

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 04-05-2011		2. REPORT TYPE FINAL		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Managing the Arctic Thaw: A Joint Interagency Approach to a Potential Hot Spot				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) LCDR Patrick F. Peschka, USCG Paper Advisor (if Any): CDR James D. Nordhill, USN				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Joint Military Operations Department Naval War College 686 Cushing Road Newport, RI 02841-1207				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; Distribution is unlimited.					
13. SUPPLEMENTARY NOTES A paper submitted to the Naval War College faculty in partial satisfaction of the requirements of the Joint Military Operations Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.					
14. ABSTRACT The recent and continued melting of the northern Polar ice cap is not only changing the geographical environment of the Arctic region, but the political landscape as well. As such, unresolved territorial claims between the Arctic coastal states, driven by the potential for increased access to numerous natural resources, and the viability for the potential utilization of shorter shipping routes, whose ownerships are disputed, have rekindled 'old fires' amongst nations which were previously 'frozen in time.' These issues, coupled with increased civilian, commercial, and military activity, have created a critical gap between the United States' desired end state in the Arctic region and its ability to achieve it. Given the remoteness of and complexity regarding the Arctic and lessons learned from past operations and conflicts, the United States needs a 'whole of government' approach that is balanced against the region's international political sensitivities to manage its Arctic dilemma.					
15. SUBJECT TERMS Arctic; Interagency; JIATF; UNCLOS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 34	19a. NAME OF RESPONSIBLE PERSON Chairman, JMO Dept
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code) 401-841-3556

**NAVAL WAR COLLEGE
Newport, R.I.**

**MANAGING THE ARCTIC THAW: A JOINT INTERAGENCY APPROACH TO A
POTENTIAL HOT SPOT**

by

Patrick F. Peschka

Lieutenant Commander, USCG

**A paper submitted to the Faculty of the Naval War College in partial satisfaction of the
requirements of the Department of Joint Military Operations.**

**The contents of this paper reflect my own personal views and are not necessarily endorsed by the
Naval War College or the Department of the Navy.**

Signature: _____

4 May 2011

Contents

Introduction	1
Maximum Unity of Effort	3
Space, Time, & Force Balance	7
Strategic Communication	12
Conclusions and Recommendations	15
Notes	18
Appendix	24
Bibliography	28

Abstract

Managing the Arctic Thaw: A Joint Interagency Approach to a Potential Hot Spot

The recent and continued melting of the northern Polar ice cap is not only changing the geographical environment of the Arctic region, but the political landscape as well. As such, unresolved territorial claims between the Arctic coastal states, driven by the potential for increased access to numerous natural resources, and the viability for the potential utilization of shorter shipping routes, whose ownerships are disputed, have rekindled ‘old fires’ amongst nations which were previously ‘frozen in time.’ These issues, coupled with increased civilian, commercial, and military activity, have created a critical gap between the United States’ desired end state in the Arctic region and its ability to achieve it. Given the remoteness of and complexity regarding the Arctic and lessons learned from past operations and conflicts, the United States needs a ‘whole of government’ approach that is balanced against the region’s international political sensitivities to manage its Arctic dilemma.

INTRODUCTION

In September 2010, the Arctic experienced its “third-lowest recorded [sea ice extent] since 1979...overall, the 2010 minimum was 31% lower than the 1979-2000 average.”¹ Whether one subscribes to global warming or climate change or not it is hard to dismiss that the physical characteristics of the Arctic are not just changing, but shifting to a different state. As such, human access to and activity in the Arctic region, in the form of nation-state endeavors, commerce, and tourism, continue to increase at an accelerated rate, quickly posing national security challenges for the U.S. and other Arctic countries.² With this increased interest and activity the question arises as to what diplomatic conflict, environmental crisis, or humanitarian disaster is primed to explode in the Arctic region and is the United States best prepared to effectively respond in a timely manner.

In today’s environment there are two recurring themes that continuously appear in every major U.S. domestic and international contingency. First, no one can go it alone; everyone requires some form of support from another agency, organization, and/or country. Second, resources really are finite, especially given the world economic and financial crisis. As such, every organization and agency must work efficiently and effectively to achieve its objectives in support of the greater national security strategy.³ The United States’ future in the Arctic can best be served by acknowledging this interdependency and, more importantly, by taking action well before a crisis, to formally establish a government structure that brings all appropriate forces to bear regarding the full spectrum of contingencies. As such, the United States should establish a Joint Interagency Task Force-Polar North (JIATF-PN) for each of its three Geographic Combatant Commands (GCCs) that encompass the Arctic in order to safeguard and promote U.S. sovereignty and interests in the region.

Establishing a JIATF-PN in NORTHCOM, EUCOM, and PACOM enables the United States to achieve maximum unity of effort through the ‘whole of government’ approach while optimizing span of control; allows for effective and efficient balancing of space, time, and force in the Arctic region; and best promotes U.S. interests with minimal impact to international relations. This paper will utilize historic cases that support the JIATF construct for use by the GCCs in the Arctic region. This paper will not attempt to evaluate or analyze capacity or capability shortfalls in detail.

Immediate objections to the proposed construct for creating multiple JIATFs within the existing Unified Command framework revolve around two differently held views. The first view advocates the status quo and objects to the notion of creating a JIATF based on the numerous existing government agencies, bilateral agreements, and international organizations with Arctic responsibilities; that creating a JIATF would be ‘just another organization’ that duplicated the work already being done in the region.

The second view, and probably the one with the greatest number of skeptics regarding the proposed construct, advocates for one JIATF within one GCC. These skeptics believe that the best way to manage the Arctic region is by achieving unity of command through one regional commander, and would immediately identify that the proposed construct in this paper violates the fundamental principle of unity of command.

While these are reasonable arguments it will be shown throughout the paper that they fail to consider the Arctic region in the greater context of maritime domestic crisis management and the politics of the international arena. That while their proposed courses of actions may appear to offer solutions to the Arctic problem, they in fact escalate the situation

by neglecting to consider the importance of managing and balancing span of control and unity of command.

MAXIMUM UNITY OF EFFORT

Establishing a JIATF-PN in NORTHCOM, EUCOM, and PACOM will enable the United States to achieve maximum unity of effort through the ‘whole of government’ approach while optimizing span of control. The U.S. Arctic Policy, as affirmed in National Security Presidential Directive (NSPD) - 66, states the need to meet national security and homeland security needs relevant to the Arctic region, protect the environment, manage the natural resources, strengthen institutions amongst the eight Arctic nations, involve the indigenous communities in decisions that affect them, and enhance scientific monitoring and research. The policy stipulates that departments of State, Defense, Homeland Security, Interior, Commerce, Transportation, and Energy as well as the Environmental Protection Agency and National Science Foundation shall coordinate with “other heads of relevant departments and agencies” to implement these six objectives.⁴ These six objectives contain numerous sub-objectives that range from missile defense, strategic deterrence, maritime presence, maritime domain awareness, law enforcement, preventing terrorist attacks, promoting freedom of navigation to studying climate change, protecting the environment, pollution prevention and response, search and rescue (SAR) cooperation, and maritime commerce initiatives. However, no priority of the objectives or sub-objectives is stated in the Directive.⁵

Though there are interagency working groups at the national level to align policy with strategy there is no general requirement for cooperation or interagency coordination at the

operational-combatant command and tactical levels. Combatant commands do have Joint Interagency Coordination Groups (JIACG) and the ability to stand-up JIATFs, but membership of interagencies is determined by each combatant command, and interagencies are not obligated to participate.⁶ This results in organizations and agencies, at the operational and operational-tactical levels, agreeing to support one another by way of memorandums of understandings (MOUs) and ‘hand-shakes.’ However, this informal construct does not work well for crisis management and operations involving multiple and overlapping jurisdictions. Culture, biases, resources, and specific mission focus often prevent effective coordination and cooperation.

For instance, when the earthquake struck Haiti in early 2010, President Obama stated the U.S. would respond with a ‘whole of government’ approach and the U.S. Agency for International Development (USAID) would have the lead.⁷ However, the U.S. response, though eventually effective, was not efficient in responding to the catastrophe, which happened only 500 miles from U.S. soil. Even after two weeks the U.S. government response was struggling. What was revealed was the lack of interagency policy and planning before a crisis, the need for common doctrine and standard operating procedures, and clearly defined “objectives, roles, responsibilities, and authorities” by the lead agency for the supporting organizations and agencies.⁸

The Haiti response is not an isolated case of the U.S Government’s (USG) inefficiency in managing the difficulties and intricacies associated with interagency cooperation. Even highly successful interagency organizations, such as Joint interagency Task Force – Counter Terrorism (JIATF-CT) and Joint Interagency Task Force – South

(JIATF-S), are plagued with similar faults and flaws regarding their constructs that have inhibited, at times, their performance and ability to maximize unity of effort.⁹

These examples and cases demonstrate common tenets regarding interagency coordination. Specifically, the need for common, prioritized, agreed upon objectives that support the greater national security objectives; the need to codify by Presidential Directive or law for the establishment of JIATFs as well as to mandate participation by organizations and agencies; the need to vest the authority in the heads of JIATFs to manage the mission and people; and the need to adopt best practices, doctrine, and standard operating procedures. According to Dr. Milan Vego, the joint operational warfare theorist, the “main requirements for the sound functioning of a command organization are centralized direction and decentralized execution, a high degree of jointness, and interoperability.”¹⁰ Establishing JIATF-PNs that incorporate these common tenets not only meets the requirements for a sound functioning command organization, but it all but achieves unity of command.

