Department of the Interior Bureau of Ocean Energy Management, “2021 Assessment of Oil and Gas Resources: Alaska Outer Continental Shelf Region,” October 2021. Accessed July 21, 2023 at <https://www.boem.gov/about-boem/assessment-data-oil-and-gas-potential-alaska-federal-offshore>

¹⁴⁸ U.S. Energy Information Administration, “Alaska: State Profile and Energy Estimates,” updated March 16, 2023. Accessed July 21, 2023 at <https://www.eia.gov/state/analysis.php?sid=AK>.

¹⁴⁹ U.S. Energy Information Administration, “Crude Oil Production,” June 30, 2023. Accessed July 21, 2023 at https://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbbl_a.htm

¹⁵⁰ Rob Wile, “The American Shale Boom Has Steamrolled Over Alaska,” *Business Insider*, August 13, 2013. Accessed July 21, 2023 at <https://www.businessinsider.com/major-decline-in-alaska-oil-production-2013-8>.

¹⁵¹ Department of Interior Bureau of Land Management, “NPR-A Sale Statistics 1999 to Present,” Accessed July 21, 2023 at https://www.blm.gov/sites/blm.gov/files/documents/files/Oil_Gas_Alaska_NPR-A_LeaseSale_Statistics_1999toPresent.pdf.

¹⁵² Department of Interior Bureau of Land Management, “Oil & Gas Lease Sale – January 6, 2021,” Accessed July 21, 2023 at https://www.blm.gov/sites/default/files/docs/2021-01/BLM-Alaska_2021-Coastal-Plain-Sale-Bid-Recap_20210106.pdf.

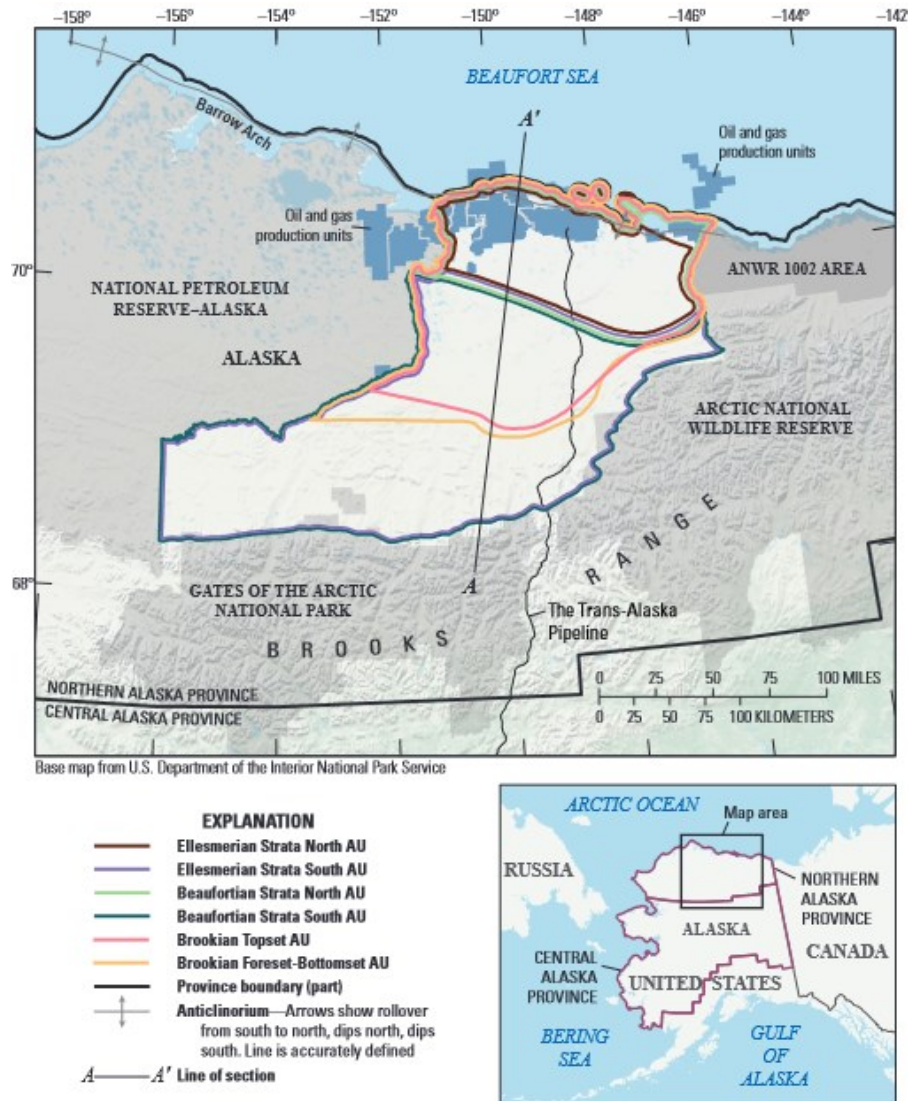


Figure 8. Map of the North Slope petroleum regions of Alaska. (USGS, “Assessment of Undiscovered Oil and Gas Reserves in the Central North Slope of Alaska, 2020: Fact Sheet 2020-3001,” January 2020.)

The federal leasing program was subsequently suspended pending environmental review.¹⁵³

Natural Gas. Alaska has estimated reserves of 100 trillion cubic feet of natural gas,

¹⁵³ U.S. Department of the Interior, “Interior Department Suspends Oil and Gas Leases in Arctic National Wildlife Refuge,” June 1, 2021. Accessed July 21, 2023 at <https://www.doi.gov/pressreleases/interior-department-suspends-oil-and-gas-leases-arctic-national-wildlife-refuge>.

roughly 16% of the national total.¹⁵⁴ Production remains minimal due to limited local demand and transport and export capacity.¹⁵⁵ During a 2017 visit to Alaska, Xi Jinping supported an Alaska LNG extraction, pipeline, liquefaction, and export project,¹⁵⁶ estimated to cost \$39 billion.¹⁵⁷ Figure 9 provides an overview of the project compiled by the Alaska Gasline Development Corporation in a July 2022 presentation. The figure outlines the relevant gas reserves and capital assets proposed to treat, transport, and liquify to export the gas.

In 2019, the AGDC, created by the State of Alaska, reported that “Sinopec, CIC Capital, and Bank of China signed supplemental agreement[s]”¹⁵⁸, and in 2022 that “LNG Buyers continue to show interest...extended/signed Letters of Intent (LOI) with legacy Asian buyers.”¹⁵⁹ China’s involvement in the project may have since terminated¹⁶⁰, as “all conversations are under confidentiality agreements.”¹⁶¹ A January 2022 consultancy report on the project done on behalf

¹⁵⁴ U.S. Energy Information Administration, “Natural Gas Reserves Summary as of Dec. 31,” December 30, 2022. Accessed July 21, 2023 at

https://www.eia.gov/dnav/ng/ng_enr_sum_a_EPG0_r21_BCF_a.htm.

¹⁵⁵ U.S. Energy Information Administration, “Alaska: State Profile and Energy Estimates.”

¹⁵⁶ Kevin Mcgwin, “Alaska LNG Plans Take Great Leap Forward with China Deal,” *High North News*, November 9, 2017. Accessed July 21, 2023 at <https://www.highnorthnews.com/en/alaska-lng-plans-take-great-leap-forward-china-deal>.

¹⁵⁷ U.S. Energy Information Administration, “Alaska: State Profile and Energy Estimates.”

¹⁵⁸ Alaska Gasline Development Corporation, “Financial Statements, Year Ended June 30, 2018,” November 8, 2018, page 4. Accessed July 21, 2023 at <https://agdc.us/wp-content/uploads/2019/02/June-30-2018-AGDC-Fianancial-Statements.pdf>; Alaska Gasline Development Corporation, “Financial Statements, Year Ended June 30, 2019,” October 16, 2019, page 5. Accessed July 21, 2023 at <https://agdc.us/wp-content/uploads/2020/01/Alaska-Gasline-Development-Corporation-19-FINAL.pdf>.

¹⁵⁹ Frank Richards, “President’s Report,” Alaska Gasline Development Corporation, September 22, 2022, page 16. Accessed July 21, 2023 at <https://agdc.us/wp-content/uploads/2022/09/AGDC-Board-of-Directors-Meeting-Presidents-Report-September-22-2022.pdf>.

¹⁶⁰ Elwood Brehmer, “ADGC President Outlines Path Forward; China Deal is Dead,” *Alaska Journal of Commerce*, July 25, 2019. Accessed July 21, 2023 at <https://www.adn.com/business-economy/energy/2019/07/25/agdc-president-outlines-path-forward-china-deal-is-dead/>.

¹⁶¹ Frank Richards, “President’s Report,” Alaska Gasline Development Corporation, March 23,

North Slope Gas Supply

- 40 Trillion cubic feet (tcf) of discovered, conventional, and developed North Slope associated gas from Prudhoe Bay and Point Thomson
- This gas is stranded and can be produced at a low incremental cost

Gas Treatment Plant

- Located in Prudhoe Bay adjacent to existing gas plants
- Removes and uses/sequesters carbon dioxide (CO₂) and hydrogen sulfide (H₂S) from raw gas stream

Natural Gas Pipeline

- 807-mile, 42" dia. mainline from Prudhoe Bay to Nikiski, following TAPS and highway system
- Provides gas to Alaskans and LNG facility

Alaska LNG Facility

- 20 Million tonnes per annum (Mtpa) LNG facility
- Converts natural gas to LNG for export to Asia
- 3 liquefaction trains, jetty, 2 loading berths and 2 x 240,000 m³ LNG tanks

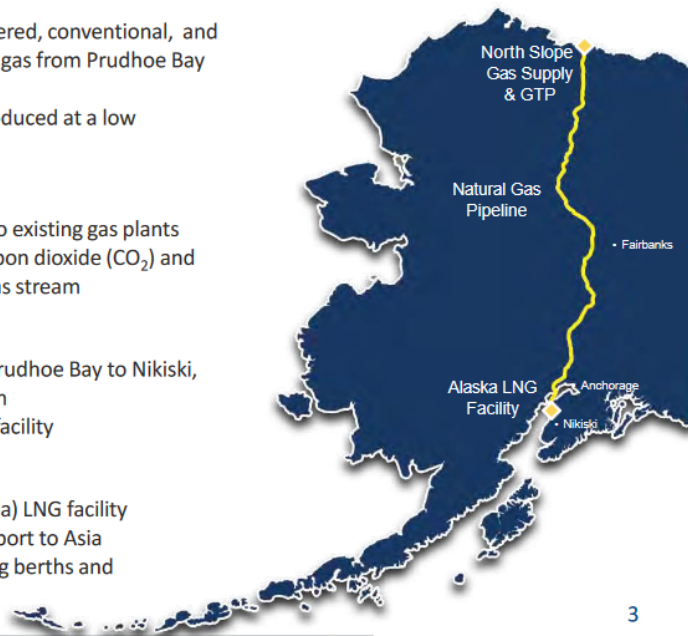


Figure 9. Overview of Alaska LNG project, slide from AGDC presentation. (Frank Richards, “Alaska LNG Project Update,” July 13, 2022. Accessed July 21, 2023 at https://alaska-lng.com/wp-content/uploads/2022/08/07-13-2022-AEDC_Alaska-LNG-Project-Update.pdf.)

of the AGDC optimistically forecasts a “likeliest scenario” will include “market liberalization” in China by 2050 thus increasing LNG imports to the country.¹⁶² The prospect of exporting LNG to China certainly deserves strategic scrutiny.

Recent Federal infrastructure spending progressed the project, which is now “fully permitted,” by providing funds for hydrogen production and carbon capture.¹⁶³ The 2021 Infrastructure bill amended the Alaska Natural Gas Pipeline Act to authorize the Secretary of

2023, page 21. Accessed July 21, 2023 at <https://agdc.us/wp-content/uploads/2023/03/AGDC-Board-of-Directors-Meeting-Presidents-Report-March-23-23.pdf>.

