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14. ABSTRACT Over the last 26 years four presidential administrations have paid homage to the Arctic and the role it plays in the security of U.S. and national interests. Although acknowledged in National Defense and Arctic Strategies, very little guidance or action has been placed on achieving strategic success in the Arctic. With Russia's dominant reemergence in the Arctic, and China claiming to be a "near-Arctic State," the time for the U.S. to revitalize priorities and investments into the Arctic is no greater than now.						
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Executive Summary

Title: The Arctic: America's Untold Battlefield

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Thesis: What was once central to the United States' nuclear deterrence with the Soviet Union during the Cold War, has now fallen prey to an Arctic strategy and policy that lacks the support of the United States public, as well as its policymakers. With Russia increasing its presence in the Arctic and claiming jurisdiction of the Northern Sea Route, and China claiming to be a "near-Arctic state," the United States must begin preparing for a fight in the Arctic. United States policy-makers, the Department of Defense, and the military service chiefs need to align their Arctic strategies, begin developing and procuring Arctic capable equipment and Navy vessels, and reprioritize the Marine Corps' ability to train, fight, and win in the Arctic.

Discussion: The United States, by virtue of its purchase of Alaska from Russia in October 1867 claims to be an Arctic nation. What once served as the United States bid for success in combating and deterring the Soviet Union during the Cold War, has since turned into a region of U.S. abandonment. Since 1991 the United States has seen four presidential administrations pay homage to the Arctic with strategies that lacked the means and ends in achieving national interests and security in the region. While much of the Arctic is an inhospitable and uninhabited region, its vast oil and natural gas reserves make its surrounding land and ocean highly valuable to states seeking natural resources. With the Arctic warming at rate of nearly twice the global average, melting ice and rising seas have opened passage to states seeking to capitalize on the Arctic's vast resources. In 2007 Russia made headlines by planting a titanium Russian flag 14,000 feet below the ice on the ocean floor of the Arctic, claiming ownership of the Arctic and the vast natural oil and gas deposits that rest beneath the surface. In January 2018, President Xi Jinping *China's Arctic Policy*, stating that China is a "near-Arctic state" that will continue its partnership with Russia in their pursuit of national interests in the region. While China and Russia equip their military with ice-hardened vessels and other Arctic-capable assets and equipment, the U.S. remains steadfast in its policy of doing nothing. With time running out, the U.S. must restore its Cold War mentality and begin preparing its military for a fight in the Arctic.

Conclusion: Over the last 26 years, the United States has seen the publication and unsuccessful execution of four presidential administrations policies in the Arctic. While all four unequivocally express the Arctic and its essential role in the security and protection of U.S. national interest, these words did not translate into action. As the U.S. continues to face significant challenges in dealing with a renewed threat from Russian and China, the time to revitalize priorities and investments into the Arctic is no greater than now. United States policy-makers, the Department of Defense, and the military service chiefs need to align their Arctic strategies, begin developing and procuring Arctic capable equipment and Navy vessels, and reprioritize the Marine Corps' ability to train, fight, and win in the Arctic.

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Preface

As an American citizen myself, I, like so many others have never truly acknowledged the United States as being an “Arctic nation.” Much like the Clinton, Bush, Obama, and Trump administrations have indicated, the Arctic region plays a significant role in maintaining national security interests, both at home and abroad. While nearly 30 years have passed since the end of the Cold War, the threat that once plagued the region from the late 1940s to the early 1990s has returned. As the result of global warming, the Arctic has opened the eyes to many states who are seeking its vast riches that lay far beneath its melting ice. My purpose in writing this paper was to identify the surface and gaps in U.S. policy, identify shortfalls in Arctic-capable assets and training, pinpoint threats within the region that challenge U.S. national security, and highlight our inability to win with the current state of our military.

I would not have completed this paper if it was not for the constant guidance and unwavering leadership from Dr. John Gordon and LTC Paul Armstrong. Writing this paper was much harder than I thought, but much more rewarding than I ever could have imagined. None of this would have been possible without you gentlemen, so thank you! I also want to give a special thanks to my wife, Taylor. If it were not for her entertaining (and silencing) Liam, Cullen, and Molly Kate, this paper would have never been written. I love you!

Thesis

The Arctic, named after the northern polar constellation “Arktos” for “bear is the world’s most northern region that spans approximately 5.5 million square miles.ⁱ Its vast landscape consists of ice- and snow-covered land and ocean that experience rapidly changing wet and dry climates, with temperatures averaging 50 degrees Fahrenheit along coastal regions in the summer, and -40 degrees Fahrenheit along interior regions in the winter.ⁱⁱ As a result of this inhospitable and unforgiving climate, much of the Arctic remains largely uninhabited by human life. Nevertheless, the Arctic’s vast oil and natural gas reserves make its surrounding land and ocean highly valuable to states seeking natural resources.

The Arctic region shares its coastline with five states—United States, Canada, Russia, Norway, and Denmark. According to the United States Geological Survey (USGS), the Arctic region contains roughly 13 percent of the world's undiscovered oil and 30 percent of the world's undiscovered gas. Furthermore, reports indicate that most of the Arctic’s undiscovered resources lie among the shore and the disputed continental shelves of the five Arctic coastal states.ⁱⁱⁱ Over the last 30 years, the Arctic has warmed faster than any other region on earth, which has led to the reduction of ice cover in the region.^{iv} “The diminishment of Arctic ice could lead in coming years to increased commercial shipping on two trans-Arctic sea routes—the Northern Sea Route close to Russia, and the Northwest Passage close to Alaska and through the Canadian archipelago... and will likely allow more exploration for oil, gas, and minerals.”^v