With respect to the U.S. Arctic Policy, which specifically identifies the diverse, multiple departments and agencies responsible for overseeing the implementation of specific policy objectives, it is easy to see the need to formally establish a mechanism that codifies cooperation and coordination at a level that is more than just a “hand-shake”, MOU, or strictly voluntary.

However, what is not immediately apparent is the need for three JIATFs. Establishing three JIATFs within the existing Unified Command Plan not only allows for unity of effort, but does so while optimizing span of control. The three JIATF construct properly accounts for “the number of subordinates, number of activities...and the size and

complexity of the operational area” so that the issues and problems surrounding the Arctic region can be optimally managed.¹¹ Each GCC with Arctic responsibilities has a unique mission focus that is shaped by the dynamics and politics of the countries in their respective regions. NORTHCOM is heavily focused on homeland security, interaction with Mexico and Canada, and civil support. EUCOM is heavily focused on engagement, Russia, and the North Atlantic Treaty Organization (NATO) countries. PACOM is heavily focused on theater security cooperation, India, and China, who happens to possess Arctic research bases and a Polar Ice Breaker. The time to plan, practice, and deconflict organization structure, operations, and crisis management is before events occur. The proposed three JIATF construct will fuse and synchronize national level policy while maintaining mission focus and Arctic issues within a manageable framework for each of the existing GCCs with Arctic responsibilities.

Opponents to the proposed construct would argue that three separate JIATFs responsible for various Arctic geographical areas would not be able to achieve any degree of unity of effort. These opponents call for one Arctic JIATF or sub-unified command under a single GCC to have control over the entire Arctic Ocean.¹² This may seem wise strictly from an ocean management perspective, but it neglects the interests of Arctic and non-Arctic nations in different GCCs as outlined in the previous paragraph. If NORTHCOM was designated the GCC in charge of all the Arctic Ocean how would Russia address Arctic issues with the U.S.? Would they work through EUCOM or go straight to NORTHCOM? Would NORTHCOM get pulled into EUCOM’s business? If EUCOM were the GCC in charge of the Arctic region would U.S. domestic agencies with Arctic responsibilities deal directly with EUCOM versus NORTHCOM? What about PACOM, if they were removed

from Arctic responsibilities, how would the U.S. engage China and other Asian countries with interests and activities in the Arctic region?

Creating a single JIATF or sub-unified command may result in better unity of effort, but it does so at the expense of the Arctic nations and countries with interests in the Arctic region. In the words of retired General John Brown regarding span of control, “there are human limits to how many internally complex subordinate battles [or operations] can be understood and appreciated by a single person at the same time.”¹³ A single JIATF would have excessive span of control issues and would create more problems regarding management of the Arctic for the United States.

SPACE, TIME, & FORCE BALANCE

According to Vego,

...the art of warfare is to obtain and maintain freedom of action – the ability to carry out critically important, multiple, and diverse decisions to accomplish assigned military objectives, [and that] one’s freedom of action is achieved primarily by properly balancing the factors of space, time, and forces.¹⁴

Whether it is warfare, or other operations and efforts in support of national objectives, Vego’s assertion regarding freedom of action is relevant to all levels of government and types of missions. Ideally, one wants to be in a position to exercise the greatest possible freedom of action, and if necessary, in time of conflict, deny their adversary freedom of action. Unity of effort is critical to this assertion by Vego. Managing the Arctic for U.S. interests is no different. Creating JIATF-PNs will allow for effective and efficient balancing of space, time, and force by U.S government organizations and agencies in support of national Arctic policy and objectives.

Though the Arctic Ocean is the smallest and shallowest ocean in the world, and even with the recent melting and the partial opening of sea lanes throughout the region, these facts do not simplify the balancing of space, time, and force.¹⁵ The extreme weather and day/night cycles as well as lack of regional infrastructure and support facilities essentially amount to the Arctic being one of the most demanding spaces in which to conduct operations.¹⁶

There is little that can be done to change the harsh physical characteristics of the Arctic space. However, the Arctic space can be managed through the factors of time and force. Since time is continuous, and time “lost can never be regained” the factor of force becomes the primary means in balancing space, time, and force.¹⁷

Forces that are properly equipped, trained, sized, integrated, procedurally aligned, and mission oriented are critical to successful operations.¹⁸ Currently, the U.S. does not possess the land, sea, and air capabilities and infrastructure to properly support its Arctic policy.¹⁹ According to a Congressional Research Services report, a former District 17 Coast Guard Admiral, and the U.S. Navy’s Arctic Roadmap there are significant shortcomings with respect to homeland security and defense, law enforcement, Search and Rescue operations, maritime domain awareness, humanitarian assistance and disaster relief operations, oil spill response, and infrastructure to support and sustain Arctic operations in western and northern Alaska.²⁰ All stress the need to coordinate and integrate efforts. A July 2010 report by the Oceanographer of the Navy stated, “to meet the demands of national security in the changing northern environment, strengthening mechanisms for cooperation among...U.S. agencies must remain a high priority.”²¹ All of these support the concept of managing the space through combined force management.

There is danger in the U.S. not taking a collective approach at the operational and operational-tactical levels in managing forces with respect to its Arctic policy. For instance, the 2010 oil spill in the Gulf of Mexico required nearly three months of emergency operations to stop the free flow of oil into the ocean waters. Numerous federal, state, and local government agencies, including the U.S. military, as well as several commercial industries were involved in these emergency operations. The event occurred in relatively warm waters near the heart of the offshore oil industry's infrastructure and support network.²² If an event of this magnitude were to occur in the Arctic Ocean there is a high probability given the remoteness, lack of infrastructure, and response capabilities that a runaway well could not be stopped. Essentially, response time would be of an astronomical magnitude given the complexity of the space and lack of force.

Furthermore, something as simple as the incident involving the cruise ship *SPLENDOR*, which was disabled off the coast of Mexico in November 2010, only 150 miles south of San Diego, required three Coast Guard cutters, a Navy aircraft carrier, and a civilian tug service to execute rescue operations.²³ There is nothing in place in the Arctic to conduct these types of rescue operations, either independently or jointly. Those individuals playing the odds of something catastrophic happening only need to consider the fate of the cruise ship *EXPLORER*, which, in 2007, struck a growler and sank in the Antarctic Ocean.²⁴ Fortunately, there was an additional cruise ship in the area that was quickly able to render assistance. If this had not been the case there is a high probability, given the harshness and cold water of the Antarctic Ocean, significant loss of life would have occurred. Even homeland security issues are in play in the Arctic. Canadian officials, for instance, highlight a 2007 incident involving a Norwegian yacht with known criminals onboard who were

forbidden to enter Canada. This yacht was able to sail three-quarters of the Northwest Passage (NWP) and was not noticed until making landfall. For Canadian officials, this underscored the gaps in not only Arctic maritime domain awareness, but in the lack of assets and people to respond.²⁵ This scenario is applicable to the U.S. and raises the question of whether illegal immigration, terrorists, and narcotics smugglers will have another direction in which to enter the United States.

These scenarios highlight the importance of economizing forces in order to better manage a space. This coordination of the forces is critical, especially given the fiscal constraints and financial crisis occurring in the United States and throughout the world over the last several of years. Instituting JIATF-PNs not only optimizes force employment from a mission stand point, it also saves taxpayers from having to fund duplicate assets within multiple agencies for overlapping missions.

Opponents to creating any type of JIATF cite the existence of numerous international and domestic organizations and agencies with responsibilities and interests associated with the Arctic. These opponents believe that the Arctic can be managed within the existing international and domestic framework. There are currently fourteen international organizations that operate in the Arctic. These organizations have various ranges of focus, including military cooperation on sunken and discarded Russian naval reactors, SAR coordination, scientific research, environmental management and response, and indigenous population protection.²⁶

The most influential of these organizations is the Arctic Council, established in 1996 by the eight Arctic states as a high level forum. The purpose of the Arctic Council is to

address “cooperation, coordination, and interaction among the Arctic states” with particular emphasis on issues pertaining to “sustainable development and environmental protection.”²⁷ The U.S. was adamant about not expanding the role, especially with respect to security, and authority of the Arctic Council.²⁸ Furthermore, all five of the Arctic coastal states further declared in the Ilulissat Declaration of 2008 that they are all committed to resolving Arctic issues peacefully, through the currently existing United Nations Convention on the Law of the Sea (UNCLOS) structure and are unanimously against establishing “a new comprehensive international legal regime to govern the Arctic Ocean.”²⁹ However, the U.S. credibility with respect to its commitment to UNCLOS is not as strong as it could be given that the U.S. is the only Arctic nation that has yet to ratify the treaty. Essentially, while the international organizations are useful in promoting cooperation and coordination with respect to SAR, environmental protection and response, and scientific research they do not equate to security for the U.S., nor should the U.S. entrust such security to others.