¹⁶² Wood Mackenzie, “Alaska LNG Competitiveness Analysis: Final Report,” January 21, 2022, page 19. Accessed July 21, 2023 at https://agdc.us/wp-content/uploads/2022/01/WM_Alaska-LNG-Competitiveness-Analysis_FINAL_20JAN2022.pdf.

¹⁶³ Senator Lisa Murkowski, “Guest Commentary: Alaska’s Clean Energy Leadership,” *Alaska Journal of Commerce*, September 29, 2021. Accessed July 21, 2023 at <https://www.alaskajournal.com/2021-09-29/guest-commentary-alaskas-clean-energy-leadership>.

Energy to guarantee \$18 billion of loans for the project¹⁶⁴, and to remove provisions limiting the project’s exports to only the continental United States¹⁶⁵ Leveraging those provisions, the Department of Energy (DOE) “authorized” the project to export LNG to non-free trade agreement nations for “strategic benefits...that are distinct from and additional to their economic benefits.”¹⁶⁶ The AGDC reported to the State’s House Finance Committee on May 3, 2023 that “the economics are very strong. The challenge of moving this project forward is not because of the economics, it is because of its size and complexity.”¹⁶⁷ The AGDC and DOE suggest that following the Russian invasion of Ukraine, world gas supplies diverted from Asia to Europe, creating opportunity for Alaska LNG to “meet the long-term energy security needs of Asia,”¹⁶⁸ which is the “primary target market for the project.”¹⁶⁹

Critical Minerals. The United States has a definite interest in securing sources of rare earth and critical minerals (CMs), particularly by diversifying from China as a supplier which currently produces and refines about 98% of the world’s rare earth elements (REEs).¹⁷⁰ As

¹⁶⁴ Alaska Natural Gas Pipeline Act, Division C of Public Law 108–324, 118 Stat. 1255, Sec. 116(c) as amended through P.L. 113–128, (July 22, 2014).

¹⁶⁵ Infrastructure Investment and Jobs Act, H.R.3684, Sec. 40401(d).

¹⁶⁶ Alaska Gasline Development Corporation, “Biden Administration Alaska LNG Authorization Confirms Significant Project Benefits,” April 14, 2023. Accessed July 21, 2023 at <https://agdc.us/wp-content/uploads/2023/04/Final-DOE-Amended-Order.pdf>.

¹⁶⁷ Nick Szymoniak, video of presentation to The Alaska State House Finance Committee, May 3, 2023, 2:06:50-2:07:00. Accessed July 21, 2023 at <https://www.akleg.gov/basis/Meeting/Detail?Meeting=HFIN%202023-05-03%2013:30:00>.

¹⁶⁸ Szymoniak, video presentation to The Alaska State House Finance Committee, attached slides.

¹⁶⁹ U.S. Department of Energy Office of Fossil Energy and Carbon Management, “Order Affirming and Amending DOE/FE Order No. 3643-A Following Partial Grant of Rehearing,” April 13, 2023. Accessed July 21, 2023 at <https://www.energy.gov/sites/default/files/2023-04/rod-eis-0512-s1-alaska-lng-seis-2023-04.pdf>.

¹⁷⁰ Brett Watson and Bob Loeffler, interview by Annie Feidt, “Talk of Alaska: Critical Minerals in Alaska,” *Alaska Public Media*, October 3, 2022, 7:20-7:35. Accessed July 21, 2023 at <https://alaskapublic.org/2022/10/03/talk-of-alaska-critical-minerals-in-alaska/>.

summarized in this paper’s chapter on existing U.S. grand strategy, as a way and means, the United States has incentivized that diversification through legislation promoting domestic production of CMs for batteries, for example. Alaska may be instrumental in that effort¹⁷¹, but it is unclear to what extent. Many useful minerals have been detected throughout Alaska - see Figure 10 which depicts the wide variety and geographic presence of CMs detected in Alaska - but the economic viability of extractable minable deposits has yet to be comprehensively researched. The true scale of mineral deposits is not known, but their detection throughout the state suggests large deposits may be discovered with more exploration.¹⁷²

Nonetheless, the National Arctic strategy claims the Arctic has “significant deposits of in-demand minerals,” and warns China has doubled its investments in the Arctic “with a focus on critical mineral extraction.”¹⁷³ The Coast Guard, Navy, and the Air Force Arctic Strategies all purport that the Arctic’s rare earth minerals are valued at over \$1 trillion; only the Air Force cites the claim, but that source in fact makes no such claim nor any mention of minerals at all.¹⁷⁴ The Homeland Security Strategy similarly argues that the Arctic houses “strategically valuable opportunities to enhance our production of rare earth minerals” without any citation to back up

¹⁷¹ Riley Rogerson, “Department of Defense Awards \$37M to Graphite One Mining Project Near Nome,” *Anchorage Daily News*, July 17, 2023. Accessed July 21, 2023 at <https://www.adn.com/business-economy/2023/07/17/departments-of-defense-awards-37m-to-graphite-one-mining-project-near-nome/>.

¹⁷² “Existing maps of Alaska and the broader Arctic region are really not sufficient to support detailed planning and evaluation of the potential and tradeoffs of additional mineral development in the region.” David Applegate, “Keynote Remarks at Wilson Center Event,” YouTube video of presentation by Director U.S. Geological Survey at event *Critical Minerals in the Arctic: Forging the Path Forward*, July 13, 2023, 1:26:40-1:26:54. Accessed July 21, 2023 at <https://www.youtube.com/watch?v=8z2H0G3PABk>.

¹⁷³ The White House, “National Strategy for the Arctic,” page 6.

¹⁷⁴ The Department of the Air Force, “Arctic Strategy,” page 6.

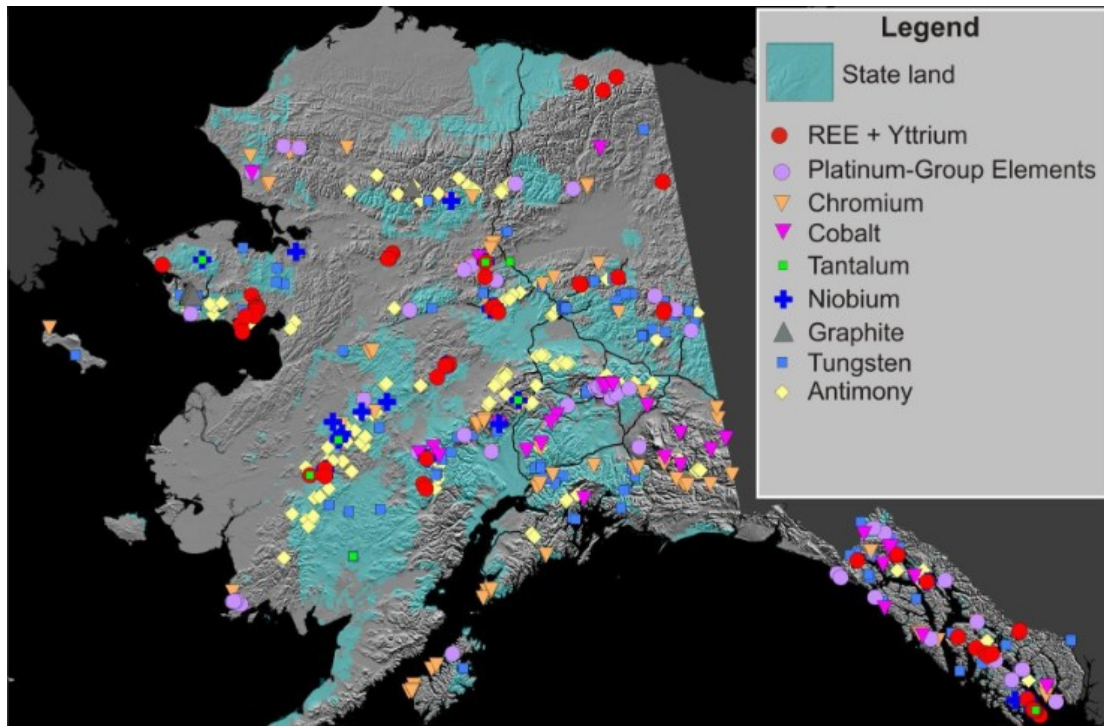


Figure 10. Critical minerals detected in Alaska. (Steven Masterman, “Project Overview and Critical Minerals in Alaska,” presentation at stakeholder’s meeting of cooperative study *Bringing Alaska’s Carbon Ore, Rare Earth Elements, and Critical Minerals into Perspective*, (Anchorage, AK: State of Alaska Department of Natural Resources Geological & Geophysical Surveys, January 18, 2022). Accessed July 21, 2023 at <https://dggs.alaska.gov/energy/download/core-cm/05-masterman-core-cm-objectives-and-overview.pdf>.)

the claim.¹⁷⁵

Advocates of mining in Alaska seek to “reduce our nation’s reliance on imported Rare Earth and Critical Minerals (REE-CM) by establishing Alaska’s resources as competitive sources of supply” yet acknowledge that “Alaska has not seen a systematic analysis of its resource potential.”¹⁷⁶ In 2018, the latest data available from the US Geological Survey, zinc accounted

¹⁷⁵ U.S. Department of Homeland Security Office of Strategy, Policy, and Plans, “Strategic Approach for Arctic Homeland Security,” page 20.

¹⁷⁶ State of Alaska Division of Geological and Geophysical Surveys, “Bringing Alaska’s Carbon Ore, Rare Earth, and Critical Minerals Potential into Perspective.” Accessed July 21, 2023 at <https://dggs.alaska.gov/energy/core-cm.html>.

for over half of Alaska’s approximately \$3.5 billion non-fuel mineral production.¹⁷⁷ Alaska’s Red Dog Mine is the world’s most productive zinc mine, accounting for over 5% of the global output, but is expected to be depleted by 2031.¹⁷⁸

In 2020, the Department of Energy announced plans to establish a Carbon Ore, Rare Earth, and Critical Minerals (CORE-CM) initiative to increase REE-CM extraction alongside coal mines and from existing mine tailings,¹⁷⁹ which subsequently seeded the University of Alaska CORE-CM research center. That Center’s current research concludes “it is unlikely new mines for producing REE/CM will be economical,” but existing mining waste may contain extractable REE/CMs.¹⁸⁰ Additionally, the Infrastructure and Jobs Act authorized funds to survey and map critical minerals in Alaska, including rare-earth elements.¹⁸¹

Off-shore, deep-sea mining is another potential source of REE/CMs in the Arctic. Russia¹⁸² and Norway¹⁸³ have signaled intent to mine the Arctic seabed. China has multiple undersea mining exploration contracts issued by the UN International Seabed Authority (ISA)

¹⁷⁷ USGS National Minerals Information Center, “The Mineral Industry of Alaska.” Accessed July 21, 2023 at <https://www.usgs.gov/centers/national-minerals-information-center/mineral-industry-alaska>.

¹⁷⁸ Feidt, “Talk of Alaska: Critical Minerals in Alaska.”

¹⁷⁹ Department of Energy, “Department of Energy Announces \$122 Million for Regional Initiative to Produce Rare Earth Elements and Critical Minerals,” September 22, 2020. Accessed July 21, 2023 at <https://www.energy.gov/articles/department-energy-announces-122-million-regional-initiative-produce-rare-earth-elements>.

¹⁸⁰ University of Alaska, “Alaska’s Minerals: A Strategic National Imperative,” May 23, 2023. Accessed July 21, 2023 <https://www.alaska.edu/akminerals/outreach/>.

¹⁸¹ USGS, “USGS Invests Millions in Critical-Minerals Mapping in Alaska,” May 17, 2023. Accessed July 21, 2023 at <https://www.usgs.gov/news/national-news-release/usgs-invests-millions-critical-minerals-mapping-alaska>.

¹⁸² The Economist, “Riches Lie Below the Waters of Russia’s Arctic,” November 27, 2021.