The United States, by virtue of its purchase of Alaska from Russia on October 18th, 1867, is an Arctic nation.^{vi} On November 8th, 2018, The Arctic Studio published a research paper entitled "*The Arctic in U.S. National Identity (2017)*". Through the conduct of a series of online surveys in October and December 2017, The Arctic Studio stated the following:

We found that Americans, on average, continue mildly to disagree with the canonical assertion of U.S. Arctic identity and interests as articulated in government policy. On a

scale from 1 to 7, with higher numbers indicating stronger agreement, Americans' average rating was 3.51, up slightly from 3.16 in 2015, but still below the scale midpoint. A plurality of respondents (27%) answered with a score of one, indicating the strongest disagreement. Men and older individuals showed greater inclination to agree with the assertion of Arctic identity and interests than women or younger respondents, a pattern also observed in 2015. No region of the country showed particularly greater inclination to agree or disagree, except Alaskans showed substantially greater agreement.^{vii}

What was once central to the United States' nuclear deterrence with the Soviet Union during the Cold War, has now fallen prey to an Arctic strategy and policy that lacks the support of the United States public, as well as its policy-makers.^{viii} With Russia increasing its presence in the Arctic and claiming jurisdiction of the Northern Sea Route, and China claiming to be a "near-Arctic state," the United States must begin preparing for a fight in the Arctic.^{ix} United States policy-makers, the Department of Defense, and the military service chiefs need to align their Arctic strategies, begin developing and procuring Arctic capable equipment and Navy vessels, and reprioritize the Marine Corps' ability to train, fight, and win in the Arctic.

26 Years of Failed Arctic Policy

Nearly three years after the conclusion of the Cold War and the United States' abandonment of the Arctic, President Bill Clinton, and his administration, released *Presidential Decision Directive/NSC-26*, which was also known as the *U.S. Policy on Arctic and Antarctic Regions*. Under this new policy, there were six principal objectives in the Arctic:

- *Meeting post-Cold War national security and defense needs;*
- *Protecting the Arctic environment and conserving its biological resources;*
- *Assuring that natural resources management and economic development in the region are environmentally sustainable;*
- *Strengthening Institutions for cooperation among the eight Arctic nations;*
- *Involving the Arctic's indigenous peoples in the decisions that affect them; and*
- *Enhancing scientific monitoring and research into local, regional, and global environmental issues.*^x

While these six principle objectives attempt to show the U.S.'s continued support in the Arctic, *PPD-26* goes on to say "although Cold War tensions have dramatically decreased, the

United States continues to have basic national security and defense interest in the Arctic region," furthermore "the end of the Cold War, however, allows a significant shift of emphasis in U.S. Arctic policy."^{xi} As a result, U.S. interest and presence in the Arctic have remained relatively stagnant for more than a decade. It would not be until January 9th, 2009, during the last week of his presidency, would President George W. Bush publish his *Arctic Region Policy, National Security Presidential Directive/NSPD-66; Homeland Security Presidential Directive/HSPD-25*.^{xii}

HSPD-66/HSPD-25 was the result of an interagency review that would ultimately supersede *PPD-26*.^{xiii} Rob Huebert, an Associate Professor for Political Science department at the University of Calgary, points out two significant changes from the 1994 and 2009 U.S. Arctic policy. First, he points out the 1994 policy as stating, "The United States *has* been an Arctic nation,"^{xiv} whereas the 2009 policy states that "the United States *is* an Arctic nation."^{xv} Second, he points out how the 2009 policy focuses on Alaska being the central reason for U.S. interest in the Arctic as a concern for the nation, not just the state.^{xvi} Much like *PPD-26*, *HSPD-66/HSPD-25* also identified six principal objectives in the Arctic that closely resemble the objectives laid out in the 1994 policy. While the 1994 and 2009 policies closely resemble one another, the latter policy signifies the United States recognition that the Arctic is changing, and action must be taken as national interests are at risk. Conversely, neither policy provide guidance on who was responsible for seeing through these changes, nor did they specify how those changes would be made to support U.S. interests in the Arctic.^{xvii}

On May 10th, 2013, the Obama administration published the *National Security for the Arctic Region*, which superseded *HSPD-66/HSPD-25*. In his executive summary, President Obama stated the following:

The *National Strategy for the Arctic Region* sets forth the United States Government's strategic priorities for the Arctic region. This strategy is intended to position the United States to respond effectively to challenges and emerging opportunities arising from significant increases in Arctic activity due to the diminishment of sea ice and the

emergence of a new Arctic environment. It defines U.S. national security interests in the Arctic region and identifies prioritized lines of effort, building upon existing initiatives by Federal, state, local, and tribal authorities, the private sector, and international partners, and aims to focus efforts where opportunities exist, and action is needed. It is designed to meet the reality of a changing Arctic environment, while we simultaneously pursue our global objective of combating the climatic changes that are driving these environmental conditions.^{xviii}

Under the *National Strategy for the Arctic Region*, the Obama administration lays out three lines of effort:

- **Advance United States Security Interest:** Enable safe transit of vessels and aircraft through, under, and over the airspace and waters of the Arctic; achieve greater awareness of activities in the Arctic; evolve infrastructure; and construct ice-capable platforms as needed.
- **Pursue Responsible Arctic Region Stewardship:** Protect the environment and conserve the resources; establish an integrated Arctic management framework; chart the region; and conduct scientific research to increase understanding of the area.
- **Strengthen International Cooperation:** Work through bilateral relationships as well as the Arctic Council, pursue arrangements that advance collective interests, promote shared Arctic state prosperity; protect the Arctic environment; enhance regional security; and work towards U.S. accession to the United Nations Convention on the Law of the Sea (Law of the Sea Convention).