With respect to domestic organizations, opponents of the proposed JIATF construct will highlight the myriad of federal agencies that already exists to execute the policies set forth in NSPD-66 pertaining to the Arctic Region. Stating that the responsibilities of defending the U.S. portions of the Arctic Ocean fall under NORTHCOM, specifically Joint Task Force Alaska (JTF-AK) who is charged with protecting and defeating attacks against the U.S. as well as conducting civil support when necessary.³⁰ However, despite the close coordination with federal agencies, there is no true unified focus with respect to planning and executing Arctic policy at the operational level. Even the recent agreement between JTF-AK and the U.S. Coast Guard District 17 Commander in Alaska to support a unified approach to protecting Alaska and the surrounding Arctic is based on a memorandum of understanding at

the operational and operational-tactical levels, not a “top-down” mandate that delineates joint interagency responses as well as priorities to national policy objectives.³¹ Operational commanders are left to coordinate agreements where ‘gaps and seams’ exist in organization and agency missions as they pertain to national policy and objectives. This presents the biggest problem when different commanders and heads of regional agencies diverge on priorities or do not share the same vision as for what is best for the country. The current construct for advancing the U.S. Arctic Region Policy, though filled with good intentions of cooperation, is not optimum to manage forces and resources.

STRATEGIC COMMUNICATION

Creating multiple JIATF-PN commands within the existing Unified Command Plan (UCP) framework best promotes U.S. interests with minimal impact to international relations. Notwithstanding Joint Publication 5-0 definition of strategic communication, a better working definition that speaks to the effects strategic communication can have on policy and operations is offered by Rowland and Tatham of the Defence Academy of the United Kingdom. Rowland and Tatham define strategic communication as “a paradigm that recognises [recognizes] that information & perception effect target audience behavior and that activity must be calibrated against first, second, and third order effects.”³² Instituting multiple JIATF-PNs would place all three GCCs with Arctic responsibility on parity with respect to the Arctic region. Since JIATFs represent the ‘whole of government’ approach and involve multiple agencies it could easily be justified as a means to increase U.S. efficiencies and effectiveness versus a militarization of the Arctic region. Essentially, multiple JIATFs allow the U.S. to minimize the difference between perception and intent.

There is no perfect solution to arranging the boundaries of a GCC's area of responsibility. Though a problem may be solved by redrawing boundaries and/or shifting responsibility of the countries within those boundaries amongst different GCCs it no doubt creates friction or problems at different junctures within the newly created construct. This is not to say that boundaries and geographical structures of the existing GCCs should not be redrawn, but only to highlight that no problem is linear and that everything is connected – solutions to problems must be looked at in the greater context. For example, Pakistan (CENTCOM) and India (PACOM) are in separate GCCs to prevent a single GCC from being 'caught' between the feuding that occurs between the two countries. Egypt is part of CENTCOM versus AFRICOM because of its close ties to the Middle Eastern countries as well as to serve as a balance to Israel with respect to military assistance.³³ These examples highlight the importance of relationships versus the physical location when deciding GCC boundaries. The point being that leaving the GCC boundaries which separate the Arctic amongst three GCCs would not be a new practice, and that geographical boundaries must be weighed in relation to geographical politics.

With regard to the Arctic region, one would think that it would be most beneficial to the United States to place the entire region under one GCC and/or one JIATF or sub-Unified Command. While this may appear to frame the Arctic problem into an easier context to manage from a U.S. perspective, it fails to address broader, more strategic aspects of global politics and security. For instance, when AFRICOM was established in 2008 as a stand-alone command many African nations viewed its establishment in a negative light, seeing it as an act of colonialism and unilateralism on the United States behalf.³⁴ It has taken several years of intense interaction and cooperation to build trust with African nations that held this

belief. Apparently, the creation of AFRICOM had different strategic communication effects than intended by the United States, highlighting a faulty assumption on the United States' part.

If the U.S. were to redraw and reorganize its GCCs so that the Arctic fell under one GCC there is a high probability that the Arctic nations as well as nations from around the world would view this as a move by the U.S. to assert hegemony in the region. This would be especially true if NORTHCOM controlled the entire Arctic region. Whereas the establishment of JIATF-PNs within the existing UCP framework would be viewed in a less threatening manner since it equates to managing the region versus consolidating the region under one GCC. A newly created unified Arctic sub-command and/or the consolidation of the Arctic in to one GCC would produce second and third order effects that run contrary to U.S. objectives in the region.

For instance, the Russian Federation, which already feels insecure regarding NATO and other U.S. initiatives, would likely view the consolidation of the Arctic region under one GCC as a threat to its national interest, potentially tipping off a greater military policy and presence in the Arctic which could erode other current initiatives in the region pertaining to international security and cooperation.³⁵ The Arctic region is of vital national security interest to the Russian Federation, given that its economy is heavily tied to the region. "As much as 20 percent of Russia's gross domestic product (GDP) and 22 percent of the total Russian export is generated north of the Arctic Circle."³⁶ Additionally, Russia already has 20 ice breakers, seven of which are nuclear powered, making it the largest fleet in the world by at least a dozen ice breakers.³⁷ Russia continues to modernize its naval fleet, and has "eight fourth-generation Borei-class ballistic missile submarines planned to be completed by 2015"

as well as well as aspirations to field “5 to 6 aircraft carrier squadrons....”³⁸ Any increase in Russian military build-up in the Arctic would create a significant dilemma for the U.S., one in which it does not have the current or foreseeable short term capabilities to address as illustrated in the previous section. Whether this occurs or whether a more aggressive course of action is taken is highly dependent on not so much what the United States says, but more importantly, what it does and how that action is interpreted by the international community.

CONCLUSIONS and RECOMMENDATIONS

As this paper is being finalized, the President of the United States issued a change to the UCP in which PACOM was relieved of all Arctic responsibilities, effectively leaving EUCOM and NORTHCOM with overseeing the Arctic region.³⁹ While this change will likely simplify and increase U.S. efficiencies in managing the Arctic, its impact, specifically with respect to strategic communication, is unknown since it is still in its infancy. However, there is one immediate and interesting issue that presents itself with respect to the new UCP geographical boundaries. In the former UCP, all three GCCs, EUCOM, NORTHCOM, and PACOM, shared the North Pole as a common boundary. The new UCP not only removes PACOM from the Arctic region, but its boundaries are redrawn as such that the entire North Pole, including approximately 300 miles in circumference, are placed in NORTHCOM’s area of responsibility. This is interesting since the Russian Federation has attempted to claim, unsuccessfully, the seabed beneath the North Pole as an extension of their continental shelf. However, the Russian Federation is still pursuing this claim and is in the process of resubmitting their claim to the United Nations.⁴⁰ It is highly probable that the Russian Federation will see this redrawing of the GCC’s geographic boundaries as a move by the U.S., which believes the Russian Federation’s claim as excessive and not in accordance with

UNCLOS guidance regarding continental shelf extensions, as a means to further challenge Russian Federation claims to the North Pole. It is also highly probable that the U.S. wanted to send just such a message. However, the strategic effects of such a message remain to be seen in the Arctic region and throughout other regions of the world.

Regardless of the new UCP, the arguments presented in this paper regarding the creation of multiple JIATF-PNs remains unchanged, though the proposed construct will require two versus three commands. Creating a JIATF-Polar North in each of the GCCs with Arctic responsibilities presents the optimum solution to the U.S. Arctic dilemma. These JIATFs will synchronize the U.S. military and government agencies efforts in planning and executing responses to Arctic crisis within a manageable span of control framework, optimize forces by concentrating resources and capabilities, as well as serve as liaison centers for both Arctic and non-Arctic countries with interests in the region. Any attempts to solve the Arctic dilemma by placing it under one GCC or JIATF neglects those Arctic Nations that have strong security, economic, and human ties and interests to the region, and strategically communicates a message of Arctic militarization opposed to one of cooperation.

To ensure its success in the Arctic, the United States should implement the following:

The United States government should direct the establishment and participants in the JIATF-PNs either through Presidential directives or legislation. This will ensure the operational level of governance and execution is best prepared and equipped to effectively and efficiently execute national policy.⁴¹ Simply establishing the JIATF-PNs without higher level mandates will not provide the necessary authorities to align organizations and agencies with common procedures, doctrines, and objectives. Furthermore, mandating JIATF-PNs

will allow the budgetary process, specifically with respect to Arctic capabilities and assets, to be addressed as a whole.

Finally, the United States should become a full member of the UNCLOS by having Congress ratify the treaty. This recommendation has been suggested by numerous high level government officials in the past, including the President, Chief of Naval Operations, and the Commandant of Coast Guard.⁴² By ratifying UNCLOS, the U.S. will communicate through action versus words, of its commitment to use the United Nations as the source for resolving maritime affairs. Additionally, by becoming a full member of the UNCLOS, the U.S. will be able to challenge and submit requests for continental shelf extensions, perhaps gaining increased access to vital natural resources.

Through the implementation of these two recommendations, JIATF-PNs will be the conduit that bridges the gaps between the strategic level of governance and the tactical level of execution regarding current and future Arctic objectives and operations.