¹⁸³ Florence Jones, “Norway Set to Become One of the First Countries to Start Deep-Sea Mining,” *Mining Technology*, June 9, 2023. Accessed July 21, 2023 at <https://www.mining-technology.com/news/norway-set-to-join-the-first-countries-starting-deep-sea-mining/>.

for regions outside the Arctic.¹⁸⁴ Having not ratified the UNCLOS, U.S. companies are ineligible for such contracts, and the country’s diplomats are “sidelined” in attempting to shape the ISA’s rules and regulations¹⁸⁵ which are scheduled to take effect and open to application on July 9, 2023.¹⁸⁶ Deep-sea mining is a nascent practice. The economics and viability of such projects for obtaining significant quantities of REE-CMs is uncertain and unproven anywhere, nonetheless in the Arctic.¹⁸⁷

Fishing. Alaska’s fishing industry produces more seafood than all other U.S. states combined and is the largest private employer in the state.¹⁸⁸ In some years, the Alaska pollock fishery is the largest globally.¹⁸⁹ As a factor of national economics, however, the industry is arguably small, contributing around 100,000 jobs and \$15 billion, using the most expansive measurement criteria.¹⁹⁰ The fishing industry is a domestic food security and economic issue, but is also intertwined with national security grand strategic interests through the legal and regulatory concepts of sovereignty and as a potential crises flashpoint.¹⁹¹ In other words, grand

¹⁸⁴ International Seabed Authority, “Contracts for Seabed Exploration,” April 2018. Accessed July 21, 2023 at <https://www.isa.org.jm/wp-content/uploads/2022/05/isacont-update.pdf>.

¹⁸⁵ Jordan Wolman, “U.S. is Sidelined in Critical Minerals Push,” *Politico*, July 26, 2022. Accessed July 21, 2023 at <https://www.politico.com/news/2022/07/26/us-sidelined-critical-minerals-push-00047799>.

¹⁸⁶ Reuters, “UN to Start Taking Deep-Sea Mining Applications this July,” April 4, 2023. Accessed July 21, 2023 at <https://www.reuters.com/business/environment/un-start-taking-deep-sea-mining-applications-this-july-2023-03-31/>.

¹⁸⁷ “Data on those [Alaska’s coastal and deep ocean mineral] resources is quite limited.” Applegate, “Keynote Remarks at Wilson Center Event,” 1:26:30-1:26:40.

¹⁸⁸ McKinley Research, “The Economic Value of Alaska’s Seafood Industry,” January 2022, page 7, 10. Accessed July 21, 2023 at https://www.alaskaseafood.org/wp-content/uploads/MRG_ASMI-Economic-Impacts-Report_final.pdf.

¹⁸⁹ Michael Frederick Sigler, et al, *Alaska Regional Action Plan for the Southeastern Bering Sea : NOAA Fisheries Climate Science Strategy*, (National Marine Fisheries Service, Alaska Fisheries Science Center, 2016), <http://doi.org/10.7289/V5/TM-AFSC-336>.

¹⁹⁰ McKinley, “The Economic Value of Alaska’s Seafood Industry,” page 5.

¹⁹¹ Mike Baker, “‘Are we Getting Invaded?’ U.S. Boats Faced Russian Aggression Near Alaska,” *The New York Times*, November 12, 2020.

strategic interests in Arctic fisheries is perhaps equally concerned with food and economics as it is with managing geopolitical competition and conflict that may escalate from those fishing industry pursuits.¹⁹² The Coast Guard Arctic strategy, for example, highlights the importance of “upholding the rules based order” through routine enforcement of fishing regulations “below the level of armed conflict...[that] are vital to maintaining a global order respectful of sovereignty and independence.”¹⁹³

Tourism. A similar argument can be made for the Alaska tourism industry as that for the fishing industry. It is of significant economic interest to the state, but in the national grand strategic context, particularly as the industry expands, the industry is most significant as it is intertwined with sovereign rights, and international relations through access regulations and crises response agreements.

Between two to three million people visit Alaska annually¹⁹⁴ (although the industry suffered profound COVID-19 induced disruption) and produces \$4-5 billion in total economic output.¹⁹⁵ Around 60% of visitors come via cruise ship and another 36% through air travel. The Coast Guard’s Arctic strategy recognizes its expanding role as cruise ship traffic (and human activity generally) to Alaska and through the Bering Strait increases, and the Navy and Air Force

¹⁹² Jen Evans and Andreas Østhagen, “Fisheries Disputes: The Real Potential for Arctic Conflict,” *The Arctic Institute*, June 3, 2021. Accessed July 21, 2023 at <https://www.thearcticinstitute.org/fisheries-disputes-real-potential-arctic-conflict/>.

¹⁹³ United States Coast Guard, “Arctic Strategic Outlook,” page 34.

¹⁹⁴ State of Alaska Department of Commerce Community, and Economic Development, “Statewide Comprehensive Economic Development Strategy: 2022-2027: Appendix C,” page 12. Accessed July 21, 2023 at <https://www.commerce.alaska.gov/web/Portals/0/pub/CEDS/Appendix%20C%20Economic%20Engines.pdf?ver=2022-11-14-101457-603>.

¹⁹⁵ McDowell Group, “Economic Impact of Alaska’s Visitor Industry,” November 2018. Accessed July 21, 2023 at https://www.alaskatourism.org/sites/default/files/2022-11/VisitorImpacts2016-17Report11_2_18.pdf.

similarly both forecast growing demand for emergency response services as visitor activity increases.

Trans-Arctic Shipping. The utility of Alaska for the commercial private sector’s logistical interests is like the logistical power projection platform it is to the nation’s security and defense interests. The physical location of Alaska is strategically advantageous to reach Asia and, with receding ice, Europe. For air transport, the Ted Stevens Anchorage International Airport is an important stopover between Asia and North America, recording the fourth highest volume of cargo in the world in 2020.¹⁹⁶ From the sea, the District 17 Coast Guard Intelligence Office reported in 2016 that vessel counts transiting the Bering Strait more than doubled to 540 between 2008 and 2015.¹⁹⁷ In 2019, the U.S. Committee on the Marine Transportation System (CMTS) reported traffic density in the Arctic region was increasing and the observed traffic season was beginning earlier and ending later.¹⁹⁸ Figure 11 depicts marine traffic density through the Bering Strait to the Chukchi Sea, how the Strait may therefore be considered a strategic bottleneck, and also illustrates the geographic significance of deepening the Port of Nome, discussed more later.

The Norwegian Nord University’s Center for High North Logistics (CHNL), reports on Northern Sea Route traffic using data from automated information system (AIS) ship tracking

¹⁹⁶ State of Alaska Department of Commerce Community, and Economic Development, “Statewide Comprehensive Economic Development Strategy: 2022-2027: Appendix C,” page 19.

¹⁹⁷ United States Coast Guard, “Preliminary Findings: Port Access Route Study: In the Chukchi Sea, Bering Strait, and Bering Sea,” page 13.

¹⁹⁸ U.S. Committee on the Marine Transportation System (CMTS), “A Ten-Year Projection of Maritime Activity in the U.S. Arctic Region, 2020–2030,” September 2019, page 26-29. Accessed July 21, 2023 at <https://www.pame.is/document-library/shipping-documents/arctic-ship-traffic-data-documents/reports/451-a-10-year-projection-of-maritime-activity-in-the-u-s-arctic-region/file>.

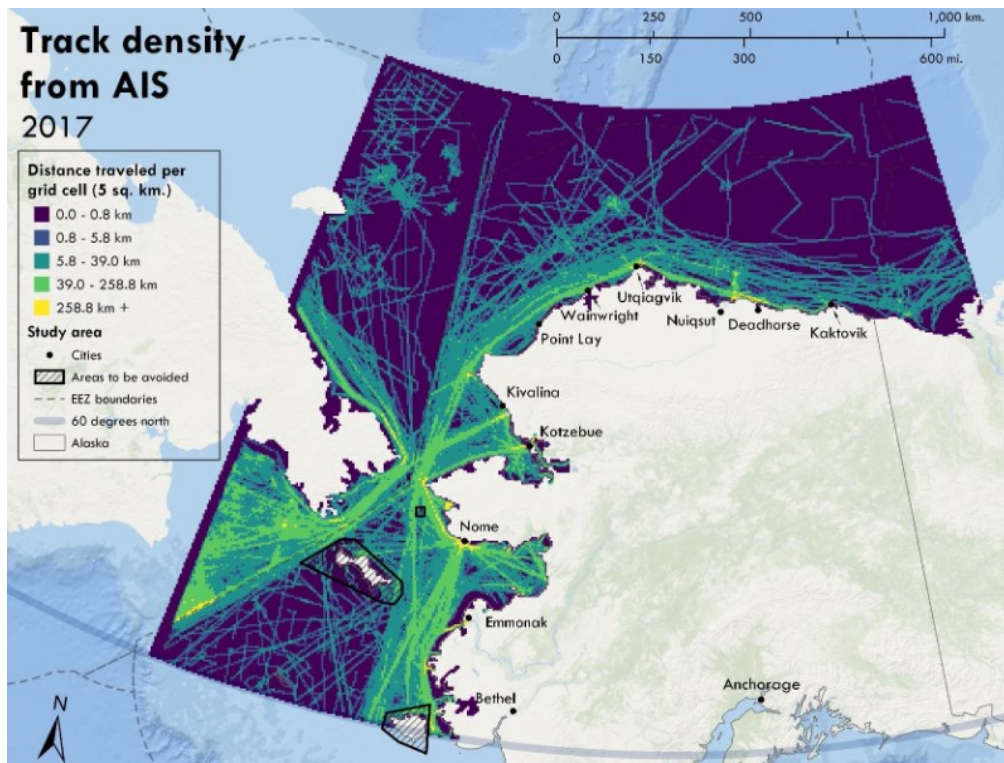


Figure 11. Alaskan Arctic maritime traffic. (CMTS, “A Ten-Year Projection of Maritime Activity in the U.S. Arctic Region, 2020–2030,” September 2019, page 19).

and Russia’s Northern Sea Route Administration. Using CHNL data, the CMTS recognized a trend towards more China and/or Hong Kong flagged cargo ships owned by the company COSCO transiting the Northern Sea Route (NSR) compared to four years earlier when most traffic was Russian tankers. The CHNL reported that in 2022 there were 2994 total voyages on the NSR by 314 vessels.¹⁹⁹ The CHNL attributes 65% of cargo, by gross registered tonnage (GRT), and 19% of voyages transiting the NSR to LNG, while general cargo accounted for 25% of voyages. Detailed data on vessel types, cargo, and volume through the Northern Sea Route off the Arctic coast of Russia, suggesting the economic significance of the transit route, is provided

¹⁹⁹ Center for High North Logistics Information Office, “Shipping Traffic at the NSR in 2022,” Nord University, June 6, 2023. Accessed July 21, 2023 at <https://arctic-lio.com/nsr-2022-short-report/>.

in Figure 12. General cargo trade shipments from China may be increasing, and energy shipments are crucial to the Russian economy, both of which would be relevant strategic considerations were either of those nations to enter war with the United States.

This section on U.S. interests in the Arctic region is meant to serve as a basis from which strategic design begins. The official U.S. Arctic strategy publications all profess in various forms that sovereign and economic interests exist. Sovereignty is a vague concept without clear definition but is of overriding concern as it underpins the Wilsonian vision. Economic interests are more quantifiable, but there is no clear threshold at which an economic industry becomes significant in a grand strategic sense. Oil and gas, for example, is mentioned by practically all strategic assessments of the region, yet the U.S.'s reliance on those resources from the region have been consistently minor relative to other regions. Critical minerals are also frequently cited as a strategic interest, with some official U.S. Arctic strategies specifically claiming \$1 trillion of those minerals are in the Arctic, yet scientific consensus holds that quantities of minerals present in the region is unknown. From the analysis in this section, this author concludes that U.S. strategic designs for the Arctic often demonstrate poor understanding of interests there and fail to implement the "evidence-based approach" prescribed by the national Arctic strategy.²⁰⁰ That is not to say the U.S. has only minor interests, but rather that the significance of economic interests is generally inflated, misunderstood, and/or mistaken. In the view of this author, the U.S.' most significant interests are in principles of sovereignty as they uphold Wilson's vision, and as a logistical transit nexus of the Northern hemisphere for both economic and security purposes.