While the Obama administrations *National Security for the Arctic Region* policy was a move in the right direction, its execution, much like *HSPD-66/HSPD-25*, was flawed. On March 9th, 2016, nearly three years after the release of *National Security for the Arctic Region* policy, the Obama administration released three documents:^{xix} the *2015 Year in Review – Progress Report on the Implementation of the National Strategy for the Arctic Region*,^{xx} the *2016 Implementation Framework for the National Strategy for the Arctic Region*,^{xxi} and an appendix

the *Integration Arctic Research Policy Committee 5-Year Plan Collaboration Teams—Summary of the Accomplishment and 2016 Priorities*.^{xxiii} While progress was made in developing a plan to most effectively implement the *National Security for the Arctic Region* policy, its return on investment would prove to be minimal.^{xxiii} Most notably, the failure to ascent to *The United Convention on the Law of the Sea (UNCLOS)*. There are a hundred and sixty-four nations, including the *European Union*, who are party members of the *UNCLOS*—the U.S. is not. While acting in accordance with the *UNCLOS* rules of non-seabed mining and freedom of navigation and flight, the U.S. is missing out on the ability of “[freedom of movement] on, over, and under the world's oceans, whenever and wherever needed...[as well as establishing] stable maritime zones, including a maximum outer limit for territorial seas; codify innocent passage, transit passage, [as well as] archipelagic sea lanes passage rights.”^{xxiv}

In 2018, the Department of Defense, under the Trump administration, published its *National Defense Strategy*. While heavy emphasis was placed on combating great powers such as Russia, China, and North Korea in an “increasingly complex security environment defined by rapid technological change, challenges from adversaries in every operating domain, and the impact on current readiness from the longest continuous stretch of armed conflict in our Nation’s history,”^{xxv} it neglected to make a single reference of the Arctic and its future threats to U.S. national interests. While later addressed in the *2019 Department of Defense Arctic Strategy* to Congress, the U.S. Department of Defense laid out its policy on combating global warming, melting ice, rising seas, and an increasing threat of Arctic capable nations that include world superpowers such as China and Russian.^{xxvi} Over the last 26 years, the U.S. has seen the implementation and failures of the Clinton administration’s *NSC-26* policy, the Bush administration’s *PPD-26* policy, and, most recently, the Obama administrations *National Security for the Arctic Region* policy. With an increased presence of China and Russia in the

Arctic challenging U.S security and interest, it is of crucial importance to refocus U.S. policymakers and military leaders thinking to that of a robust Cold War-like fighting force and presence in the Arctic.

China: A Threat to the Arctic

The *2018 National Defense Strategy* describes China as a strategic competitor that intimidates its neighbors by predatory economics,^{xxvii} who utilizes military modernization and influence operations to shape a world that is consistent with an authoritarian model that is equally shared with Russia.^{xxviii} A country along with Russia that is “now undermining the international order from within the system by exploiting its benefits while simultaneously undercutting its principles and “rules of the road,”^{xxix} and thus remains a principal priority for the Department of Defense that will require increased investment into the threats they pose to U.S. security today and in the future.^{xxx} While the *2019 DoD Arctic Strategy* echo’s similar sentiments, it merely glances at the importance of the natural resources and shipping lanes that are critical to China’s strategic objectives in the Arctic,^{xxxi} and later denounces their status as a “near-Arctic state” despite their continued investments and growing partnerships in the region.^{xxxii}

While not an Arctic nation geographically, their invitation as a permanent observer to the Arctic Council in 2013 is one of the most significant events in the geopolitical development in the Arctic.^{xxxiii} This permanent member status along with the release of President Xi Jinping’s *2018 Arctic Policy* that describes China’s “Belt and Road Initiative” of creating Arctic shipping lanes that would form a “Polar Silk Road”^{xxxiv} “gave China greater impetus to be more economically, diplomatically, and scientifically visible in the Arctic.”^{xxxv} In the 2019 yearly edition of the Department of Defense’s annual report on Chinese military developments, China stated its goal of becoming a world-class military by 2049. The report outlined China’s

continued production of its missile force, the production of its second aircraft carrier, the sailing of two new cruisers, the flight of their fifth-generation Chengdu J-20 "Mighty Dragon" stealth fighter,^{xxxvi} the completion of two icebreakers, and a plan for a nuclear icebreaker.^{xxxvii} Additionally, China is the region's largest navy with more than 300 surface and subsurface vessels,^{xxxviii} to include a 60-75 submarine fleet and a modernized amphibious fleet that has "conducted a joint amphibious exercise in the eastern theater in the early fall [2019] as well as numerous smaller force-on-force exercises, including an exercise between two newly reformed amphibious mechanized infantry brigades."^{xxxix} Despite the increase in Chinese surface, subsurface, and aviation capabilities, and the acknowledgment that China poses a threat to U.S. security and interests in the Arctic, U.S. policymakers continue to focus on China and their push for supremacy in the Indo-Pacific, and not that of global expansion.