NOTES

1. J. Richter-Menger and J.E. Overland, *Arctic Report Card 2010*, Annual Report (NOAA, 2010), 17, <http://www.arctic.noaa.gov/reportcard/arcticreportcard/> (accessed 28 February 2011). Also see, George A. Backus and James H. Strickland, *Climate-Derived Tensions in the Arctic Security*, Sandia Report (Albuquerque, NM: Sandia National Laboratories, September 2008), 17.

2. In August 2010, Russian bombers were intercepted by Canadian fighter jets over the Arctic for the third consecutive year, marking a practice that has not occurred since the Cold War. Since 2007, Canada has annually conducted operation NANOOK north of the Arctic Circle to promote its sovereignty in the region. Additionally, Canada is moving forward with procuring six to eight Arctic Offshore Patrol Ships, renewing the infrastructure at a berthing and refueling facility at Nanisivik, and building an Arctic training center for Canadian forces at Resolute Bay. Norway's military command center was moved to the Arctic and became operational in November 2010, making it the first NATO country with "its military leadership located in the Arctic Circle." There were 152 ice-capable-vessels on order by the end of 2008, accounting for over half of the total vessels on order. This past November marked an Arctic first when Russia's new cargo, double-acting ship (DAS) MONCHEGORSK made a round-trip voyage from Murmansk to Shanghai via the Northern Sea Route (NSR) without the aid of an icebreaker. Normally, the voyage is conducted with the aid of icebreakers while the return trip is conducted via the Suez Canal. By utilizing the DAS cargo ship design, the icebreaker and canal fees were eliminated, and the return leg reduced by over 40 days of transit time. Canada reported that 18 cruise ships transited the Northwest Passage (NWP) in 2010, two-and-half times the number making the trip in 2009. Furthermore, one of the cruise ships making the 2010 voyage through the NWP ran hard aground, requiring Canadian Coast Guard assistance that was a two day steam away. Rob Gillies, "Canada intercepts two Russian bomber planes," *The Washington Times*, 25 August 2010, <http://www.washingtontimes.com/news/2010/> (accessed 22 March 2011). Also see, "Arctic/Offshore Patrol Ship," *Canadian Armed Forces*, 16 February 2011, <http://www.forces.gc.ca/aete/articoffshorepatrolshippmoaops-projectnavirevaisseaudpatrol/> (accessed 22 March 2011); "Norway's command centre open for business," *SIKU news*, 11 November 2010, <http://www.sikunews.com/> (accessed 22 March 2011); George A. Backus and James H. Strickland, *Climate-Derived Tensions in the Arctic Security*, Sandia Report (Albuquerque, NM: Sandia National Laboratories, September 2008), 19; "ABB marine technology helps open new seaway between Europe and Asia," *ABB Communications*, 6 December 2010, <http://www.abb.com.pe/cawp/> (accessed 22 March 2011); "Russian ship makes record time on historic round trip through Northern Sea Route," *Canadian Sailings*, 21 February 2011, <http://www.canadiansailings.ca/editorial/specialreports/> (accessed 22 March 2011); "Northwest Passage traffic up in 2010," *CBC News*, 20 September 2010, <http://www.cbc.ca/news/canada/north/story/> (accessed 22 March 2011); "Clipper Adventurer Runs Aground in Arctic," *Cruise Industry News*, 30 August 2010, <http://www.cruiseindustrynews.com/cruise-news/4413-83010-clipper-adventurer-runs-aground-in-arctic/> (accessed 22 March 2011).

3. For example, responses to Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Hurricane KATRINA all required the 'whole of government' approach. All required the specific skills and authorities of one another to execute and achieve the objectives and desired end-state at the national/strategic level. Without this 'whole of government' approach, these operations and responses would not have been possible. The complexity of major operations, in today's world, frequently requires cooperation amongst multiple services, agencies, organizations, and the international community to successfully execute.

4. *Arctic Region Policy*, National Security Presidential Directive/NSPD 66 and Homeland Security Presidential Directive/HSPD 25 (9 January 2009), <http://www.fas.org/irp/offdocs/nspd/nspd-66.htm/> (accessed 22

February 2011).

5. *Arctic Region Policy, National Security Presidential Directive/NSPD 66 and Homeland Security Presidential Directive/HSPD 25* (9 January 2009), <http://www.fas.org/irp/offdocs/nspd/nspd-66.htm/> (accessed 22 February 2011).

6. Matthew F. Bogdanos, "Joint Interagency Coordination: The First Step," *Joint Force Quarterly*, no.37 (2005): 12-16. Also see, Neyla Arnas, Charles Barry, and Robert B. Oakley, *Harnessing the Interagency for Complex Operations*, Position Paper (Washington, DC: National Defense University, August 2005), 9-15; Robert S. Pope, "U.S. Interagency Regional Foreign Policy Implementation: A Survey of Current Practice and an Analysis of Options for Improvement" (Research paper, Maxwell, Alabama: Air Command and Staff College, 2010), 18-19.

7. P.K. Keen, Matthew G. Elledge, Charles W. Nolan, and Jennifer L. Kimmey, "Foreign Disaster Response Joint Task Force-Haiti Observations," *Military Review*, November-December 2010, 92.

8. P.K. Keen, Matthew G. Elledge, Charles W. Nolan, and Jennifer L. Kimmey, "Foreign Disaster Response Joint Task Force-Haiti Observations," *Military Review*, November-December 2010, 87. Also see, Mark D. Mandelas, "Imposing Order on Chaos: Establishing JTF Headquarters," *JCOA Journal*, Summer 2010, 27.

9. Another example that illustrates lack of interagency planning was the Gulf of Mexico oil spill of 2010. According to Admiral Thad Allen, "the biggest lesson learned from this and other disasters is that it's important to make sure all of the different branches and levels of government are working together," and the need for agencies to adopt higher level objectives versus their agencies objectives as well as standard operating procedures during a crisis. Both Haiti and the Gulf of Mexico oil spill reinforce the U.S. government's failure to plan, coordinate, and cooperate effectively and efficiently before and during operations in support of national policy objectives. Furthermore, JIATF-CT and JIATF-S, despite being highly successful regarding interagency cooperation, experienced problems with their organizational construct. JIATF-CTs were established by each of the GCC's following the September 11th attacks to jointly process intelligence and interrogate suspected terrorists. These JIATF-CTs later evolved "from an operation-specific task force to a comprehensive JIACG better to wage the long-term war on terrorism." However, despite their success, several faults and flaws with the construct of these JIACG exists. Colonel Matthew Bogdanos, one of the original designers and users of the JIACG concept, cites the "lack of a single, national-level organization issuing guidance, managing competing agency policies, and directing agency participation in JIACGs" as a major inhibitor to achieving unity of effort. Bogdanos goes on to say that planning needs to occur both simultaneously and horizontally at all levels. JIATF-S, located in Key West, Florida, was established in 1994 as a Department of Defense (DOD) command to facilitate the employment of DOD capabilities to support U.S. law enforcement agencies in their efforts to combat drugs. JIATF-S success has been associated with its integrated command structure, which includes members of different agencies filling key influential director and deputy positions, a clear mission statement, common standard operating procedures, and their ability to control assets assigned. However, despite their success, participation by agencies is determined by way of MOUs, which according to a comprehensive paper that surveyed interagency policies and practices across a multiple of disciplines, required time for agencies to "build trust." J. J. Sutherland, "Thad Allen And Lessons Learned From the Gulf Oil Spill," *NPR*, 9 September 2010, <http://www.npr.org/blogs/thetwo-way/2010/09/08/129726292/admiral-thad-allen-and-lessons-learned-from-the-gulf-oil-spill/> (accessed 31 March 2011); Also see, Norah Swanson, "Problem-solving requires cooperation, says retired Adm Thad Allen," *Government Executive.com*, 1 November 2010, http://www.govexec.com/story_page_pf.cfm?articleid=46424/ (accessed 31 March 2011); Matthew F. Bogdanos, "Joint Interagency Coordination: The First Step," *Joint Force Quarterly*, no.37 (2005): 12, 15-16; Richard M. Yeatman, "JIATF-South Blueprint for Success," *Joint Force Quarterly*, no.42 (3rd Quarter 2006): 26-27. Also see, Daniel Lawner, Brandon Kaster, and Natalie Matthews, "Recipes for Failure and Keys to Success in Interagency Cooperation: Two Case Studies," *Defense Concepts*, no.4 (2010): 25-29; Robert S. Pope, "U.S. Interagency Regional Foreign Policy Implementation: A Survey of

Current Practice and an Analysis of Options for Improvement” (Research paper, Maxwell, Alabama: Air Command and Staff College, 2010), 19.

10. Milan N. Vego, *Joint Operational Warfare Theory and Practice* (Newport, R.I.: U.S. Naval War College, Spring 2009), VIII-8-VIII-9.

11. Office of the Joint Chiefs of Staff, Command and Control for Joint Air Operations, Joint Publication 3-30 (Washington, DC: CJCS, 5 June 2003), II-10. Also see Milan N. Vego, *Joint Operational Warfare Theory and Practice* (Newport, R.I.: U.S. Naval War College, Spring 2009), APP44-46.

12. Daryl Robbin, “Arctic Defense Concerns: The Need to Reorganize United States Defense Structure To Meet Threats in a Changing Arctic Region” (research paper, Newport, RI: U.S. Naval War College, Joint Military Operations Department, 2010), 16.