²⁰⁰ The White House, "National Strategy for the Arctic," page 8.

Vessel Types 2022					Vessel Types 2021				
Vessel Type	Nº Voy 2022	Nº Ves 2022	GRT	% GRT	VesselType	Nº Voy 2021	Nº Ves 2021	GRT	%GT GRT
LNG Tanker	564	26	71,244,243	65.09%	LNG Tanker	528	25	66,716,979	61.91%
Tanker	660	43	20,309,544	18.56%	Tanker	705	47	20,900,255	19.40%
Icebreaker	345	18	7,115,437	6.50%	Icebreaker	354	18	6,453,033	5.99%
General cargo	750	95	5,414,988	4.95%	General cargo	800	131	6,011,234	5.58%
Container	194	8	3,050,192	2.79%	Container	177	9	2,732,758	2.54%
Bulk	68	10	1,266,529	1.16%	Bulk	94	24	2,714,894	2.52%
Research	92	22	279,942	0.26%	Heavy Load	26	11	550,199	0.51%
Supply	83	13	242,889	0.22%	Supply	156	22	497,384	0.46%
Drill rig	3	1	163,350	0.15%	Research	138	31	456,898	0.42%
Tug	141	41	92,738	0.08%	Dredger	37	18	343,916	0.32%
Fishing	42	20	87,027	0.08%	Drill rig	6	3	154,684	0.14%
SAR	18	5	61,649	0.06%	Tug	141	53	110,678	0.10%
Reefer	6	3	53,368	0.05%	SAR	17	6	41,988	0.04%
Dredger	11	4	32,007	0.03%	Fishing	25	6	25,482	0.02%
Cable Layer	2	1	20,210	0.02%	Drilling	5	1	17,875	0.02%
Drilling	4	1	14,300	0.01%	Hopper	12	5	14,310	0.01%
Hopper	7	3	4,807	0.00%	Reefer	5	3	13,812	0.01%
Yacht	4	1	40	0.00%	Passenger	1	1	3,061	0.00%
Total	2994	314	109,453,260	100.00%	Total	3227	414	107,759,440	100.00%



Figure 12. NSR traffic. (Center for High North Logistics Information Office, “Shipping Traffic at the NSR in 2022,” Nord University, June 6, 2023).

Threats

The security threats recognized by each U.S. Arctic security strategy acknowledge a changing physical environment and great power competition as the primary challenges in the Arctic context. Canadian Arctic policy and security researcher P. Whitney Lackenbauer refines the threat assessment by framing threats as through, to, and within the Arctic, differentiated by their source and destination.²⁰¹ That framework, to which this author will add “from,” is particularly useful to analyze military or “hard” security threats, such as those that have a definite trajectory like missiles.

Threats through the Arctic, those emanating from outside and aimed outside but passing through the region, must necessarily be considered in the context of extra-regional global security and defense affairs. Threats through the Arctic are of grave concern of NORAD and USNORTHCOM, which notes new warning challenges from the Northern approaches.²⁰² Great power or strategic conflict may “spillover” into the Arctic, according to the DoD and Navy strategies, from Europe or the Indo-Pacific. The military strategies all recognize the utility of Alaska as a platform to project power. The Army specifically notes the strategic “geographic proximity” of Alaska for deploying to Europe and the Indo-Pacific, and that Alaska can be “a front line...power projection platform, or a rear area.” A more expansive interpretation of the “through” context than hard military threats include trans-Arctic shipping activity, such as commercial logistics and tourism, which create crises and emergency response contingencies,

²⁰¹ P. Whitney Lackenbauer, “Threats Through, To, and In the Arctic: A Framework for Analysis,” 2021, in *Debating Arctic Security*, page 464-476.

²⁰² “Russia’s fielding of advanced, long-range cruise missiles capable of being launched from Russian territory and flying through the northern approaches and seeking to strike targets in the United States and Canada has emerged as the dominant military threat in the Arctic.” NORAD and USNORTHCOM, “Strategy Executive Summary,” March 2021.

and could exacerbate geopolitical tensions. For example, the DoD, each of its service branches, and the Coast Guard Arctic strategies all reference China's intent to link the Arctic into its "Belt and Road initiative," a global logistics, infrastructure, economic, and social development program to project and entrench Chinese influence and power.²⁰³

Threats to the Arctic emanate from outside and are aimed into the Arctic. NORAD's Northern approach air and maritime monitoring systems and the Alaska-based Ground-Based Interceptors, for example, could be targets of adversaries in war.²⁰⁴ Other power projection assets relying on Arctic air and maritime domains space could also be targets.

Threats within the Arctic consist of climate driven infrastructure damage, increasing human and military traffic and activity, competition for resources, and other economic activities that may also seed social, civil, political, and military conflict and crises. For example, in June 2023, ice flows severed an undersea fiber-optic cable, disconnecting towns and villages in North and West Alaska, including Nome, from broadband communication services.²⁰⁵ The company owning the cable estimated 6-8 weeks to complete the repair, coordinating the repair vessel with natural summer ice break up,²⁰⁶ suggesting a present shortage of ice breaking capabilities to enable basic infrastructure that would be integral for operating the forthcoming expanded Port of

²⁰³ Congressional Research Service, "Changes in the Arctic: Background and Issues for Congress," R41153, May 17, 2021, <https://crsreports.congress.gov/product/pdf/IF/IF11735>

²⁰⁴ "A conflict between the US and China in the Pacific could see a Chinese attack on US missile defence installations in the Arctic. These conflicts would not be about the Arctic, however." Paul Sigurd Hilde, "Armed Forces and Security Challenges in the Arctic," *Geopolitics and Security in the Arctic: Regional Dynamics in a Global World*, (Routledge Global Security Studies, 2014), page 162.

²⁰⁵ Joey Klecka and Joe Cadotte, "Broadband Outage Affecting North Slope due to Undersea Fiber Cut, Company Says," *Alaska's News Source*, June 13, 2023. Accessed July 21, 2023 at <https://www.alaskasnews.com/2023/06/13/broadband-outage-affecting-north-slope-due-undersea-fiber-cut-company-says/>.

²⁰⁶ Quintillion Global, "Update to Service Outage Notification," June 13, 2023. Accessed July 21, 2023 at <https://www.quintillionglobal.com/update-to-service-outage-notification/>.

Nome. Coast Guard command in Alaska has reported rising demand for medevac flights from cruise ships, other maritime vessels, and non-maritime medical transport.²⁰⁷ Although the crises and emergency response operations may be similar for fishing, tourist, or transport vessels, they may each necessitate distinct geopolitical regimes, including laws, norms, and regulations. In the military realm, the Arctic strategies generally warn about the growing dual-use capabilities of the Russian and Chinese presence in the Arctic, competition for resources, and Russia's excessive regulation of the Northern Sea Route.

A final category not offered by Lackenbauer's framework would be threats from the Arctic, those emanating from within and aimed outside, such as Arctic based submarine launched ballistic missiles. In this context, the DoD strategy notes the need for anti-submarine warfare exercises, the possibility of China deploying submarines to the Arctic, and the homeland defense role of ground-based interceptors at Fort Greely, Alaska. The Navy strategy makes no mention of missile threats but highlights its submarine presence and anti-submarine exercises in the region, and the role of the Navy in deterring aggression.

Lackenbauer concludes with a warning that "geostrategic competition at the international systemic level should not be misapplied to objective and subjective geographical assessments of the regional Arctic security environment." As threat perceptions at the level of great power competition dominate, they could be mischaracterized as Arctic regional security threats. An example mentioned by all the military strategies is the threat of China building regional power and undermining economies and rules and norms by linking the Arctic into its Belt and Road

²⁰⁷ James Brooks, "Alaska's Top Coast Guard Official Warns of Rising Medevac Cases as he Leaves Command," *Alaska Beacon via Anchorage Daily News*, June 21, 2023. Accessed July 21, 2023 at <https://www.adn.com/alaska-news/2023/06/21/alaskas-top-coast-guard-official-warns-of-rising-medevac-cases-as-he-leaves-command/>.

initiative, leveraging participation in international governance organizations, building trans-Arctic shipping capacity, and engaging in economic deal making with Arctic nations. Many such “soft” power threats are encompassed within an all instruments approach, blend the policy-strategy and peace-war divides, and cross the categories of Lackenbauer’s framework. As another example, while a crisis erupting over a conflict between fishing vessels in the Arctic may in and of itself be a national security threat in principle only to sovereignty within the Arctic, geopolitical activities (or lack thereof) to cooperatively regulate the fishing industry preceding those crises is a more global soft-power issue. Such a crisis could “spillover” outside the Arctic. Thus, while objective technical threat factors may be limited conceptually to through, to, within, and from the Arctic, the U.S. national threat assessment must necessarily judge those threats against its expansive, global sovereign and economic interests and threat assessments.

Ends and Objectives

The sought after ends conceptualized by each strategy document are encompassed by a broadly generalized program to build alliance strength. All interests, regional (peace, stability, prosperity, and cooperation) as well as grand strategic (a free, open, prosperous, and secure world), are served by building alliance strength and thereby “exercising presence.”

Building alliance strength through cooperation, diplomacy, and exercises includes unilateral as well as multilateral efforts to develop capabilities and train together to coordinate and complement them with partners. That interpretation, in other words, is to say unilateral efforts to build Arctic capabilities are part and parcel of multilateral alliance efforts to do the same. Within the service branch strategies, cooperation and alliance building is somewhat distinct from that branch’s own capabilities. However, this author conceives of unilateral

national power and military modernization as components of the grand strategic (NSS) object of alliance strength, and, vice versa, alliance strength as a component of the grand strategic object of investing in national power and military modernization (refer back to the illustration of the NSS, Figure 5). The argument maintains that Arctic ends must complement and interface with grand strategic ends, and that individual national strength composes alliance strength.

Each Arctic strategy seeks to improve capabilities, maintain vigilance, project power, and defend the homeland – all of which are essential forms of “presence”. Increasing presence in the region is a necessary objective to build strength, through training and exercise Presence mitigates threats so that interests may be defended and pursued with less risk. Those forms of presence demonstrate credibility in the context of deterrence against adversarial threats. Presence additionally serves as a risk mitigator and resource towards crises and emergency response capacity, such as search and rescue services for commercial accidents. Combined with infrastructure presence, human presence is a driver of economic prosperity and cooperation.

A critic might contend that increased U.S. presence may instigate a countervailing adversary response, destabilize relations, or provoke conflict. However, that criticism implies that the cessation of sovereign rights and responsibilities including commercial economic activity would appease adversary insecurities. In other words, the counterfactual to that destabilization hypothesis is that absence from the region would preserve peace, that a lack of presence would offer more security than presence. The logic is the mirror of the earlier discussed DoD definition of interests which included the limitation of Chinese and Russian activity in the region. For a nation to characterize the presence, in and of itself, of an adversary in a region as undermining interests is a failure to realistically assess a threat. Of course, the United States cannot ensure its adversaries will reliably judge the intent of U.S. presence in the Arctic as non-

threatening. But if the U.S. were to cede its valid sovereign rights and responsibilities out of fear of falling into some Thucydides trap, it would have preemptively undermined its Wilsonian vision.

Ways and Means

Domain Awareness. Developing and maintaining domain awareness (DA) is a crosscutting enabler of all interests necessary for all ends, for regulation and law enforcement, crises and emergency response, threat/adversary tracking and monitoring, and safe commercial operations. All the U.S.'s Arctic strategies call for improved DA with a specific application towards air and maritime homeland approaches, missile defense, and weather forecasting. It is unclear, however, what specific components of current DA systems are considered inadequate. There exist a wide array of programs and agencies producing domain awareness in some form for various ends. Within the context of DA, high-level reports with rhetoric calling for jointness, interagency collaboration, integration, and information sharing are abundant, implying a present shortage of coordination across the wide range of existing public and private agencies which maintain, research, and develop Arctic domain awareness assets.