Where the message continues to get lost in translation in recognizing China as a threat is their lack of physical presence in the Arctic. While undeniable so, China is methodically inching its way into being one of the first non-Arctic nations becoming a real stakeholder in the Arctic region. In 2017, President Vladimir Putin offered China with a partnership in Arctic energy projects that would provide them with opportunities through the Northern Shipping Route. With China's liquified natural gas (LNG) growing from a record eight metric tons in 2017 and another 12 metric tons in 2018 that would make up 50 percent of the world's LNG demand grow,^{xl} China partnered up with Russia, owning a 9.9 percent stake in Yamal LNG. This served as a turning point for China's maritime trade routes in the Northern Sea Route, where it is forecasted that 15-20 percent of bulk goods shipped through the NSR will be via China's international trade.^{xli} Not only does this pivot Chinese companies from the U.S. sourced LNG deal to future LNG deals with Russia, it also solidified a growing alliance between Vladimir Putin and Xi Jinping.^{xlii}

In addition to current and future investments and building of alliances between China and Russia, China's presence and national interest in the Arctic are only expanding. Since 2012, China has invested more than \$154 million in the Iceland economy. Their investments are centered on oil and gas resources, and they operate the China-Iceland Arctic Science Observatory (CIAO) in the northern part of the country.^{xliii} In 2016, Shenghe Resources acquired a 12.5 percent stake in Greenland Minerals and Energy with their focus on rich deposits in rare-earth elements, uranium, and zinc,^{xliv} with future concerns of them "establish[ing] a research station and a satellite ground station, renovate airports and expand mining."^{xlv}

While the U.S. continues to denounce China as "near-Arctic" capable, their advancements in military technology, their investments in energy resources in Russia, Iceland, and Greenland, as well as their growing alliance with Russia, makes China a creditable threat to U.S. security and national interests in the Arctic.

Russia: A Threat to the Arctic

Following the conclusion of World War II and the commencement of the Cold War, the Soviet Union increased its presence in the Arctic and drastically strengthened the security of its northern border by establishing airbases, radar stations, and anti-aircraft batteries.^{xlvi} Much like the U.S., Russia utilized the Arctic as a strategic zone to protect its borders through deterrence and direct engagement. In what seemed like overnight, the highly contested Arctic that once served as an uncertain battlefield for nearly 50 years, miraculously disappeared for more than a decade.

Some 16 years after the conclusion of the Cold War and the abandonment of the Arctic, Russia made headlines by planting a titanium Russian flag 14,000 feet below the ice on the ocean floor of the North Pole, claiming ownership of the Arctic and the vast natural oil and gas deposits that rest beneath the surface.^{xlvi} As headlines flashed and television blared, the

international response was immediate. The Canadian Foreign Minister Peter McKay exploded, "This is posturing. This is the true north strong and free, and they're fooling themselves if they think dropping a flag on the ocean floor is going to change anything. We've established—a long time ago—that these are Canadian waters, and this is Canadian property."^{xlvi} While John B. Bellinger III, legal adviser to the U.S. Secretary of State, remarked, "We knew they were going to the North Pole, but we didn't know they were going to plant the flag. It was a provocative action and took us aback."^{xlvi} While these actions appeared to spark a flame that would ignite follow on actions by preserving security and U.S. national interests in the Arctic, nothing was heard.

Since 2012, Russia has reasserted itself into the Arctic by advancing its military capabilities, reopening abandoned military bases,ⁱ and building new air and radar bases in a push to stake claim to more than 500 thousand square miles in the Arctic.^{li} Over the last six years, the Russia Ministry of Defense has constructed more than 475 military infrastructures and facilities armed with military personnel and specialized weapon systems.^{lii} Additionally, they constructed a military base on the island of Alexandra Land of the Franz Josef Land, as well as a second military base on the Kotelny Island of the Novosibirsk Islands.^{liii} More recently, the Russian Geographical Society discovered five new islands in Visa Bay on the North Island of Novaya Zemlya, with plans of constructing buildings and infrastructure to support military operations.^{liv}

In November 2014, President Vladimir Putin changed the status of the Northern Fleet Joint Strategic Command to an independent military district that serves as the administrative division for the Russian Armed Forces in the Arctic. Established initially as an experimental association, the Joint Strategic Command's Northern Fleet was tasked with determining the feasibility of protecting Russia's national interests in the Arctic. In 2016, Russia successfully conducted a two-month large-scale exercise that tested and validated Russia's ability to protect

its northern regions from various threats ranging from massive missile and airstrikes to amphibious and aerial landings of mock enemy forces.^{lv}

Russia has acknowledged the lack of modern surface combatants capable of contesting them in Arctic waters. Nevertheless, they have continued to bolster their Northern Fleet with capabilities consisting of light surface vessels carrying standoff missile systems, nuclear-powered guided-missile cruisers, anti-submarine destroyers,^{lvi} and nuclear submarines that are reportedly carrying 81% of Russia sea-based nuclear weapons.^{lvii} While most of the world focuses entirely on Northern Fleet's surface and subsurface capabilities at sea, their land forces are often overlooked and forgotten. Northern fleet carries with them the ability to organically generate six battalion tactical groups. These battalions consist of four ground-based battalions and two naval infantry battalions. Northern Fleet's ground-based battalions specialize in protecting Russia's Arctic Coastline, as well as the installations located there. In contrast, Northern Fleet's naval infantry battalions are specialized in conducting amphibious assaults, operating air defense systems, and conducting combined arms operations with navy and air forces.^{lviii} Furthermore, Sergei Shoigu, Russia's Defense Minister, announced that Northern Fleet would receive 368 new types of weapons and military equipment by 2020, which would replace and modernize 59 percent of Northern Fleet's existing arsenal.^{lix} Of note, these new technological advancements will provide Northern Fleet with a multi-layer air and sea denial system, "giving the armed forces space for perimeter control and out-of-area interdiction from long-range to coastal defense."^{lx}

During the 2017 confirmation hearing of James Mattis, former U.S. Defense Secretary, stated it was "not to our advantage to leave any part of the world," later calling Russia's moves as "aggressive steps," and pledging that U.S. strategy would combat Russian progression.^{lxi} Ten months later, Richard V. Spencer, former Secretary of the Navy, spoke of a conversation he had

with the Russian Ambassador at the *2017 Arctic Conference*. When he asked, “why are you repaving five Cold War airstrips, and why are there reportedly 10,000 Spetsnaz troops [in the Arctic]?” he received a response of “search and rescue, Mr. Secretary.” When later asked whether he thought Russia was a competitor, a partner, or both in the Arctic, Secretary Spencer reluctantly said, “I would like to say both.”^{lxii}