13. John S. Brown, “Spans of Control,” *Army*, Vol 56, Iss 8 (2006): 79.

14. Milan N. Vego, *Joint Operational Warfare Theory and Practice* (Newport, R.I.: U.S. Naval War College, Spring 2009), VIII-3.

15. Paul A. Berkman, *Environmental Security in the Arctic Ocean* (United Services Institute for Defence and Security Studies, Philadelphia, PA: Taylor & Francis, 2010), 11.

16. For instance, there are no U.S. deepwater ports in the Arctic, and the nearest ports are in the Aleutians more than 800 miles from the Arctic Ocean. Canada is refurbishing its only Arctic deepwater port in Nanisivik to enable better response capabilities to support its national policies, while the Russian Federation has Murmansk and two other mid size ports in the Arctic. Another point that highlights the vastness and remoteness of the region pertains to the US Coast Guard’s search and rescue capabilities. It is over a 900 mile flight across three mountain ranges from the main Coast Guard air station in Kodiak, Alaska to Point Barrow on Alaska’s northern coast. In 2010, it took the Canadian Coast Guard two days to reach a cruise ship aground in the NWP. The Arctic space, though physically smaller to other areas and oceans, is much bigger in totality. Alice Rogoff, “Alaska Dispatch to host Arctic Conference,” *Alaska Dispatch*, 1 March 2011, <http://www.alaskadispatch.com/> (accessed 2 April 2011). Also see, Gordon Rankine, *Russia-Opportunities for UK-Based Companies in the Ports Sector*, UK Trade & Investment Report (London, UK: UK Trade & Investment, 2010), 11-12.; US Coast Guard District 17, “USCG D17 Arctic Brief,” Powerpoint, 27 January 2011, <http://uscg.mil/d17/arcticoverview.pdf/> (accessed 25 March 2011); “Clipper Adventurer Runs Aground in Arctic,” *Cruise Industry News*, 30 August 2010, <http://www.cruiseindustrynews.com/cruise-news/4413-83010-clipper-adventurer-runs-aground-in-arctic/> (accessed 22 March 2011).

17. Time can be managed by properly preparing and planning before and during operations. Milan N. Vego, *Joint Operational Warfare Theory and Practice* (Newport, R.I.: U.S. Naval War College, Spring 2009), VIII-19.

18. Milan N. Vego, *Joint Operational Warfare Theory and Practice* (Newport, R.I.: U.S. Naval War College, Spring 2009), III-35.

19. The U.S. Navy, with the exception of submarines, does not possess any maritime assets capable of projecting and sustaining U.S. power or asserting U.S. sovereignty in the region. The Department of Homeland security, specifically the Coast Guard, effectively has two capable Polar class ice breakers, one of which is at the end of its 30 year service life, that are capable of promoting and sustaining U.S. interests in the region. However, maintenance cycles and commitments to annual Antarctica missions already overstretch the operational capacity of the Polar ice breaker fleet. In October of 2007, the Coast Guard attempted to fly a C130 to the North Pole, but had to turn back to Alaska 500 miles from their objective after the temperature started to drop below -40F because Coast Guard C130s are not equipped with heated fuel tanks. Air force and

Navy fighter and bomber aircraft appear to be the only real asset to assert U.S. presence in the region. Additionally, Customs and Border Patrol (CBP) and Immigration and Customs Enforcement (ICE) do not have aircraft of surface assets capable of operations in the extreme Arctic environment. The National Science Foundation (NSF) relies on the Coast Guard for its Arctic requirements, but has ventured to contracting foreign vessels for U.S. science operations in the past due to the lack of Coast Guard polar assets as well as the ability to save money. Having the NSF reliant on foreign powers to promote U.S. science endeavors might pose security and sovereignty issues. National Research Council, *Polar Ice Breakers In A Changing World*, U.S. Government Report (Washington, DC: National Academy of Sciences, 2007), 59. Also, see Gene Brooks, "Arctic Journal," 19 September 2008, <http://www.d17.uscgnews.com/go/doc/780/230836/&printerfriendly=1> (accessed 21 February 2010).

20. U.S. Navy, Office of the Vice Chief of Naval Operations, "Navy Arctic Roadmap" (Washington, DC: Department of the Navy, Vice Chief of Naval Operations, 10 November 2009), 3-7; Ronald O'Rourke, *Changes in the Arctic: Background and Issues for Congress*, Congressional Research Report (Washington, DC: Congressional Research Service, 21 July 2010), 36-37; National Ice Center, *Impact of an Ice-Diminishing Arctic on Naval and Maritime Operations*, Summary Report (Washington, DC: National Ice Center, July 2007), 15; Gene Brooks, "Arctic Journal," 19 September 2008, <http://www.d17.uscgnews.com/go/doc/780/230836/&printerfriendly=1> (accessed 21 February 2010).

21. Ronald O'Rourke, *Changes in the Arctic: Background and Issues for Congress*, Congressional Research Report (Washington, DC: Congressional Research Service, 21 July 2010), 39.

22. Michael Carden, "Military Support to Mitigate Oil Spill Continues," *American Forces Press Service*, 15 July 2010, <http://www.defense.gov/news/> (accessed 14 March 2011).

23. SDNR Staff, "Crippled Cruise Ship under tow; arrives in San Diego," *San Diego News Room*, 11 November 2010, http://sandiegonewsroom.com/news/index.php?option=com_content&view=article&id=42870:crippled-cruise-ship-under-ttow-arrives-in-san-diego&catid=87:regional-news&Itemid=89/ (accessed 14 March 2011).

24. Bill Cormier, "Iceberg Sinks Cruise Ship Off Antarctica," *National Geographic News*, 24 November 2007, <http://news.nationalgeographic.com/news/> (accessed 14 March 2011). Note, a growler is an iceberg that is less than 1 meter in size which makes it difficult to detect on the water's surface since the majority of its mass is submerged. As such, growlers are extremely dangerous to shipping because they often evade detection from the human eye and radar.

25. Michael Byers, *Who Owns the Arctic?* (Vancouver, B.C. CA: Douglas & MacIntyre, 2009), 18; Canadian Standing Senate Committee on Fisheries and Oceans, *Controlling Canada's Arctic Waters: Role of the Canadian Coast Guard*, Canadian Government Report (Ottawa, Canada: Canadian Senate, December 2009), v-vi.

26. Paul A. Berkman, *Environmental Security in the Arctic Ocean* (United Services Institute for Defence and Security Studies, Philadelphia, PA: Taylor & Francis, 2010), 39-41.

27. Arctic Council, "Declaration on the Establishment of the Arctic Council," Ottawa, Canada, 19 September 1996, 2.

28. *Arctic Region Policy*, *National Security Presidential Directive/NSPD 66 and Homeland Security Presidential Directive/HSPD 25* (9 January 2009), 3, <http://www.fas.org/irp/offdocs/nspd/nspd-66.htm/> (accessed 22 February 2011).

-
29. "The Ilulissat Declaration," *Arctic Ocean Conference* (Ilulissat, Greenland, 27-29 May 2008).
30. United States Northern Command, "About USNORTHCOM," <http://www.northcom.mil/about/index.html> (accessed 18 February 2011).
31. "Agreement Signed for integrated defense of Alaska," USMILNET, 29 June 2009, <http://usmilnet.com/smf/index.php?> (accessed 4 April 2011).
32. Lee Rowland and Steve Tatham, *Strategic Communication & Influence Operations: Do We Really Get It?*, Defence Academy of the UK Report 10/08 (Shrivenham, England: Defence Academy of the UK, 2008), 6.
33. Abu Muqawama, "Israel to CENTCOM?" *CNAS.org*, 15 March 2010, <http://www.cnas.org/blogs/abumuqawama/2010/03/israel-centcom.html/> (accessed 18 March 2011).
34. Lauren Ploch, *Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Congressional Research Report (Washington, DC: Congressional Research Service, 16 November 2010), 4-6. Also see, Samuel Makinda, "Why AFRICOM Has Not Won Over Africans," *CSIS.org*, 2010, <http://csis.org/blog/why-africom-has-not-won-over-africans/> (accessed 18 March 2011).
35. Katarzyna Zysk, "Russia's Arctic Strategy," *Joint Forces Quarterly* 57, 2nd Quarter (2010): 109.
36. Katarzyna Zysk, "Russia's Arctic Strategy," *Joint Forces Quarterly* 57, 2nd Quarter (2010): 105.
37. Katarzyna Zysk, "Russia's Arctic Strategy," *Joint Forces Quarterly* 57, 2nd Quarter (2010): 106. Also see, US Coast Guard District 17, "USCG D17 Arctic Brief," Powerpoint, 27 January 2011, <http://uscg.mil/d17/arcticoverview.pdf/> (accessed 25 March 2011).
38. Katarzyna Zysk, "Russia's Arctic Strategy," *Joint Forces Quarterly* 57, 2nd Quarter (2010): 108.
39. *Presidential Memorandum-Unified Command Plan 2011* (6 April 2011), <http://whitehouse.gov/the-press-office/2011/04/06/presidential-memorandum-unified-command-plan/> (accessed 11 April 2011).
40. *Presidential Memorandum-Unified Command Plan 2011* (6 April 2011), <http://whitehouse.gov/the-press-office/2011/04/06/presidential-memorandum-unified-command-plan/> (accessed 11 April 2011). Also see, SWJ Editors, "DOD Releases Unified Command Plan 2011," *Small Wars Journal*, 9 April 2011, <http://smallwarsjournal.com/blog/2011/04/print/dod-releases-unified-command-plan/> (accessed 11 April 2011); James Kraska, "Arctic Strategy and Military Security," *In Changes in the Arctic Environment And The Law Of The Sea*, by Myron H. Nordquist and Thomas H. Heidar (The Netherlands: Martinus Nijhoff Publications, 2010), 254.
41. Notionally, each of these JIATF-PNs would be tailored to their respective GCCs. For instance, it is feasible that the JIATF-PN in NORTHCOM will be primarily focused on domestic issues and homeland security first and foremost, with international issues being secondary in nature. While the JIATF-PN in EUCOM would be focused primarily on international issues involving European Arctic nations and Russia as well as homeland defense, with U.S. domestic issues being a lesser concern. With respect to PACOM, though now obsolete, their tentative role would have focused primarily on homeland defense and in engaging PACOM regional countries, such as China, with interests and activities in the Arctic Ocean and region, including ice breaker operations. In NORTHCOM, the Coast Guard District 17 Admiral could be 'dual-hatted' as the JIATF-PN NORTHCOM commander and as the CG D17 Commander. The deputy could be a member from DOD or another federal agency with Arctic responsibilities. For EUCOM, a DOS representative could head that JIATF-