NORAD/NORTHCOM's strategy defines DA as "a layered sensing grid that provides persistent battlespace awareness from the seabed to space and to cyberspace."²⁰⁸ The DoD strategy similarly seeks to "[modernize] DoD's missile and cruise missile defense systems...to [maintain] a layered approach to domain awareness through multi-domain sensors that include terrestrial radars and space-based capabilities." The Navy strategy seeks to enhance awareness through synchronized joint force efforts. The Air Force asserts its "ability to protect the

²⁰⁸ NORAD and USNORTHCOM, "Strategy Executive Summary."

homeland requires Arctic domain awareness including threat detection, targeting and tracking, communications, and weather forecasting.”

The Arctic Domain Awareness Center, established under the Department of Homeland Security, is partnered with the University of Alaska Anchorage and the U.S. Coast Guard and has over 20 ongoing and concluded projects such as modeling and monitoring conditions in the Arctic through a variety of sensors including unmanned underwater vehicles and satellites, as well as training and education programs.²⁰⁹ The Department of Commerce through the National Oceanic and Atmospheric Administration (NOAA) conducts a wide range of research and forecasting of conditions in the Arctic.²¹⁰ NOAA’s Arctic Programs includes the International Arctic Buoy, Arctic Saildrone, satellites, International Arctic Systems for Observing the Atmosphere, and United States Arctic Observing Network (U.S. AON) programs. Supported by the NOAA Integrated Ocean Observing System, the Alaska Ocean Observing System incorporates existing sensor and data feeds from private and public affiliates to provide real-time and recorded data sets.²¹¹

The U.S. AON, on behalf of the Interagency Arctic Research Policy Committee of the Office of the President’s National Science and Technology Council, published a report as requested by Congress “On the Need to Establish and Maintain a Sustained Arctic Observing Network.”²¹² The recommendations covered the need for coordinated and sustained project

²⁰⁹ Arctic Domain Awareness Center, “Project Summaries,” University of Alaska, January 24, 2020. Accessed July 21, 2023 at https://www.arcticdomainawarenesscenter.org/Downloads/PDF/Fact%20Sheets/ADAC%20-%20Project%20Sheet_Compiled%20Project%20List_v2.8_Companded.pdf.

²¹⁰ NOAA Arctic, “Arctic Research.” Accessed July 21, 2023 at <https://arctic.noaa.gov/research/>.

²¹¹ Alaska Ocean Observing System, “What We Do.” Accessed July 21, 2023 at <https://aoots.org/>.

²¹² The U.S. Arctic Observing Network, “On the Need to Establish and Maintain a Sustained Arctic Observing Network,” December 15, 2022. Accessed July 21, 2023 at <https://www.iarpcollaborations.org/uploads/cms/documents/usaon-report-20221215.pdf>.

planning and funding integrated across agencies and projects to fill gaps and ensure interoperability and data sharing. Similarly, the Director of National Intelligence’s 2022 National Maritime Domain Awareness plan suggests obstacles to maritime DA are generally technical and organizational impediments to communication, interoperability, and information exchange, but stops short of detailing the obstacles or offering a plan to overcome them.²¹³ For example, “non-emitting/uncooperative vessels” presumably refers to Automated Identification Systems, but an explanation of the challenge, or why existing technology such as the Arctic Domain Awareness Center’s sensing projects including unmanned and satellite monitoring systems are inadequate to address the challenge, is not provided.

Given the plethora of private and public data collection efforts in the Arctic, more central executive leadership is clearly needed to ensure efficient, resilient (redundant without uncoordinated duplication of effort), comprehensive, complementary, cooperative, coherent, and useful Arctic DA. However, the DoD and service branches may have additional exclusive purview over certain DA requirements which remain classified: missile and submarine tracking capabilities, for example.²¹⁴ Melting sea ice and emerging technologies such as hypersonic cruise missiles and unmanned sea and air vehicles may also compel innovative offsetting DA requirements.

Military. In 2022, more than 30,000 defense personnel (including Coast Guard) were

²¹³ National Maritime Intelligence-Integration Office, “National Strategy for Maritime Security: National Maritime Domain Awareness Plan,” Revision 3, 2022. Accessed July 21, 2023 at <https://nmio.isc.gov/Portals/16/National%20MDA%20Plan%202022%20FINAL.pdf>.

²¹⁴ Chris Kofron National Security Council Director for Russia, “Deterring Russia at Sea in the High North,” YouTube video of discussion at Wilson Center event, February 9, 2023. Accessed July 21, 2023 at https://www.youtube.com/watch?v=O61x_dKe2zU. In the context of discussing the difference between “presence and exposure operations” during wartime versus “not wartime,” Kofron says: “you can do things remotely now. We have uncrewed vehicles, you have subsurface acoustics, you have all sorts of things that can federate a monitoring network.”

hosted in Alaska.²¹⁵ The 2022 National Defense Authorization Act, passed in December 2021, established the Ted Stevens Center for Arctic Security Studies as a DoD Regional Center for Security Studies.²¹⁶ Section 1090 of the Act additionally calls for the United States to achieve a “comparative military advantage...in response to great power competitors in the Arctic region,” and to implement the National and service’s Arctic strategies “in the event deterrence fails.” In September 2022, the DoD announced the establishment of the “Arctic Strategy and Resilience Office...to ensure U.S. strategy and policy protects U.S. interests in that crucial region.” The only statements specifying what the office will do vaguely say it “signifies the importance” of the region and will “start laying the groundwork for how we can best prepare ourselves and to know what the challenges of the future may be.”²¹⁷ The 2022 DoD Freedom of Navigation (FoN) Report recorded the first Arctic FoN challenge to Russia’s 2021 “excessive” territorial water traversal notification requirement, in the Bering Sea.²¹⁸

Ice Breakers. The Coast Guard currently operates one heavy and one medium icebreaker, has funding for the acquisition of two heavies scheduled to enter service 18-24 months after their delivery in 2025, and seeks funding for a third.²¹⁹ The 2023 National Defense Authorization Act authorized \$20 million to “design and select” icebreakers” and \$150 million for the acquisition of an icebreaker capable of, among other things, the confusing task of “projecting United States

²¹⁵ State of Alaska Department of Commerce Community, and Economic Development, “Statewide Comprehensive Economic Development Strategy: 2022-2027: Appendix C,” page 16.

²¹⁶ National Defense Authorization Act for Fiscal Year 2022, S.1605, 117th Congress (2021-2022), December 27, 2021.

²¹⁷ Garamone, “DOD Establishes Arctic Strategy and Global Resilience Office.”

²¹⁸ Department of Defense, “Annual Freedom of Navigation Report,” April 21, 2023. Accessed July 21, 2023 at

https://policy.defense.gov/Portals/11/Documents/FON%20Program%20Report_FY2022.pdf.

²¹⁹ Congressional Research Service, “Coast Guard Polar Security Cutter (Polar Icebreaker) Program: Background and Issues for Congress,” RL34391, September 21, 2022.

sovereignty.”²²⁰ The Act also requested an analysis report on icebreaker fleet mix options, the ability to transit the Northern Sea Route and Northwest Passage.

Airports. Due to limited land and sea communications, Alaska has developed an extensive set of airports of varying quality with generally limited service upon which communities rely. Across the State, there are 265 airports with runways over 3000 feet, and 71 of more than 5000 feet, 49 of which are asphalt or concrete.²²¹ Although intended mostly for civil purposes, these may be dual-useful for operations of the armed services. The quantity and distribution of existing runways should be sufficient to satisfy security needs. However, that only applies to Alaska. The air base assets of the United States’ allies and partners was not studied.

Port of Nome. By early 2022 a deep-water port for Nome on the West coast of Alaska had received Congressional authorization and funding.²²² The port will be the Nation’s northernmost deep-water port (yet Nome is approximately 140 air miles south of the Arctic circle), situated near the Bering Strait chokepoint entrance to the Chukchi Sea, approximately 800 air miles from the nearest existing port accessible to large Coast Guard vessels, on Kodiak Island. Although Nome is considered a regional logistics hub, it is separated from the mainland road system by at least 400 miles. Overland offroad access in the winter months when the ground

²²⁰ James M. Inhofe National Defense Authorization Act for Fiscal Year 2023, H.R.7776, 117th Congress (2021-2022), December 23, 2022.

²²¹ Airport facility database provided by the Alaska Department of Transportation and Public Facilities, “Alaska Aviation Database,” accessed and data acquired July 14, 2023 at <https://internal.alaskaasp.com/Facilities>.

²²² U.S. Army Corps of Engineers, “Port of Nome Modification, Nome Alaska,” May 17, 2020. Accessed July 21, 2023 at https://www.nomealaska.org/sites/default/files/fileattachments/port_of_nome/page/11929/ponm_phase_1_public_information_meeting_2.0_20230517.pdf; U.S. Army Corps of Engineers, “Alaska Deep-Draft Arctic Port System Study,” February 2015. Accessed July 21, 2023 at <https://www.poa.usace.army.mil/Portals/34/docs/civilworks/arcticdeepdraft/ADDMainReportwithoutappendixes.pdf>.

is frozen may be plausible, but reaching the port would generally only be possible by sea or air.

Missile Defense and Deterrence. Emerging missile types and platforms (such as cruise and hypersonic missiles and drones) will place new demands on monitoring Northern homeland approaches and missile defense missions, including force protection of missile defense assets in the Arctic. But with increased flight time, speed, maneuverability, and proliferation, mitigating that threat from the North alone is not sufficient for the homeland defense mission. Therefore, integrated air and missile defense of the Northern approaches to the U.S. homeland is objectively inseparable from the integrated air defense of the homeland from any direction. The debates over missile defense policy, system capabilities, and their effects on deterrence and stability are not narrowly confined to the Arctic, either. For example, while Russia “restitutes” its Cold War era capabilities and bastion defense strategy²²³ and China develops more Arctic presence, those nations could be deterred from basing long range precision strike capabilities in the Arctic by denial through, in addition to integrated air defense, capable attack submarine and anti-submarine forces. Those deterrence missions, though, may not necessarily deter the Russian and Chinese threat from or through other theaters. Furthermore, the same concepts and requirements for countering missile threats through integrated air defense apply not only to the U.S. homeland but also to the NATO alliance from the European Arctic. Although Cold War missile defense and deterrence logic necessarily attended to the Arctic, that geographical limitation is no longer

²²³ Kofron, “Deterring Russia at Sea in the High North,” for “restitution” see 40:05-40:26: “we tend to see this [military buildup] as a restitution of Soviet era capabilities more than a true buildup,” for “bastion” see 41:11-41:23: “the largest proportion of its SSBN fleet are behind the Arctic circle and that means Russia has a bastion defense mindset” and Vice Admiral Daniel Dwyer, Commander Second Fleet/Commander, Joint Forces Command Norfolk, “Deterring Russia at Sea in the High North Pt.2,” YouTube video of discussion at Wilson Center Event, February 9, 2023, 27:25-27:30. Accessed July 21, 2023 at <https://www.youtube.com/watch?v=WwtFkx4vX6U>.

valid.

Diplomatic. Cooperation to further U.S. interests in the Arctic was put forth as a policy as early as 1971 with NSDM-144.²²⁴ In December 2022, the Department of State announced the establishment of an “Ambassador-at-Large for the Arctic Region” to collaborate with stakeholders towards the advancement of U.S. policy.²²⁵ However, the State Department has not published an Arctic Strategy, a missing component to serve National Arctic strategy and complement defense strategies as part of the all instruments approach. Such a strategy would clarify what the Arctic Ambassador intends to do, establish priority diplomatic issues of focus for the Department of State, and provide broad government wide guidance for participation in bi- or multi-lateral Arctic engagements like defense cooperations, the Arctic Coast Guard Forum, and Arctic Council. Without a diplomatic strategy, the U.S.’s national Arctic strategy’s call for a whole of government approach is left with a gaping void.