Since 2017, Russia has increasingly expanded its power and firmly grasped control over the Arctic. While some policymakers highlight Russia's cooperation with Arctic coastal states and their compliance with the U.N. Convention on Law of the Sea, Russia has strategically increased its influence in the region in an attempt to control waterways and natural resources. In 2019, Russia violated International law when they seized the North Sea Route and implemented strict guidelines for the passage of foreign vessels. Under these new restrictions, foreign vessels must receive approval by Russian authorities no later than 45 days prior to passage. If approved, foreign vessels are required to be boarded by Russian pilots prior to transit. If not adhered to, Russia has granted itself permission to arrest or destroy the vessel in violation.^{lxiii}

As the U.S. and NATO look on, Russia and China are gradually taking over the Arctic. As Russia is finding new islands in the Arctic, the U.S. is looking for ways to get up there without spending a dime. In June 2019, Heather Conley, Senior Vice President for Europe, Eurasia, and the Arctic at the Center for Strategic and International Studies, stated when asked about the Trump Administrations *2019 Arctic Strategy* that “Nothing has changed...it just proceeds as if nothing was really different, and further stating “All of this to me feels like we are already in the late-to-need category...when we realize we have a problem, it will already be too late because we simply don’t have any capabilities to get there.”^{lxiv} As the U.S. sits back and waits, Russia and China are seizing the initiative and will ultimately capitalize on their investments at the cost of U.S. security and national interest. With adequate funding and

investments, however, the U.S. Navy and Marine Corps can turn the tide in the Arctic and reignite the deterrence strategy that once existed during the Cold War.

U.S. Navy: The Way Forward

In January 2019, former Chief of Naval Operations Admiral John Michael Richardson released the Navy's *Strategic Outlook for the Arctic*, aligning the Navy with the Department of Defense's 2016 *Strategy to Protect United States National Security Interests in the Arctic Region*.^{lxv} Under the Navy's *Strategic Outlook for the Arctic*, Admiral Richardson defines the Navy's mission as defending the United States from attack, preserving the Nation's strategic influence in the Arctic, and deterring aggression and enabling the peaceful resolution of crises. More specifically the Navy will support the Department of Defense's Arctic objectives by pursuing the following objectives:

- *Defend U.S. Sovereignty and the homeland from attack;*
- *Ensure the Arctic remains a stable, conflict-free region;*
- *Preserve Freedom of the Seas; and*
- *Promote partnerships within the U.S. Government and will allies and partners to achieve the above objectives.*^{lxvi}

While the United States Coast Guard is tasked with statutory responsibilities and most of the maritime missions in U.S. Arctic waters,^{lxvii} the 2015 *National Fleet Plan* charges the U.S. Navy and U.S. Coast guard with achieving "commonality and interoperability for 21st century maritime and naval operations," with the intent of enabling successful operations when mutually supporting each other.^{lxviii} Although aligned with *2016 Department of Defense Arctic Strategy*, the Navy's enduring operational priorities and approach to achieving these objectives are through the utilization of subsurface and aviation assets,^{lxix} while seemingly relegating surface operations to the U.S. Coast Guard. Despite increased competition between world superpowers, the Navy deemed the Arctic as "low risk" for conflict as a result of nations resolving conflicts peacefully.^{lxx} Thus, the Navy feels it can execute its strategy with the surface, subsurface, and

aviation assets that are currently in their inventory. As indicated by a U.S. Government Accountability Office (GAO) report, the Navy recognizes “significant limitations for operating surface ships in the Arctic, but states that the Navy has the capabilities required for executing the strategy, and has no plan to design ice-hardened surface ships...[procure] existing ice-hardening vessels or construct new ones.”^{lxxi} This, however, is of great concern as the U.S. Navy outlined one of its leadership roles in the Arctic as ‘power projection,’ which is “projecting power from the sea with lethal precision fires from ships, submarines, carrier-based aircraft, and with operations from the sea utilizing the United States Marine Corps.”^{lxxii}

While Navy presence in the Arctic region has been sparse over the last several decades, recent efforts have been made by the Navy in preparing itself for future conflicts with advanced militaries in the region. In 2018, while supporting NATO’s Exercise Trident Juncture, the USS Harry S. Truman was the first U.S. carrier above the Arctic circle since the USS America at the conclusion of the Cold War. Accompanying the USS Truman Carrier Strike Group (CSG) was the USS Iwo Jima Amphibious Ready Group (ARG) and the embarked 24th Marine Expeditionary Unit (MEU).^{lxxiii} While the sheer presence of the USS Truman CSG and the USS Iwo Jima ARG/MEU in Arctic waters displayed the Navy’s willingness to comply with the Department of Defense’s *National Defense Strategy*, this exercise did not go without fault. On October 22nd, 2018, two of the three ships in the Iwo Jima ARG carrying Marines to Trident Junction had to return to Reykjavik, Iceland because of damage sustained by heavy seas. As a result, the USS Gunston Hall (LSD-44) sustained damage to the ships Landing Craft Utilities, the well-deck, and several injuries to embarked Sailors.^{lxxiv} Leading Exercise Trident Juncture, Admiral James Foggo, Commander, U.S. Naval Forces Europe-Africa, and Commander, Allied Joint Force Command Naples stated; “because of the weather, we did not get the amphibious landing off, but that is part of the learning curve of operating at this time of year in the latitudes

of the high north.”^{lxxv} Furthermore, he added, "This is an exercise, not a crisis, but weather can be as capable an adversary as another nation that invades your territory, and we're finding out that there's some very challenging conditions out there.”^{lxxvi} While training objectives were achieved and learning ultimately occurred, the Navy remains firm in its belief that they have the capabilities required for executing their Arctic strategy, despite their ships' inability to operate in rough seas. While words of encouragement were heard by former Secretary of the Navy, Richard V. Spencer by stating I would “write a check for that kind of damage every single time...after seeing what we’d learned from going up there,”^{lxxvii} the long term success of the U.S. Navy in the Arctic will not be applying band-aids to a giant wound.