PN with the deputy being a member of DOD.

42. James Kraska, "Arctic Strategy and Military Security," *In Changes in the Arctic Environment And The Law Of The Sea*, by Myron H. Nordquist and Thomas H. Heidar (The Netherlands: Martinus Nijhoff Publications, 2010), 257. Also see, Christopher P. Cavas, "Roughead says Russian, Chinese navies growing," *NavyTimes*, 16 March 2011, <http://navytimes.com/news/2011/03/defense-navy--cno-assesses-russian-chinese-navies-031611/> (accessed 4 April 2011).

APPENDIX

ARCTIC 101 – OPPORTUNITIES and ISSUES

There are many definitions that define the Arctic. For this paper, the Arctic includes the water and land masses, above the Arctic Circle (66.30 deg North).¹ Arctic coastal states, those nations with maritime coasts above the Arctic Circle along the Arctic ocean, include Canada, Greenland (Denmark), Norway, the Russian Federation, and the United States. Other Arctic states, those countries with territory above the Arctic Circle without a coastline along the Arctic Ocean, include Sweden, Finland, and Iceland.² Regarding the United States Unified Command Plan (UCP), the Arctic is managed by three Geographical Combatant Commands (GCCs) - Pacific Command (PACOM), Northern Command (NORTHCOM), and European Command (EUCOM) – that intersect at the North Pole.

What does the Arctic have to offer and why is there a potential for friction and conflict in the region? The answer is money and opportunity, and the potential for more of both. Unlike Antarctica, in which countries have claimed portions of the continent, but do not truly own, the Arctic land masses are already the sovereign territory of the Arctic countries, which affords them rights and privileges, including access to fisheries, oil, natural gas, and minerals, within their established Exclusive Economic Zone (EEZ). However, there are boundary and territorial disputes between several of the Arctic coastal states. These disputes are fueled by the potential for certain Arctic coastal states to gain additional territory and/or more favorable borders which will expand their EEZs, essentially allowing greater access to additional natural resources along the Arctic sea bed.

There are currently three actively disputed maritime boundaries and territories in the Arctic. The first concerns the United States and the Russian Federation and involves the Bering Sea. The second involves the United States and Canada regarding the Beaufort Sea. Which according to Canada's National Energy Board contains enough [natural] gas "to supply Canada for 20 years."³ The third involves Greenland (Denmark) and Canada over the ownership of Hans Island.⁴ There was a fourth dispute regarding the Barents Sea, the so called 'gray zone,' that involved Norway and the Russian Federation, but that issue was peacefully resolved in September, 2010 after nearly forty years of being contested. This 'gray zone' is estimated to contain "1.36 billion tones [tons] of crude and 5.87 trillion cubic meters of natural gas."⁵

Additionally, and perhaps the biggest catalyst for activity, is the ability of the Arctic coast states to enlarge their EEZs beyond the normally established 200 nautical mile. Those Arctic coastal states that are parties to the UNCLOS, for which all the Arctic coastal states are with the exception of the United States, are permitted to submit claims if they can prove their respective continental shelves extend further beyond the limits. To date, four of the five Arctic states entitled under the UNCLOS article 76 have submitted claims to extend their continental shelf. Including one by the Russian Federation in an attempt to claim half the Arctic as well as the North Pole. This was denied, but the Russian Federation is resubmitting, as they attempt to claim ownership of the Lomonosov Ridge which bisects the Arctic. Canada is claiming the Lomonosov Ridge as well.⁶ What is at stake is vast amounts of oil and natural gas. "The Arctic accounts for about 13 percent of the undiscovered oil and 30 percent of the undiscovered natural gas...in the world. About 84 percent of the estimated resources are expected to occur offshore."⁷

Finally, the opening of the Arctic allows for three potential short-cuts in maritime trade routes: Over the top, the Northwest Passage (NWP), and Northern Sea Route (NSR). The over the top route will not be discussed given that its use involves uncontested waters. The NWP connects the Atlantic and Pacific Oceans by way of a route over North America. The NSR connects the Atlantic and Pacific by way of a route over Asia and Europe. A trip from Europe to Asia is 4,700 miles shorter by way of the NWP than the Panama Canal.⁸ A trip from London to Yokohama is 7,200 nautical miles by way of the NSR versus 11,400 nautical miles via the Suez Canal or 14,750 nautical miles by way of the Cape of Good Hope.⁹ It is easy to see how these maritime trade routes become more appealing as the Arctic continues to melt and facilitate passage. However, both Canada, with respect to the NWP, and the Russian Federation, with respect to the NSR, claim that portions of these routes are in fact internal waters, and thus are subject to their jurisdiction. The United States as well as several other European and world nations view the passages as international waters, and, as such, apply freedom of navigation and transit passage.¹⁰

APPENDIX NOTES

1. Ronald O'Rourke, *Changes in the Arctic: Background and Issues for Congress*, Congressional Research Report (Washington, DC: Congressional Research Service, 21 July 2010), 1.
2. Ronald O'Rourke, *Changes in the Arctic: Background and Issues for Congress*, Congressional Research Report (Washington, DC: Congressional Research Service, 21 July 2010), 2.
3. Sian Griffiths, "US-Canada Arctic border dispute key to maritime riches," *BBC News US & Canada*, 2 August 2010. <http://www.bbc.co.uk.news.world-us-canada-10834006/> (accessed 29 March 2011).
4. Ronald O'Rourke, *Changes in the Arctic: Background and Issues for Congress*, Congressional Research Report (Washington, DC: Congressional Research Service, 21 July 2010), 11.
5. ITAR-TASS, "State Duma ratifies Russian-Norwegian treaty on waters division cooperation," ITAR-TASS.com, 25 March 2011, <http://itar-tass.com/eng/prnt.html?newsID=1608901/> (accessed 29 March 2011). Also see, Andrew Kramer, "Russia and Norway Agree on Boundary," *The New York Times*, 15 September 2010, http://www.nytimes.com/2010/09/16/world/europe/16russia.html?_r= (accessed 29 March 2011).
6. RFI Staff, "Battle over seabed begins as Arctic Forum gets underway in Moscow," *RFI*, 22 September 2010, <http://www.english.rfi.fr/americas/20100922-arctic-forum-gets-underway-moscow-countries-battle-share-seabed/> (accessed 29 March 2011).
7. U.S. Geological Survey, "90 Billion Barrels of Oil and 1,670 Trillion Cubic Feet of Natural Gas Assessed in the Arctic," *USGS.gov*, 23 August 2008, http://www.usgs.gov/newsroom/article.asp?ID=1980&from=rss_home/ (accessed 22 March 2011).
8. "As ice melts, debate over Northwest Passage heats," *USATODAY.com*, 4 April 2006, http://www.usatoday.com/news/world/2006-04-03.nwpassage-debate_x.htm (accessed 29 March 2011)
9. Halvor Schoyen and Svein Brathen, "Bulk Shipping Via The Northern Sea Route Versus Via the Suez Canal: Who will Gain From a Shorter Transport Route?," *World Conference on Transport Research* (Lisbon, Portugal: July 2010), 2.
10. James Kraska, "Arctic Strategy and Military Security," *In Changes in the Arctic Environment And The Law Of The Sea*, by Myron H. Nordquist and Thomas H. Heidar (The Netherlands: Martinus Nijhoff Publications, 2010), 272-278.