The U.S. faces a conundrum in purporting to defend and support an international order of rules and laws supported by cooperation through global partnerships and like-minded allies while at the same time in dispute with its closest geographic ally, Canada, over those rules and laws covering EEZs and FoN. While the United States has not ratified the UNCLOS, Canada has. Under the UNCLOS Section 8, Article 234: Ice-covered areas²²⁶, Canada claims certain archipelagic waterways within its EEZ as internal waterways subject to enforcement of sovereign

²²⁴ Henry Kissinger, “National Security Decision Memorandum 144: United States Arctic Policy and Arctic Policy Group,” December 22, 1971. Accessed July 21, 2023 at www.hsdl.org/?view&did=750480.

²²⁵ Vedant Patel, “Establishing an Ambassador-at-Large for the Arctic Region,” Department of State, August 26, 2022. Accessed July 21, 2023 at <https://www.state.gov/establishing-an-ambassador-at-large-for-the-arctic-region/>.

²²⁶ U.N., “U.N. Convention on the Law of the Sea.” Accessed July 21, 2023 at https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

regulation.²²⁷ The U.S. opposes this interpretation as an excessive restriction of its sovereignty, in favor of unrestricted freedom of navigation, with practical (albeit covert) consequence for submarine transits.²²⁸ Additionally, through the Commission on the Limits of the Continental Shelf (CLCS) under the UNCLOS, Canada claims rights to the seabed and subsurface rights in far extension of its EEZ.²²⁹ The CLCS, however, only has authority to delineate the outer boundaries, not to delimit overlapping claims, which is a matter for independent inter-state negotiations.²³⁰

The United States and Canada make overlapping maritime claims in the Beaufort Sea, ostensibly due to different techniques to establish the baselines (“a notional, adjusted coastline”)

²²⁷ Ashley Porter, “UNCLOS in the Arctic: A Treaty for Warmer Waters,” *Georgetown Security Studies Review*, February 24, 2020. Accessed July 21, 2023 at <https://georgetownsecuritystudiesreview.org/2020/02/24/unclos-in-the-arctic-a-treaty-for-warmer-waters/>.

²²⁸ Adam Lajeunesse, “The Northwest Passage in Canadian Policy: An Approach for the 21st Century,” *International Journal*, 63 (4), (Autumn 2008, *Nuclear Strategy in the Age of Weapons of Mass Destruction*), pages 1037-1052.

²²⁹ Government of Canada, “Addendum to the Partial Submission of Canada to the Commission on the Limits of the Continental Shelf Regarding Its Continental Shelf in the Arctic Ocean : Executive Summary,” 2022. Accessed July 21, 2023 at https://www.un.org/depts/los/clcs_new/submissions_files/can1_84_2019/cda1eseng.pdf. Also, for an understanding on the distinction between EEZs, continental shelves, extended continental shelves, and the rights entailed, see Cornell Overfield, “An Off-the-Shelf Guide to Extended Continental Shelves and the Arctic,” *Lawfare*, April 21, 2021. Accessed July 21, 2023 at <https://www.lawfaremedia.org/article/shelf-guide-extended-continental-shelves-and-arctic>.

²³⁰ “It should be emphasized at the start that bilateral delimitation of the continental shelf between opposite or adjacent coastal States is a distinct and wholly separate process from the unilateral delineation and establishment of the outer limits of the continental shelf beyond 200 n.m. from shore on the basis of Commission recommendations: the former requires agreement between two or more States on the division of areas encompassed by overlapping continental shelf claims, the latter requires individual coastal States to comply with the substantive and procedural terms of Article 76 of the 1982 United Nations Convention on the Law of the Sea.” Overfield, “Off-the-Shelf Guide” cites Coalter Lathrop, “Continental Shelf Delimitation Beyond 200 Nautical Miles: Approaches Taken by Coastal States before the Commission on the Limits of the Continental Shelf,” in *International Maritime Boundaries* (David A. Colson and Robert W. Smith eds., 2005), pages 4139-4160.

from which their maritime boundary claims are projected.²³¹ See Figure 13 for an illustration of the area of overlapping claims (AOC), over 7000 square nautical miles of disputed waters with open oil and gas lease blocks. While the United States Department of Interior Bureau of Ocean Energy Management, responsible for managing offshore oil and gas leases, defines lease blocks within the AOC and beyond the U.S. EEZ, none have been issued.²³² Meanwhile, Canada has issued 5 lease blocks that fall wholly or partly within the AOC.²³³

The issue of freedom of navigation also presents intractable conundrums for U.S. policy makers. Canada and Russia both make, in the view of the United States, excessive claims to specially regulate maritime traffic through their Arctic near-shore waters. In principle of maintaining untarnished freedom of the seas, the U.S. adamantly opposes such claims while at the same time raising alarm about China exercising presence in the Arctic which is defended by Chinese diplomats through freedom of navigation principles. The United States should cede to a Canadian and Russian premise that ice breaking escorts near shore ice-covered routes would be of mutual interest for environmental protection, crises mitigation, and risk reduction thereby enabling safe economic activity.

It would be in the U.S. interest to support Canada's regulation of its archipelagic waterways as internal under the UNCLOS ice provision before it melts and regular usage leads

²³¹ Pieter Bekker and Robert van de Poll, "Unlocking the Arctic's Resources Equitably: Using a Law-and-Science Approach to Fix the Beaufort Sea Boundary," *The International Journal of Marine and Coastal Law*, 35 (2), September 26, 2019, pages 163-200.

²³² Bekker and van de Poll, "Unlocking the Arctic's Resources Equitably: Using a Law-and-Science Approach to Fix the Beaufort Sea Boundary"; Department of Interior Bureau of Ocean Energy Management, "2019 Beaufort Sea OCS Oil and Gas Lease Sales." Accessed June 30, 2023 at <https://www.boem.gov/about-boem/2019-beaufort-sea-ocs-oil-and-gas-lease-sale>.

²³³ Bekker and van de Poll, "Unlocking the Arctic's Resources Equitably: Using a Law-and-Science Approach to Fix the Beaufort Sea Boundary."

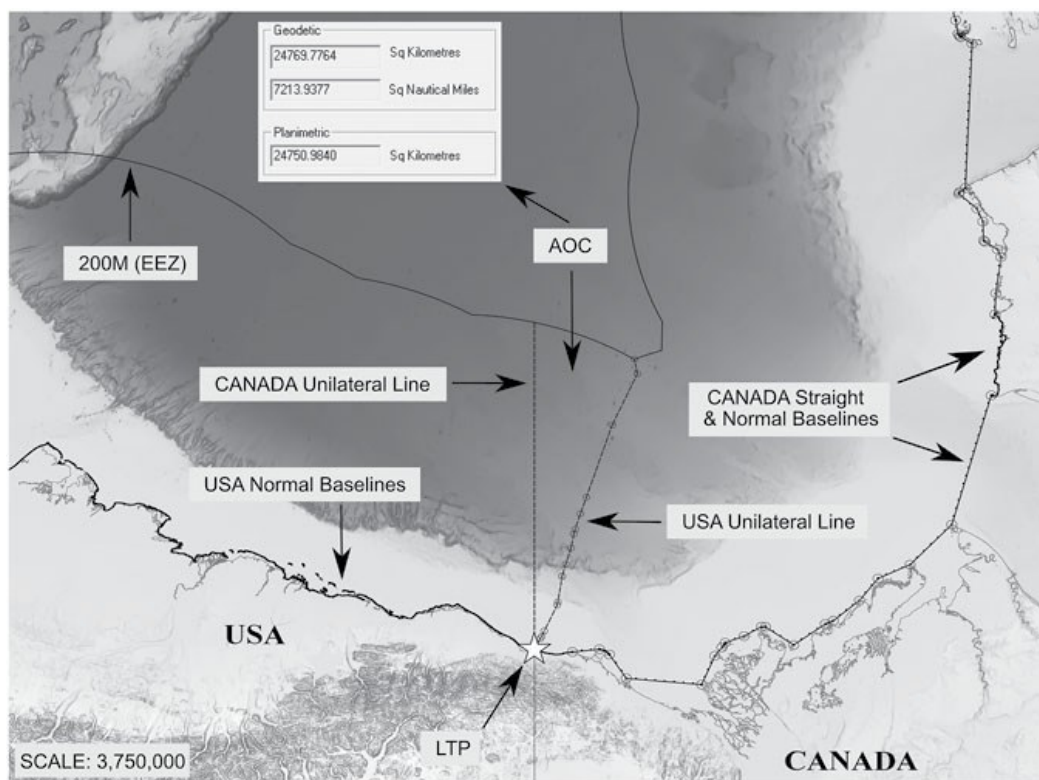


Figure 13. Beaufort Sea, United States and Canada claimed baselines and boundaries. (Pieter Bekker and Robert van de Poll, “Unlocking the Arctic’s Resources Equitably: Using a Law-and-Science Approach to Fix the Beaufort Sea Boundary,” *The International Journal of Marine and Coastal Law*, 35 (2), September 26, 2019, pages 163-200.)

to an “international waterway” definition.²³⁴ Developed under international institutional authority, such a concession of sovereignty to do so may bolster those institution’s relevance in line with U.S. grand strategic interests without practically limiting freedom of seas anywhere else, and additionally strengthen the Canadian-U.S. alliance. Such an interpretation is uniquely applicable to the Northwest passage, therefore without consequence for freedom of navigation in other theaters - the Northeast passage is less ice covered, already heavily trafficked, and not

²³⁴ “With the melting of the northern ice, the growing threat to Canadian sovereignty derives principally from the unsettled legal status of the Northwest Passage and the possibility that future traffic might not be on Canadian terms.” Lajeunesse, “The Northwest Passage in Canadian Policy: An Approach for the 21st Century.”

archipelagic and thus such an interpretation would not be a concession nor applicable to Russian regulation of its near-coastal Arctic waters. As Canadian defense and security is heavily dependent upon cooperation with the United States, it is likely Canadian sovereign regulation of the waterway would support U.S. security interests, in part by limiting legal access of adversaries, and otherwise by legalizing stringent regulation in difficult to navigate areas.

Even if the concession lent credence to Russia's regulation of its near-coastal waters and thus be antithetical to countering Russian transgressions, that would simultaneously limit China's free access to the region, thereby imposing stress upon the Russia-China relationship by forcing renegotiation of their existing transit and access agreements, and thus may be a net gain for the United States. Additionally, the United States and Canada could work to make an unprecedented joint concession to their shared native Inuit constituents for a multilateral regulation of that maritime region through cooperation with those tribal governments.

Diplomatic engagement by the United States to settle its territorial disputes would be a means of "shaping the rules of the road"²³⁵ and thereby the Wilsonian institutions of its grand strategic interest by clarifying boundaries and definitions of sovereign rights. Arctic economic interests in dispute are minor compared to the political sovereignty interests at stake, yet the U.S. strategy to pursue and defend those sovereign interests is a wedge among the allies' consensus on the very definition of laws and sovereignty being defended. The United States should favor establishing clearly defined international laws, rules, and norms to bolster the credibility of its Wilsonian international institutional vision, thereby defending its sovereignty and security interests which are superior to those minor economic interests within geographically contested spaces. The persistence of the U.S.-Canada Arctic sovereignty disputes is contradictory to the

²³⁵ The White House, "National Security Strategy," 2022.

U.S.'s grand strategic interest in universal Wilsonianism under threat from authoritarian revisionism.

Wilsonian norms and laws might be weak counterforces to dedicated revisionism. Without an enforcement agency to deter or punish transgressions, universal compliance should indeed not be expected. The argument being made in this section, however, is not that the Wilsonian vision will enjoy universal unchallenged acceptance, nor to suggest how transgressions should be addressed. What is being argued here is that by failing to even agree upon the rules, the U.S. and its allies have undermined their vision without any revisionist act. In attempting to build a coalition of partners with a shared Wilsonian vision, the U.S. loses moral high ground and credibility if it cannot define sovereign rights and resolve border disputes with its neighbor and ally. The failure to do so contributes to this author's conclusion that U.S. Arctic strategy is incoherent and diplomatically sparse.