While the U.S. Navy is not the only contributing factor in policing the Arctic, there are several contributing factors as to why the Navy must begin developing and procuring vessels that cannot only withstand rough seas but also withstand the frigid and ice-covered waters that make up much of the Arctic region. While the Greenland, Iceland, United Kingdom – Norwegian (GIUK-N) Gap remains as an unfrozen strategic naval chokepoint that provides the Russian Northern Fleet with access to the U.S. East Coast,^{lxxviii} some experts now believe that the GIUK-N Gap no longer serves as the strategic location to deter and engage Russia.^{lxxix} Steven Wills, a Research Analyst at CNA and an expert in U.S. Navy strategy and policy, identifies several areas of concern that need to be recognized as potential pitfalls when it comes to combating what he refers to as a “revanchist Russia” in the Arctic. Mr. Wills lays out concerns of Alliance naval forces that are significantly smaller than that of the Cold War era, a U.S. Navy that is less than half its size in the 1980s, and a shrinking Norwegian naval force that will be unable to conduct naval combat in the High North all alone.^{lxxx} Through his research, Mr. Wills identifies the areas of the Eastern Barents and Arctic Seas as areas that previously served as “remote operating grounds for Russian ballistic missile subs, now serve as bases for cruise missile platforms to

threaten NATO units and land-based targets in and facing the Norwegian Sea.”^{lxxxix} On the contrary to previous NATO and U.S. strategies for patrolling and preserving peace in the Arctic by means of securing the GUIK-N, Mr. Wills believes that the U.S. and NATO must begin to prepare and invest in assets capable of bringing the fight to Russian naval forces in the High North “long before these units can get into range of resupply ships or NATO nation port facilities on the European mainland.”^{lxxxii}

As of 2020, the Navy’s target goal for sustaining the force is 355 ships, none of which are capable of patrolling the seas of the High North. Albeit, capable vessels in ice-free waters, the U.S. Navy’s current fleet consists of vessels that are thin-skinned and ill-suited for the waters of the Arctic. While U.S. strategic success in the Arctic requires the procurement of Arctic capable war vessels, Navy success cannot be achieved without help from the Coast Guard’s depleted icebreaker fleet. Tasked with “conducting and supporting scientific research, defending U.S. sovereignty and other U.S. interests in Polar regions, monitor sea traffic in the Arctic, and conducting other Coast Guard missions such as search and rescue,”^{lxxxiii} the U.S. Coast Guard is currently ill-equipped and incapable of fulfilling these lawful tasks. As of 2019, the Coast Guard currently operates one large icebreaker, the 399-foot-long *USCGC Polar Star (WAGBN-10)* that is capable of breaking through ice that is up to 21 feet thick, and one medium icebreaker, the 420-foot-long *USCGC Healy (WAGBN-11)* that is capable of breaking through ice that is no thicker than four and a half feet. In addition to the *Polar Star*, the Coast Guard has a second large icebreaker, the *Polar Sea (WAGBN-11)*, that entered the service in 1978 but has been nonoperational since sustaining an engine casualty in June 2010.^{lxxxiv} While both vessels prove to be highly capable and valuable assets to the U.S. Coast Guard and U.S. global interests, the *Polar Star* “spends the winter breaking ice near Antarctica in order to refuel and resupply McMurdo Station. When the mission is complete, the *Polar Star* returns to dry dock in order to

complete critical maintenance and prepare it for the next ODF mission. Once out of the dry dock, it's back to Antarctica, and the cycle repeats itself."^{lxxxv} While missions such as those conducted at McMurdo remain important to U.S. interest in the Antarctic, additional icebreaking assets must be built in order to help support the Navy's mission in the Arctic.

In 2010, the U.S. Coast Guard opted out of participating in an Arctic Exercise as they feared their icebreakers would break down, and they would have to call Russia for help. Three years later, the U.S. Coast Guard formally expressed their plans of building three heavy polar icebreakers and three medium icebreakers. In 2018, Congress agreed to the Coast Guard's request and set aside \$750 million in the Department of Homeland Security's 2019 budget for the construction of the first vessel. In 2019, Congress reiterated its support of the new icebreakers stating, "It is the sense of Congress that the Coast Guard should maintain an inventory of not fewer than six polar-class icebreaker vessels beginning not later than the fiscal year 2029."^{lxxxvi} While the construction of these icebreakers vessels shows the U.S.'s drive for securing its interest in the Arctic, their construction is not a strategy of its own. As indicated by Congressman John Garamendi (D-CA) during a maritime transportation committee hearing in 2018, "there's more to it than simply constructing ice-capable vessels. The much-discussed icebreakers are part of such a strategy, but they only help achieve Arctic goals — they are not a plan on their own."^{lxxxvii} Albeit aligned to the core functions of *National Defense Strategy*, the U.S. Navy remains dedicated and overlent on an Arctic strategy of nuclear and conventional deterrence by stating the following:

"The Navy achieves deterrence by convincing potential enemies that they cannot win or that the cost of aggression would be unacceptable. Nuclear and conventional deterrence remain relevant, and the Navy's ability to deter provides our leadership with options for controlling escalation. The Arctic provides additional maneuver room for distributed nuclear and conventional forces to operate in support of deterrence."