BIBLIOGRAPHY

- ABB Communications. "ABB marine technology helps open new seaway between Europe and Asia." *ABB Communications*, 6 December 2010. <http://abb.com.pe/cawp/> (accessed 22 March 2011).
- "Agreement Signed for Integrated Defense of Alaska." USMILNET, 29 June 2009. <http://usmilnet.com/smf/index.php?> (accessed 4 April 2011).
- Arctic Council. Declaration on the Establishment of the Arctic Council. Ottawa, Canada, 19 September 1996.
- Arctic Region Policy. National Security Presidential Directive/NSPD 66 and Homeland Security Presidential Directive/HSPD 25*, 9 January 2009. <http://www.fas.org/irp/offdocs/nspd/nspd-66.htm/> (accessed 22 February 2011).
- "Arctic search and rescue treaty in works." CBC.ca News, 6 January 2011. <http://license.icopyright.net/> (accessed 25 March 2011).
- Arnas, Neyla, Charles Barry, and Robert B. Oakley. *Harnessing the Interagency for Complex Operations*. Position Paper, Washington, D.C.: National Defense University, August 2005.
- Backus, George A., and James H Strickland. *Climate-Derived Tensions in the Arctic Security*. Sandia Report, Albuquerque, NM: Sandia National Laboratories, September 2008.
- Berkman, Paul A. *Environmental Security in the Arctic Ocean*. United Services Institute for Defence and Security Studies, Philadelphia, PA: Taylor & Francis, 2010.
- Bogdanos, Matthew F. "Joint Interagency Cooperation: The First Step." *Joint Force Quarterly*, no. 37 (2005): 10-18.
- Borgerson, Scott G. "Arctic Meltdown." *Foreign Affairs*, March/April 2008.
- Brigham, Lawson W. "The Fast-Changing Maritime Arctic." *U.S. Naval Proceedings*, May 2010: 54-59.
- Broad, William, and Judith Miller. "The World: Live AMMO; The Threat of Germ Weapons Is Rising. Fear, Too." *The New York Times*, 27 December 1998. <http://www.nytimes.com/1998/12/27/weekinreview/> (accessed 30 March 2011).
- Brooks, Gene. "Arctic Journal," 19 September 2008. <http://www.d17.uscgnews.com/go/doc/780/230836/&printerfriendly=1/> (accessed 21 February 2010).
- Brown, John S. "Spans of Control." *Army*, no. 56, Iss. 8 (2006): 78-79.
- Buchanan, Jeffrey, Maxie Y. Davis, and Wight, T. Lee. "Death of the Combatant Command? Toward a Joint Interagency Approach." *Joint Force Quarterly*, no. 52 (1st Quarter 2009): 92-96.

- Byers, Michael. *Who Owns the Arctic?* Vancouver, B.C. CA: Douglas & McIntyre, 2009.
- Canadian Armed Forces. *Arctic/Offshore Patrol Ship*. 16 February 2011.
<http://www.forces.gc.ca/aete/arcticoffshorepatrolshippmoaops-projectnavirevaisseaudpatrol/> (accessed 22 March 2011).
- Canadian Standing Senate Committee on Fisheries and Oceans. *Controlling Canada's Arctic Waters: Role of the Canadian Coast Guard*. Canadian Government Report. Ottawa, Canada: Canadian Senate, December 2009.
- Carden, Michael. "Military Support to Mitigate Oil Spill Continues." *American Forces Press Service*, 15 July 2010. <http://www.defense.gov/news/> (accessed 14 March 2011).
- Cavas, Christopher P. "Roughead says Russian, Chinese navies growing." *NavyTimes*, 16 March 2011. <http://www.navytimes.com/news/2011/03/defense-navy--cno-assesses-russian-chinese-navies-031611/> (accessed 4 April 2011).
- Cohen, Ariel. "From Russian Competition to Natural Resources Access: Recasting U.S. Arctic Policy." *Background*, 15 June 2010: 1-13.
- Cormier, Bill. "Iceberg Sinks Cruise Ship off Antarctica." *National Geographic News*, 24 November 2007. <http://news.nationalgeographic.com/news/> (accessed 14 Mar 2011).
- Cruise Industry News. "Clipper Adventurer Runs Aground in Arctic." *Cruise Industry News*, 30 August 2010. <http://www.cruiseindustrynews.com/cruise-news/4413-83010-clipper-adventurer-runs-aground-in-arctic/> (accessed 22 March 2011).
- Dale, Catherine, Nina Serafino, and Pat Towell. *Organizing the U.S. Government for National Security: Overview of the Interagency Reform Debates*. Congressional Research Report, Washington, D.C.: Congressional Research Service, 18 April 2008.
- Directorate-General for Maritime Affairs and Fisheries. *Legal Aspects of Arctic Support*. European Union Summary Report, Luxembourg: European Union, February 2010.
- Dunning, Harold P. "The Joint Interagency Coordinating Group: Expanded Use and Reserve Manning." *The Officer*, December 2006: 91-95.
- Ebinger, Charles K., and Evie Zambetakis. "The geopolitics of Arctic melt." *International Affairs* 85, no. 6 (2009): 1215-1232.
- Elmquist. "Arctic may melt before U.S. ready for northern ocean defense." *National Security Zone*, 17 August 2010. <http://nationalsecurityzone.org/site/artic-may-melt-before-u-s-ready-for-northern-ocean-defense/> (accessed 2 April 2011).
- Gabriel, Dana. "NATO Arctic Security and Canadian Sovereignty in the Far North." *Global Research*, 22 November 2010.
<http://globalresearch.ca/printarticle.php?articleID=22048/> (accessed 22 February 2011).

- Galgano, Francis A., and Eugene J. Palka. *Modern Military Geography*. New York, NY: Routledge, 2011.
- Gedeon, Julie. "Preparedness for dealing with Arctic oil spills remains small-scale at best." *Canadian Sailings*, 21 February 2011. <http://www.canadiansailings.ca/editorial/specialreports/> (accessed 22 March 2011).
- Gillies, Rob. "Canada intercepts two Russian bomber planes." *The Washington Times*, 25 August 2010. <http://www.washingtontimes.com/news/2010/> (accessed 22 March 2011).
- Griffiths, Sian. "US-Canada Arctic border dispute key to maritime riches." *BBC News US & Canada*, 2 August 2010. <http://www.bbc.co.uk/news/world-us-canada-10834006?/> (accessed 29 March 2011).
- Gunitskiy, Vsevolod. "On Thin Ice: Water Rights and Resource Disputes In the Arctic Ocean." *Journal of International Affairs*, Spring/Summer 2008: 261-271.
- Huebert, Rob. "Cooperation or Conflict in the Arctic?" *In Changes in the Arctic Environment And The Law Of The Sea*, by Myron H. Nordquist and Thomas H. Heidar, 27-60. The Netherlands: Martinus Nijhoff Publications, 2010.
- "As ice melts, debate over Northwest Passage heats." *USATODAY.com*, 4 April 2006. http://www.usatoday.com/news/world/2006-04-03.nwpassage-debate_x.htm/ (accessed 29 March 2011).
- "The Ilulissat Declaration." Arctic Ocean Conference. Ilulissat, Greenland, 27-29 May 2008.
- "Intervention Lesson: Better Civil-Military Coordination, Solana Says." *Defense Daily International*, 28 October 2005: 1. <http://proquest.umi.com/pdqweb?index=70&sid=27srchmode=1&vinst=PROD/> (accessed 24 February 2011).
- ITAR-TASS. "State Duma ratifies Russian-Norwegian treaty on waters division cooperation." *ITAR-TASS.com*, 25 March 2011. <http://itar-tass.com/eng/prnt.html?NewsID=16089901/> (accessed 29 March 2011).
- Jakobson, Linda. "China Prepares For An Ice-Free Arctic." *SIPRI Insights on Peace and Security* 2010, no. 2 (March 2010): 1-15.
- Johnson, Spencer W. "New Challenges for the Unified Command Plan." *Joint Force Quarterly*, Summer 2002: 62-70.
- Keen, P.K., Matthew G. Elledge, Charles W. Nolan, and Jennifer L. Kimmey. "Foreign Disaster Response Joint Task Force-Haiti Observations." *Military Review*, November-December 2010: 85-96.
- Kramer, Andrew. "Russia and Norway Agree on Boundary." *The New York Times*, 15 September 2010.