Economic. An Arctic strategy published by the Department of Commerce Arctic strategy is notably absent. Such a strategy could provide national leadership for the development of economic industries and their necessary infrastructure in the Arctic. Beyond establishing national policies to justly pursue economic sovereign interests, the United States could work to establish trans-Arctic trading rules, laws, norms, and regimes. Such policies could sanction economic activities of companies operating in violation of those regimes, such as non-adherence to the Arctic fishing ban or vessels operating contrary to procedures established by the Arctic Coast Guard Forum.²³⁶ As highlighted in the previous chapter, economic sanctions are a frequently

²³⁶ “The Arctic Coast Guard Forum (ACGF) is an independent, informal, operationally-driven organization, not bound by treaty, to foster safe, secure, and environmentally responsible maritime activity in the Arctic. All Arctic countries...are members.” Arctic Coast Guard Forum, “About the ACGF.” Accessed July 21, 2023 at <https://www.arcticcoastguardforum.com/about-acgf>.

exercised tool of the United States, albeit with variable results. It should therefore be expected to see corresponding regimes applied towards Arctic economic industries as they grow.

China and Russia Arctic Strategies

China's official Arctic "policy" outlines four high-level interests in the Arctic: scientific research, environmental protection, economic potential, and international governmental cooperation.²³⁷ The document's justification for pursuing those interests and being present in the Arctic is based heavily upon existing international laws, specifically the UNCLOS and Spitsbergen Treaty, which protect freedom of navigation and exploration. China's Arctic policy is based primarily upon being present and increasingly active in the region and its associated organizations to entrench itself as an essential and respectable actor. In the United States, China's Arctic activities have evoked fear of nefarious revisionism, considering China's presence in the Arctic as dual-use for a military presence, possibly to base nuclear weapons in the Arctic²³⁸, threaten U.S. air defenses²³⁹, and otherwise a "long-con" to undermine the West's world order.²⁴⁰ Even so, those analyses generally do not consider that China's interest in the Arctic or threat to those of the United States are vital ends in and of themselves but are possibly "spill-over" interests and threats from wider geopolitical considerations.

²³⁷ The State Council Information Office of the People's Republic of China, "China's Arctic Policy," January 2018. Accessed July 21, 2023 at

https://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm.

²³⁸ Lyle Goldstein, "Chinese Nuclear Submarines Could Soon Be Visiting Russian Arctic Ports," *National Interest*, November 15, 2020. Accessed July 21, 2023 at

<https://nationalinterest.org/blog/reboot/chinese-nuclear-submarines-could-soon-be-visiting-russian-arctic-ports-17260>. Goldstein bases that prediction on a statement in the DoD 2019 China Military Power Report, which is absent in the 2022 version of that DoD report.

²³⁹ Hilde, "Armed Forces and Security Challenges in the Arctic."

²⁴⁰ Congressional Research Service, "Changes in the Arctic," page 34-35; P. Whitney Lackenbauer and Ryan Dean, "Arctic Exceptionalism," in *Debating Arctic Security*, page 151.

Russia’s official Arctic policy defines interests in the Arctic that span the social-political spectrum, from preserving indigenous culture to preparing for great power conflict²⁴¹, and the perceived risks vary from high cost of living and population decline to pathogens and substandard education to delayed infrastructure development and potential conflict.²⁴² According to the document, resource extraction from the Arctic region and projected growth in shipping traffic along the Northern Sea Route will play a significant role in the economic future of the Federation; Western sanctions²⁴³, a shortage of icebreakers, and persistent or unpredictable sea ice²⁴⁴ may alter those calculations, though. Most alarming to U.S. observers, Russia has in recent years undertaken a modernization effort of its Arctic infrastructure and military capabilities – the policy document indeed calls for a restructuring of forces and modernization of weapons, equipment, and infrastructure “to meet current and projected military risks.”²⁴⁵ The most cynical analysts warn that Russia’s Arctic posture is a threat to unilaterally seize its extended continental shelf claims currently awaiting adjudication²⁴⁶ and imposes strategic effects²⁴⁷, while the optimists purport that Russia remains a steadfast supporter of the existing international legal

²⁴¹ Putin, “Strategy for Development of the Arctic Zone of the Russian Federation and Provision of National Security for the Period up to 2035,” page 7.

²⁴² Putin, “Strategy for Development of the Arctic Zone of the Russian Federation and Provision of National Security for the Period up to 2035,” page 8-9.

²⁴³ Atle Staalesen, “Isolated Russia Seeks Way Out Through Arctic Waters,” *Eye on the Arctic, The Independent Barents Observer*, October 28, 2022. Accessed July 21, 2023 at <https://www.rcinet.ca/eye-on-the-arctic/2022/10/28/isolated-russia-seeks-way-out-through-arctic-waters/>.

²⁴⁴ Atle Staalesen, “One Year After the Crises, There is Again Early Ice on Northern Sea Route.” *The Barents Observer*, November 15, 2022. Accessed July 21, 2023 at <https://thebarentsobserver.com/en/2022/11/one-year-after-crisis-there-again-early-ice-northern-sea-route>.

²⁴⁵ Vladimir Putin, “Strategy for Development of the Arctic Zone of the Russian Federation and Provision of National Security for the Period up to 2035,” page 19-20.

²⁴⁶ Department of Defense Office of the Under Secretary of Defense for Policy, “Report to Congress: Department of Defense Arctic Strategy,” page 7.

²⁴⁷ United States Army, “Regaining Arctic Dominance,” page 18.

regime in the Arctic out of self-serving national interest and its infrastructure, although dual-use²⁴⁸, is intended for economic, legitimate defensive, and other purposes.²⁴⁹

U.S., Chinese, and Russian official policy interests in the Arctic are remarkably analogous, each seeking to serve their own national ambitions. Extended claims of sovereignty, shipping and transit rights, natural resources, civil and military infrastructure development, and perceptions of defense and security are in some regard's mutual interests and in others zero-sum. For example, the U.S. goal to defend liberal transit rights, specifically freedom of navigation, is practically aligned with the Chinese goal to exercise freedom of navigation rights to expand its international shipping network, while both are directly opposed to the Russian and Canadian goal of sovereign regulation of transit routes in their near-shore waters. The U.S. strategy for the defense of its world order is opposed to the aspirations of Russia for a distinct sphere of influence and of China for a more authoritative role in setting laws and norms.

China's military posture appears mostly diversionary and less credible (although China could plausibly base submarines with nuclear weapons in the Arctic); China may be attempting to divert U.S. and NATO attention and resources away from Asia and the Pacific. China could more easily secure necessary access to the Arctic as part of its economic logistics network without military force.²⁵⁰ But those distractions cannot easily be ignored: a Chinese attempt to

²⁴⁸ Vladimir Putin, "Strategy for Development of the Arctic," page 20 explicitly calls to "[employ] dual-use technologies and infrastructure... to fulfill defense objectives."

²⁴⁹ P. Whitney Lackenbauer, "Why Fear Russia in the Arctic" in *Debating Arctic Security: Selected Writings*, page 272; Atle Staalesen, "New Super-powerful Icebreaker Might Work Exclusively for Putin's Oil Tycoon Igor Sechin," *The Barents Observer*, November 22, 2022. Accessed July 21, 2023 at <https://thebarentsobserver.com/en/industry-and-energy/2022/11/new-super-powerful-icebreaker-might-work-exclusively-rosnefts-arctic>.

²⁵⁰ "[If the Arctic states] primarily view Chinese behaviour through a regional lens, they may find that they are baited into political confrontations over non-threatening moves in the Arctic, or that they squander resources to defend pieces that the opponent never really intended to take."

establish even an impractically small permanent base in the Arctic, as radical as building an island, would present serious challenges to the U.S. world order.

Meanwhile, Russia's economic and sovereign interests in the Arctic seem to be vital grand strategic ends and the Federation has invested heavily in its Arctic dominance strategy, so Russia's military posture appears to be less diversionary and a more credible military threat to the interests of the United States. Russia may view its Arctic border as its most defensible and entrenched, having established the region as a bastion of military, primarily air and naval, force reminiscent of its Cold War submarine bastion strategy including modern air defenses.²⁵¹ Russia may unilaterally seize disputed territories and the resources in them, forcefully defend its claims, and continue to impose a regulatory framework on access to the Northern Sea Route in contradiction to norms and laws. Russian fears of encirclement by NATO may only grow with the addition of Finland and Sweden to the alliance, which will make every Arctic nation except Russia an alliance member. Russia's Arctic posture necessitates U.S. and NATO strategic planning as in conflict with Russia, the Arctic would unavoidably be a principal theater of concern, connecting other operational theaters.

Ryan Dean and P. Whitney Lackenbauer, "China's Arctic Gambit? Contemplating Possible Strategies," in *Debating Arctic Security*, page 300.

²⁵¹ Heather Conley, Mathew Melino, and Jon Alterman, "The Ice Curtain: Russia's Arctic Military Presence," Center for Strategic and International Studies, March 26, 2020. Accessed August 1, 2023 at <https://www.csis.org/analysis/ice-curtain-russias-arctic-military-presence>.

CONCLUSION

A contemporary deluge of strategic security assessments directed towards the Arctic from U.S. analysts is fueled by dual realities. One is a trend of steadily receding ice which enables more human activity for a variety of pursuits, and the second is a shifting geopolitical threat environment characterized by great power competition with Russia and China. Narratives abound that portray the Arctic as a new frontier of decisive strategic effect. In that narrative, a new sea is dominated by Russia's fleet of icebreakers and modernized military in partnership with China, enabling command of the Arctic uncontested by the U.S.' tiny presence.

The motivation of this thesis was to assess and analyze common strategic understandings about how the Arctic may affect or be instrumental towards U.S. grand strategic interests. The approach presented a framework to define grand and Arctic strategy specific in the contemporary context from the perspective of the United States. The conclusion finds a compelling argument supporting the notion that the Arctic may be instrumental towards U.S. grand strategic ends if effectively integrated. However, the strategic guidance presented by the Federal government is disjointed, pockmarked and porous, and often ill-informed if not mistaken. Existing guidance generally suggests that the Arctic in and of itself is of vital grand strategic interest. The existing set of DoD and Homeland Security Arctic strategy documents is not complemented by diplomatic or economic strategies by the Departments of State and Commerce. The strategies that do exist tend to overinflate resource and economic values by not justifying those interests, and do not clearly present their strategies in a mutually reinforcing or interfacing framework. They demonstrate a generally poor conception of threats, not adequately representing a distinction between threats through, to, within and from the Arctic and those threats' effect on

grand strategy or the NSS. However, on the positive side, the end states towards which they are aimed generally support NSS objectives.

Interests and threats inform strategic planning by answering the “why” of a strategy. The U.S.’s most vital surmised grand strategic interest is in a Wilsonian world order. That order manifests in the Arctic through institutionalized principles of sovereignty. Sovereignty primarily represents the exercise of rights and responsibilities such as access for logistics (geographic proximity to other regions for commerce and military operations) and economic opportunities (mostly resource extraction). The primary grand strategic threat is the revisionist challenge posed by Russia and China, separately and together, to challenge and reform the world order. That threat is agitated in the Arctic by the easier access consequent of melting sea ice, and manifests as efforts to undermine the rules and norms of the Western Wilsonian world order, including aggression, political-economic coercion, and excessive claims and enforcement of sovereignty. The United States should expect Russia and China to continue those revisionist efforts, including provocative forays into air and maritime boundaries, illegitimate regulation of maritime traffic, participation to influence multilateral organizations, and violations of rules and laws regulating fisheries and other extractive activities. Those probing operations are hardly unique to the Arctic and should be viewed in the context of the adversaries’ peacetime all-instruments grand strategy. In a situation of war between the United States and Russia and/or China, the Arctic could prove critical as a platform of power projection to leapfrog between theaters. Additionally in a war, given Russia’s Arctic bastion strategy, the United States could plausibly find imperatives to operate extensively in the Arctic to disable those Russian assets.