Although not entirely untrue, the strategy of deterring our nation's adversaries through the threat of employing nuclear weapons is not a strategy with any tangible backing. The race to nuclear warfare supremacy between the U.S. and the Soviet Union during that cold war is a thing of the past. According to a 2019 study of the current state of armaments, disarmaments, and international security conducted by the Stockholm International Peace Research Institute (SIPRI), the four countries leading the way in terms of its nuclear arsenal are Russia (1,600 deployed / 6,500 in total), the United States (1,750 deployed / 6,185 in total), France (280 deployed, 300 in total), and China (0 deployed / 300 in total).^{lxxxviii} While nearly 75 years since the second and most recent atomic bomb being dropped on Nagasaki on August, 9th 1945, the terror and devastation it left behind has arguably prevented great world powers and leaders from employing nuclear weapons against an adversary ever since. While history has not written itself yet, SIPRI's 2019 study does not suggest the likeliness of future responses being nuclear in nature; it suggests how unlikely it is that the world will ever see a nuclear response ever again. What once was a strategy of deterrence only controlled and known by the U.S., is now a strategy shared among every country that possesses nuclear weapons in their arsenal. While still an effective strategy, nuclear deterrence is still only a threat of nuclear employment and is something that will only be employed if all means necessary are exhausted. For this reason, the Navy must invest in assets and capabilities that will deter future adversaries conventionally.

As previously identified in this paper, Exercise Trident Juncture served as a valuable training exercise that highlighted the capabilities and limitations of two of the Navy's three amphibious class ships. While some subsurface and aviation missions still occur in the Arctic, the presence of surface vessels is virtually nonexistent. Whether it's in Afghanistan, Iraq, Syria, or the Arctic, appropriate escalation of force must be applied. While the presence of nuclear submarines and bomber aircraft serve as deterrents in the Arctic, the employment of their assets

would far surpass the appropriate levels of response. As seen in previous conflicts over the last 19 years, appropriate decision-making and military action must be taken into consideration for future conflicts in the Arctic. Inappropriate decision-making and military response can, after all, alter strategies from nuclear and conventional deterrence to nuclear and conventional employment. Undisputedly one of the harshest and most unforgiving environments in the world, the water and land of the Arctic must be appropriately protected by the U.S. military. While future conflict in the Arctic may seem minimal to some, the Navy must accept some risk in investing in amphibious ships that can patrol the waters of the High North along with the U.S. Coast Guards icebreakers. Building ice-hardened amphibious ships provides U.S. policy and decision-makers with an alternate means of dealing with conflict in the region. Utilizing the current construct of the Navy-Marine Corps ARG/MEU in the Arctic will not only serve as sea-base in the area, but it will also serve as a critical asset that is equipped with strategic air and sea-lift capabilities, close air support through rotatory and fixed-wing aviation, as well as ground combat elements that are capable of conducting operations that range from humanitarian assistance and disaster relief to conventional warfare. Although extremely costly, the presence of an ice-hardened ARG/MEU in the Arctic will uphold the Navy's strategy of conventional deterrence and provide U.S. decision-makers with real-time intelligence and assets that are capable of applying the appropriate level of military response if the needs arise.

U.S. Marine Corps: The Way Forward

Over the last 19 years and counting, the United States Marine Corps has found itself in continuous conflicts throughout the Middle East. Although highly successful, the Marine Corps has been fighting a war against several terrorist groups with no clear ending in sight. Increased tensions between China, Russia, Iran, and North Korea have top Pentagon officials fearing that the United States' next major conflict will not be against another terrorist group, but rather

against a near-peer adversary that will result in a conflict of high-intensity.^{lxxxix} With Russia increasing its presence in the Arctic and claiming jurisdiction of the Northern Sea Route, and China claiming to be a “near-Arctic state,” the United States Marine Corps must be prepared to fight and win in cold regions.^{xc} Although capable of conducting training in the cold, the Marine Corps as part of the Joint Force is ill-prepared to fight and win in the Arctic as a result of their reluctance to build, equipped, and maintain units capable of fighting and winning in the region.

The Marine Corps' current construct and force laydown is designed with the intent of supporting and conducting expeditionary and land-based operations in the Middle East and other warm-weather regions. As a result of current conditions in Iraq and Afghanistan and altering tensions between the United States and Iran, the Marine Corps' primary focus remains on maintaining a force that is capable of fighting in warm regions. In July 2019, the 38th Commandant of the Marine Corps delivered his initial guidance to the fleet, stating that the Marine Corps "cannot afford to build multiple forces optimized for a specific competency such as arctic warfare."^{xc} With this message, the Marine Corps carried on its long-standing tradition of putting the metaphorical “check in the box” on training, preparation, and readiness to operate in cold environments. The Marine Corps' current and continued methodology for preparing to fight in cold regions revolves around rotating units through cold weather training exercises in places such as the Marine Corps Mountain Warfare Training Center, Camp Riley Minnesota, and Fort McCoy, Wisconsin.^{xcii} During this time, Marines undergo extensive periods of training focused on individual survival skills, followed by a more rigorous and realistic practical application that is led by Marines within their unit who are formally trained in schools such as Winter Mountain Leaders Course, Basic Cold Weather Leaders Course, Mountain Scout Skier Course, and Cold Weather Medicine Course.^{xciii} Although highly valuable and informative, this training is not conducted with the intent of establishing contingency forces capable of conducting

operations in cold environments, but instead, it's treated as "just another" training exercise that Marines will endure, and do so on a one-time basis. Rather than capitalizing on these training exercises and further developing the Marine Corps capabilities through follow-on training and deployments, atrophy sets in, and so does the Marine Corps' ability to successfully conduct operations in cold environments.