- (http://www.nytimes.com/2010/09/16/world/europe/16russia.html?_/ (accessed 29 March 2011)).
- Kraska, James. "Arctic Strategy and Military Security." *In Changes in the Arctic Environment And The Law Of The Sea*, by Myron H. Nordquist and Thomas H. Heidar, 251-282. The Netherlands: Martinus Nijhoff Publications, 2010.
- Lawner, Daniel, Brandon Kaster, and Natalie Matthews. "Recipes for Failure and Keys to Success in Interagency Cooperation: Two Case Studies." *Defense Concepts* 4, no. 4 (2010): 22-31.
- Macalister, Terry. "Climate change could lead to Arctic conflict, warns senior NATO Commander." *Guardian.co.uk*, 11 October 2010.
<http://www.guardian.co.uk/environment/2010/oct/11/nato-conflict-arctic-resources/> (accessed 22 February 2011).
- Makinda, Samuel. "Why AFRICOM Has Not Won Over Africans." *CSIS.org*, 2010.
<http://csis.org/blog/why-africom-has-not-won-over-africans/> (accessed 18 March 2011).
- Mandeles, Mark D. "Imposing Order on Chaos: Establishing JTF Headquarters." *JCOA Journal*, Summer 2010: 21-32.
- Mansager, Tucker B. "Interagency Lessons Learned in Afghanistan." *Joint Force Quarterly*, no. 40 (First Quarter 2006): 80-84.
- Meikle, James. "BP oil spill: new cap 'sucessfully installed' on leaking well." *Guardian.co.uk*, 13 July 2010.
<http://www.guardian.co.uk/environment/2010/jul/13/bp-oil-spill-containment-cap/> (accessed 14 March 2011).
- Muqawama, Abu. "Israel to CENTCOM?" *CNAS.org*, 15 March 2010.
<http://www.cnas.org/blogs/abumuqawama/2010/03/israel-centcom.html/> (accessed 18 March 2011).
- National Ice Center, *Impact on an Ice-Diminishing Arctic on Naval and Maritime Operations*. Summary Report, Washington, DC: National Ice Center, July 2007.
- National Research Council. *Polar Icebreakers In A Changing World*. U.S. Government Report, Washington, D.C.: National Academy of Sciences, 2007.
- "Northwest Passage traffic up in 2010." *CBC News*, 20 September 2010.
<http://www.cbc.ca/news/canada/north/story/> (accessed 22 March 2011).
- "Norway's command centre open for business." *SIKU news*, 11 November 2010.
<http://www.sikunews.com/> (accessed 22 March 2011).
- Oakley, Robert B., and Michael Casey. "The Country Team Restructuring America's First Line of Engagement." *Joint Force Quarterly*, no. 47 (Fourth Quarter 2007): 146-154.

- Office of the Chairman of the Joint Chiefs of Staff. *Joint Operations (Joint Publication 3-0)*. Washington, D.C.: CJCS, 22 March 2010, incorporating change 2.
- Office of the Chairman of the Joint Chiefs of Staff. *Command and Control for Joint Air Operations (Joint Publication 3-30)*. Washington, D.C.: CJCS, 5 June 2003.
- Office of the Chairman of the Joint Chiefs of Staff. *Joint Operational Planning (Joint Publication 5-0)*. Washington, D.C.: CJCS, 26 December 2006.
- Office of the Chairman of the Joint Chiefs of Staff. *The National Military Strategy of the United States of America*. Washington, D.C.: CJCS, 8 February 2011.
- "Operation Nanook Reaches Successful Conclusion." 30 August 2010.
<http://news.gc.ca/web/article-eng.do;jsessionid=ac1b105330d821a833c60bf24fee883668e6/> (accessed 22 March 2011).
- O'Rourke, Ronald. *Changes in the Arctic: Background and Issues for Congress*. Congressional Research Report, Washington, D.C.: Congressional Research Service, 21 July 2010.
- Pope, Robert S. "U.S. Interagency Regional Foreign Policy Implementation: A Survey of Current Practice and an Analysis of Options for Improvement." Research Paper, Maxwell, Alabama: Air Command and Staff College, 2010.
- Ploch, Lauren. *Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*. Congressional Research Report, Washington, D.C.: Congressional Research Service, 16 November 2010.
- Presidential Memorandum-Unified Command Plan 2011*, 6 April 2011.
<http://www.whitehouse.gov/the-press-office/2011/04/06/presidential-memorandum-unified-command-plan/> (accessed 11 April 2011).
- Rankine, Gordon. *Russia - Opportunities for UK-Based Companies in the Ports Sector*. UK Trade & Investment Report. London, UK: UK Trade & Investment, 2010.
- RFI staff. "Battle over seabed begins as Arctic Forum gets underway in Moscow." *RFI*, 22 September 2010. <http://www.english.rfi.fr/americas/20100922-arctic-forum-gets-underway-moscow-countries-battle-share-seabed/> (accessed 29 March 2011).
- Richter-Menger, J. and J.E. Overland. *Arctic Report Card 2010*. Annual Report. NOAA: 2010. <http://www.arctic.noaa.gov/reportcard/arcticreportcard/> (accessed 28 February 2011).
- Robbin, Daryl. "Arctic Defense Concerns: The Need to Reorganize United States Defense Structure To Meet Threats in a Changing Arctic Region." Research Paper, Newport, RI: U.S. Naval War College, Joint Military Operations Department, 2010.
- Rogoff, Alice. "Alaska Dispatch to host Arctic conference." *AlaskaDispatch*, 1 March 2011. <http://www.alaskadispatch.com/> (accessed 2 April 2011).

- Roi, Michael L. "Russia: The Greatest Arctic Power?" *Journal of Slavic Military Studies*, 2010. <http://www.informaworld.com/> (accessed 22 February 2011).
- Rowland, Lee and Steve Tatham. *Strategic Communication & Influence Operations: Do We Really Get It?*. Defence Academy of the UK Report 10/08. Shrivenham, England: Defence Academy of the UK, 2008.
- Roosevelt, Ann. "Interagency Group Concept Successful In Multinational Experiment." *Defense Daily international*, 26 March 2004: 1. <http://proquest.umi.com/> (accessed 24 February 2011).
- Rowe, Elana Wilson, and Stina Torjesen. *The Multilateral Dimension in Russian Foreign Policy*. New York, NY: Routledge, 2009.
- "Russian ship makes record time on historic round trip through Northern Sea Route." *Canadian Sailings*, 21 February 2011. <http://www.canadiansailings.ca/editorial/specialreports/> (accessed 22 March 2011).
- Schoyen, Halvor, and Svein Brathen. "Bulk Shipping Via The Northern Sea Route Versus Via the Suez Canal: Who will Gain From a Shorter Transport Route?" *World Conference on Transport Research*. Lisbon, Portugal, 11-15 July 2010. 1-28.
- SDNR Staff. "Crippled cruise ship under tow; arrives in San Diego." *San Diego News Room*, 11 November 2010. http://sandigonewsroom.com/news/index.php?option=com_content&view=article&id=42870:crippled-cruise-ship-under-ttow-arrives-in-san-diego&catid=87:regional-news&Itemid=89/ (accessed 14 March 2011).
- SWJ Editors. "DOD Releases Unified Command Plan 2011." *Small Wars Journal*, 9 April 2011. <http://smallwarsjournal.com/blog/2011/04/print/dod-releases-unified-command-plan/> (accessed 11 April 2011)
- Sutherland, JJ. "Thad Allen And Lessons Learned From the Gulf Oil Spill." *NPR*, 9 September 2010. <http://www.npr.org/blogs/thetwo-way/2010/09/08/129726292/admiral-that-allen-and-lessons-learned-from-the-gulf-oil-spill/> (accessed 31 March 2011).
- Swanson, Norah. "Problem-solving requires cooperation, says retired Adm. Thad Allen." *Government Executive.com*, 1 November 2010. http://www.govexec.com/story_page_pf.cfm?articleid=46424/ (accessed 31 March 2011).
- Tangredi, Sam J. *Globalization and Maritime Power*. Honolulu, HI: University Press of the Pacific, 2004.
- Titely, David W. "Arctic Security Considerations and the U.S. Navy's Roadmap for the Arctic." *Naval War College Review* 63, no. 2 (Spring 2010): 35-48.
- U.S. Coast Guard District 17. "USCG D17 Arctic Brief." Powerpoint. 27 January 2011. <http://uscg.mil/d17/arcticoverview.pdf/> (accessed 25 March 2011).

- U.S. Congress. House and Senate. "Statement of United States European Command." 111th Cong., 2010.
- U.S. Congress. House and Senate. "Statement of Commander U.S. Northern Command and Northern American Aerospace Defense Command." 111th cong., 2010.
- U.S. Congress. House and Senate. "Statement of U.S. Pacific Command on U.S. Pacific Command Posture." 111th cong., 2010.
- U.S. Geological Survey. "90 Billion Barrels of Oil and 1,670 Trillion Cubic Feet of Natural Gas Assessed in the Arctic." *USGS.gov*, 23 August 2008.
http://www.usgs.gov/newsroom/article.asp?ID=1980&from=rss_home/ (accessed 22 March 2011).
- U.S. Navy. Office of the Vice Chief of Naval Operations. *Navy Arctic Roadmap*. Washington, DC: Department of the Navy, Vice Chief of Naval Operations, 10 November 2009.
- United States Northern Command. *About USNORTHCOM*.
<http://www.northcom.mil/about/index.html> (accessed 18 February 2011).
- Van Pay, Brian J. "National Maritime Claims in the Arctic." *In Changes In The Arctic Environment And The Law Of The Sea*, by Myron H. Nordquist and Tomas H. Heidar, 61-80. Leiden, The Netherlands: Martinus Nijhoff Publishers, 2010.
- Vego, Milan N. *Joint Operational Warfare Theory and Practice*. Newport, R.I.: U.S. Naval War College, Spring 2009.
- Vego, Milan. *Operational Warfare at Sea Theory and Practice*. New York: Routledge, 2009.
- Yeatman, Richard M. "JIATF-South Blueprint for Success." *Joint Force Quarterly*, no. 42 (3rd Quarter 2006): 26-27.
- Young, Oran R. "The Future of the Arctic: cauldron of conflict or zone of peace?" *International Affairs* 87, no. I (2011): 185-193.
- Zysk, Katarzyna. "Russia's Arctic Strategy." *Joint Forces Quarterly*, issue 57, 2nd Quarter (2010): 103-110.