The U.S. Arctic strategy is a microcosm of the military, diplomatic, and economic all-instruments grand strategic approach way instituted globally. Towards the ends of a peaceful,

stable, prosperous, and cooperative Arctic region as a component of its grand strategic vision, the United States must employ a unified, coherent, and measured approach to counter threats of revisionism in the Arctic during peacetime. To do so, the U.S. grand strategy values a strengthened alliance and multilateral agreements as two of its primary ways, and the development of those should therefore be primary ends of the U.S. strategy in the Arctic. Being present in the Arctic is the fundamental objective for the U.S. to achieve both. Specific objectives include maintaining a small military defense posture, leveraging international organizations, and supporting the economic, social, and civil development of the State of Alaska to maintain dual-use infrastructure. Specific means towards those objectives include, for example, the development of the Port of Nome and a small fleet of icebreakers, the integration of existing domain awareness programs, developing integrated air and missile warning and defense, the resolution of boundary disputes with Canada, and fisheries management.

Policy and Strategy Recommendations

A recommendation generated from this exercise is on the need for the U.S. strategy makers to adopt a common set of terminology and concepts for composing and conveying their intent. This thesis submitted such a framework based on Julian Corbett's useful for the specific context but did not completely define all terminology. For example, this author did not utilize a distinction between "minor" and "major" strategy, "objects" and "objectives," and at times found difficulty in distinguishing between ways and objectives.

A diplomatic strategy is necessary to unify and direct efforts across all avenues of international relations in the Arctic, such as Arctic issue forums, alliance relations, and bilateral negotiations. The most urgent diplomatic agenda item should be with Canada to resolve

boundary disputes and specify plans for integrated air and missile defense encompassing not just the Arctic but all continental approaches. A Department of Commerce Arctic strategy is also necessary. For the United States to utilize transport potential through the Arctic for both military and economic advantage, a complementary set of infrastructure connecting Alaska and U.S. allies and partners is essential. That Commerce strategy should serve as a component of ongoing efforts to “friend shore” and otherwise build resilient logistics networks and supply chains in the medium to long term, assuming climate change trends affecting the region continue.

In the short term, economic interests of the United States in the Arctic, including oil and gas, fisheries, critical minerals, tourism, and trans-Arctic shipping, are minor in the grand strategic sense. Oil production could be scaled up in crises but otherwise has been relatively economically inefficient in recent years. Energy resiliency contingency plans should be maintained for rapid expansion of production in crises. Fisheries are relatively productive and important for the State of Alaska but minor in terms of food security for the United States, yet the industry could spark a geopolitical crisis as national fishing industries compete. Assuming ice continues to recede, tourism and trans-Arctic shipping, like the fishing industry, will demand more international cooperation to maintain rules, regulations, and crises and emergency response capacities. Although those industries are distinctly independent of classical military defense and strategy, they are directly imperative to U.S. grand strategic goal of institutionalizing Wilsonian ideals. Those ideals are bolstered through evolving international governance regimes, exercising sovereign rights and responsibilities by exercising presence and conducting economic activities, and developing dual-use capabilities – principles with which Mahan and Corbett would probably agree in the grand strategic sense of peacetime utility of maritime power. Therefore, as a short-term imperative, the United States must assess and sow its future projected needs for logistical

infrastructure capacity for economic as well as military functions in a future Arctic with receding ice. The objective should be to simultaneously enable economic and military activity by building infrastructure and industrial skill to operate in the region, towards which the Port of Nome and small fleet of icebreakers already in the deployment pipeline are appropriate. A private/public forum should be established to plan the development of a coherent network of assets including ports, roads, communication lines, transport capacity, and shipbuilding facilities, and the necessary regimes and regulations to ensure those investments are economically productive.

Additionally in the short term, efforts to regulate increasing activity through international institutions, bi-, and multi-lateral diplomacy could bolster or erode cooperative relationships depending on outcomes. However, a vacuum of diplomatic agendas for the Arctic is a gap in the U.S.'s all instruments, peacetime grand strategic approach to bolster international institutions. Certain policy debates and positions of the United States involving the Arctic present conundrums that if left unresolved risk undermining its own interests in that or other regions, either by unfavorable legal resolution or dividing its alliance. Specifically, the issues of conflicting EEZ claims and FoN regulations between the United States and Canada present intractable conundrums for U.S. policy makers. These should be expediently resolved, for the value of strengthened cooperation, U.S. leadership, and coherence within the alliance is greater as a grand strategic end than minor regional economic gains. Although the United States – Canada disputes are of little practical consequence, its existence undermines the credibility and legitimacy of the alliance purporting to be the defenders of international rules and laws. If they cannot reach a shared coherent interpretation and definition of those rules and laws, their allied efforts to defend those rules and laws from the Russian and Chinese revisionism will be hamstrung and the moral high ground eroded. Coordinated effort within the alliance could not

only resolve their disputes but could make cooperation between the adversaries more difficult.

In the short through medium term, increasing activity in the Arctic maritime domain will tax limited infrastructure and crises and emergency response capabilities. The Port of Nome will improve sea access, but the Bering Strait and Chukchi Sea are relatively shallow, a challenge for submarine navigation from Nome into the Arctic.²⁵² As annual sea ice extent recedes from the Beaufort Sea which has a much steeper coastal slope, a second port there (Prudhoe Bay has road access) would increase operational capacity and resiliency. Such a port could feasibly be used for energy and mining exports and dual use for military missions. Given that Nome is disconnected from the road system, access to Nome could easily be impeded, such as by adverse weather or other events. For example, the undersea fiber optic cable severed by ice flows in June 2023 left the town of Nome without phone service and forced the city to rely on limited backup satellite and microwave communications, which would be an impediment to port operations.²⁵³ The small fleet of Coast Guard ice breakers in the procurement pipeline is probably sufficient. Given that ice cover is expected to continue receding, icebreakers might be mothballed in the long term. Private/public partnerships and cost sharing agreements may further enable resiliency and economic feasibility of icebreaking programs.

In the medium term, the development of LNG export facilities in Alaska could be instrumental in global energy markets. Therefore, as an instrument of strategy, foreign

²⁵² A nautical chart for the Arctic coast is available at: <https://charts.noaa.gov/OnLineViewer/16003.shtml>. Note depths at mean lower low tide are less than 30 fathoms (54 meters) in the Bering Strait chokepoint. For a chart of Norton Sound including Nome and the Bering Strait, see <https://charts.noaa.gov/OnLineViewer/16200.shtml>. Also, see Brubaker “The Northern Sea Route” pages 306–309 for an analysis of the challenges of navigating through the Northern Sea Route.

²⁵³ Klecka and Cadotte, “Broadband Outage Affecting North Slope due to Undersea Fiber Cut, Company Says.”

investments in and exports from the Alaska LNG project deserve oversight by national policymakers from more than environmental and economic perspectives.²⁵⁴ Following a “de-risking,”²⁵⁵ “no trade is free,”²⁵⁶ decoupling, protectionist, deglobalized, or otherwise less-than-strictly-free-trade strategy, Arctic resource policy broadly including LNG and oil should be incorporated into the strategic toolbox. Specifically, Chinese demand for LNG can be leveraged positively or negatively (as a carrot or stick, in other words).

In the medium through long term, critical mineral sources in Alaska and in offshore Arctic waters could emerge economically viable and/or strategically significant. Data is presently lacking, thus research should continue with increased programming and funding to study those potentials. Although critical minerals have been detected both on and off land, the quantities and technical feasibility of extracting them not well known. Additionally in the medium-long term, as the Northwest sea routes become more regularly passable, the United States will find significant value in increasing its maritime power projection capabilities between Alaska and the European and Russian Arctics. Economic interests may derive similar value from utilizing the

²⁵⁴ Daniel Yergin, *The New Map : Energy, Climate, and the Clash of Nations*, (Penguin Press, New York, 2020), page 55. A remarkable parallel is recounted by Yergin who notes Alaska Senator Lisa Murkowski’s 2015 support for the lifting of the U.S. oil export ban to equate for the lifting of sanctions against Iranian oil. From the U.S. perspective, Senate supporters sought to export U.S. oil “to our friends and allies’ [to] bolster both the security of U.S. partners and America’s own international position.” From the E.U. perspective, U.S. oil exports would, “in the aftermath of Russia’s moves on Ukraine in 2014, enhance European energy security.” However, page 104 recounts E.U. division over U.S. sanctions aimed at stemming the Nord Stream 2 pipeline to limit Russian LNG reaching Europe, with Western European countries arguing “instruments for political sanctions should not be tied to economic interests.”

²⁵⁵ The White House, “G7 Hiroshima Leaders’ Communiqué,” May 20, 2023. Accessed July 21, 2023 at <https://www.whitehouse.gov/briefing-room/statements-releases/2023/05/20/g7-hiroshima-leaders-communicue/>.

²⁵⁶ Gavin Bade, “Trump’s Trade Chief Provides Blueprint for Second Term,” *Politico*, June 29, 2023. Accessed July 21, 2023 at <https://www.politico.com/news/2023/06/29/trump-trade-lighthizer-second-term-00103685>.

logistics routes. It is again instructive to recall Mahan and Corbett's connection between sea power for economic activity in peace time as well as war. Such power in peacetime enables productive economic activity, sustains dual use capabilities, contributes to deter war, and could be useful for maintaining command of the seas during war, such as by interdicting Russia's reliance on its Arctic waters.

Persistent across time, the geographic location of Alaska is of major strategic significance for the United States, serving as a platform of power projection and logistical communication to any region of the Northern hemisphere, and for similar reasons as a component of global domain awareness – a base from which to detect and intercept missile and other homeland threats. Those missions may occur through air or maritime domains and thus will face evolving requirements as sea ice conditions change and technologies develop and proliferate. Emerging missile types and platforms present in the Arctic will place new demands on monitoring Northern homeland approaches, but so to from any approach to the homeland. An integrated air and missile defense concept for the United States necessarily includes but is not exclusive to the Arctic. An unbalanced overemphasis on the North Warning System would expose to adversaries the vulnerability of the United States to missile and air attack from other approaches. Due to the enduring nature of this threat, the United States and Canada should maintain long-term plans for the maintenance of their shared continental defense mission.

The Arctic is not immune to realist and idealist prescriptive debates – the former seeing a strategic security opportunity that must be filled with primacy, the latter purporting that the maintenance of international regulatory frameworks is the surest way to preserve peace and stability in the region. In practice, the U.S. defense posture anywhere tends to assume a compromise between the two, relying on both unilateral power and international cooperation to

protect its interests and further the worldwide adoption of Wilsonian principles, and that mixture is evidently being pursued today in the Arctic.²⁵⁷ Yet it is the primary thrust of this thesis that from a reductionist view of either a realist or idealist, the Arctic should be a way to ulterior ends globally. To pursue security either via a realist's prescription for military primacy or idealists through cooperation, the Arctic Circle, even though relatively remote and inaccessible, uninhabitable and barren, with fewer than 20,000 U.S. residents²⁵⁸, the region in any case is valuable as a nexus on geographic and political maps and can serve as an instrument towards grand strategic ends. While we can attempt to measure, quantify, and link regional interests and threats to the available ways and means of obtaining desirable ends, pursuing such a strategy is wasted if those ends do not productively contribute to a grand strategy of addressing interests and threats beyond that region. Contemporary U.S. security and defense policy treats "great power competition with China and Russia" as the primary consideration. The attempts of those nations to establish the world order of the future will include the Arctic but cannot be entirely decided in the Arctic.

²⁵⁷ "It is not a binary cooperation or conflict idea. It is one more of management and a case-by-case mutual benefit sort of idea." Chris Kofron, "Deterring Russia," 38:37-38:53.

²⁵⁸ The 20,000 claim is the Alaskan population living North of the Arctic Circle based on data from the State of Alaska at <https://live.laborstats.alaska.gov> and <https://live.laborstats.alaska.gov/cen/maps/state/current/AlaskaBorCA.pdf>. Note only the North Slope Borough and portions of the Northwest Arctic and Yukon-Koyukuk areas lie north of the Arctic Circle.

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