Another significant issue that inhibits the Marine Corps from successfully operating in cold regions is their inability to procure the necessary gear and equipment that not only ensures survival but also enables the warfighter to pursue the enemy aggressively. Although slightly improved with the fielding of the lightweight exposure suit, the extreme cold weather vapor barrier boots, and a new ski system, the Marine Corps cold-weather inventory remains substandard. With modifications yet to be made to the All-Purpose Clothing System, and delays in purchasing the extreme Gore-Tex jacket and a rucksack that does not break in the cold, the Marine Corps lacks the gear that will enable maneuverability on the battlefield.^{xciiv} Whether done intentionally or by lack of general knowledge, the DoD in their 2019 Arctic Strategy, informed Congress that the Marine Corps had enough extreme weather gear to outfit 39,000 Marines. However true this may be, the DoD neglected to inform Congress that surviving in extreme weather environments (below -25 degrees Fahrenheit) requires the use of the Infantry Combat Clothing and Equipment (ICCE) as well as the Extreme Cold Weather Clothing System (ECCWCS) "Happy Suit." Albeit highly capable sets of equipment to survive in the elements, the Marine Corps needs to be sourced with gear that is meant to withstand the wear and tear of combat operations, not the gear that is intended to be worn while bivouacking or standing watch.^{xciiv}

On February 22, 2019, the Marine Corps published its latest version of MCWP 12-10 “Every Clime and Place.” Signed by then Lieutenant General David H. Berger, MCWP 12-10 states:

“The Marine Corps is optimized to be expeditionary—an institutional imperative that acknowledges the necessity to deploy rapidly, arrive quickly, and begin operating immediately. Such a rapid-response, general-purpose force must maintain itself in a continuous state of readiness, ready to deploy and adapt to a broad range of operating environments on short notice. Charged with this responsibility, Marines must be familiar with operating in various environments. The effective conduct of any military operation requires a basic understanding of the environment.”^{xv}

However accurate this statement may sound, “a basic understanding of the environment” does not apply to all operations, especially those operations conducted in cold-weather regions.

As it stands today, the Marine Corps places minimal emphasis on training Marines in cold-weather regions and virtually zero emphasis on follow-on or sustainment training aimed at maintaining or increasing proficiency levels. As stated by Brigadier General Lar Lervik, commander of the Norwegian Brigade North, “individual basic skills are key to surviving and winning in cold environments...20% is equipment and 80% is knowledge and routines.”^{xvii}

With the Marine Corps' current cold-weather training and deployment cycles, Marines lack the experience to gain a sufficient level of knowledge and the ability to establish routines that will enforce good habits and individual decision making in cold environments. While currently on entirely separate wavelengths, the Marine Corps and the Department of Defense must come to a middle ground regarding the Marine Corps' capabilities to operate in cold regions. However, unsupportable a two MEB Arctic-capable force may be, there is no denying that the Marine Corps needs to take more significant steps into their preparation and ability to conduct operations in cold environments. Utilizing the successes gained through the Marine Rotational Force – Europe (MRF-E) deployment program to Norway, the Marine Corps needs to invest more equity into their readiness by establishing a cold-weather training and deployment cycle that involves

consecutive workups and deployments to cold regions. Utilizing MRF-E as a frame of reference, the Marine Corps can double-down its efforts by establishing a similar program in the Southern Hemisphere that will enable year-round training in the cold. Although not a perfect solution, this concept will not only enable the Marine Corps to maintain a MEB sized element ready to fight and win in cold regions, but it will also serve as a useful testbed in Marine Corps Systems Command's endless pursuit in developing and purchasing equipment and gear that will enable survival, maneuverability, and success on the battlefield. This concept, however, will be all the more difficult as the 38th Commandant puts the Marine Corps in even greater jeopardy of losing the battle in the Arctic. In March 2019 he stated, "The Marine Corps is not optimized to meet the demands of the *National Defense Strategy*,"^{xcviii} and announcing his plan to reduce the number of infantry battalions from 21 to 24, by 2030.^{xcix} While General Berger is correct in stating that the Marine Corps is not in compliance with *National Defense Strategy*, he is ignored the Congress mandated *2019 Department of Defense Arctic Strategy* that was published a year later. While significant efforts can be made between the Navy and Marine Corps with the implementation of ice-hardened vessels and specialized units dedicated to operating in the Arctic, depleting the force of valuable assets such as infantry battalions is taking one massive step in the opposite direction.

As the Marine Corps stands in 2020, its readiness to fight and win in cold regions is significantly low. With more than 19 consecutive years of fighting in the Middle East, the Marine Corps' focus remains on shooting the alligator closest to the boat. This, however, is not a justifiable reason in not maintaining a small contingent force that is well trained, well equipped, and ready to fight in the harshest of conditions. Because nothing comes without consequences, the Marine Corps needs to accept some risk by dedicating additional time, units, and resources into preparing for what now seems like the unthinkable. As "hope" is not a course of action, the

Marine Corps must begin to focus on building, equipping, and maintaining a Marine force that is capable of fighting and winning in cold regions.

Conclusion

Over the last 26 years, the United States has seen the publication and unsuccessful execution of four presidential administrations policies in the Arctic. While all four unequivocally express the Arctic and its essential role in the security and protection of U.S. national interest, these words did not translate into action. As the U.S. continues to face significant challenges in dealing with a renewed threat from Russian and China, the time to revitalize priorities and investments into the Arctic is no greater than now. United States policy-makers, the Department of Defense, and the military service chiefs need to align their Arctic strategies, begin developing and procuring Arctic capable equipment and Navy vessels, and reprioritize the Marine Corps' ability to train, fight, and win in the Arctic.

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