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14. ABSTRACT

National intelligence estimates support the contention that climate change will have wide-ranging implications for U.S. national security interests over the next few decades. Similarly, in 2013 Navy Admiral Samuel Locklear, Commander of U.S. Pacific Command, identified climate change as the Pacific region's biggest long-term security threat, stating that it "is probably the most likely thing that is going to happen ...that will cripple the security environment, probably more likely than the other scenarios we all often talk about." However, some commentators have argued that climate change is simply not a national security issue in the traditional sense, as it does not concern the survival of the state, and is not related to threats of military aggression by other states. The 2014 Center for Naval Analyses (CNA) Military Advisory Board, made up of 16 retired Generals and Admirals from the U.S. Armed Forces, asserted that the risks associated with climate change are "comprehensive and accelerating." They also state that "the observed rapidity of climate change" is producing effects that have the potential to elevate from "threat multipliers" to "catalysts for conflict." In light of the arguments presented, U.S. treatment and categorization of climate change as an important to vital national interest is appropriate. Thus, the nation must continue to allocate the proper resources to address the issue, including to the military and its non-combat operations that will be stressed most as a result of

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MASTER OF MILITARY STUDIES

VITALLY IMPORTANT: ANALYZING AND ASSESSING AMERICA'S TREATMENT OF GLOBAL CLIMATE CHANGE WITH RELATION TO NATIONAL SECURITY

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

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Executive Summary

Title: Vitally Important: Analyzing And Assessing America's Treatment Of Global Climate Change With Relation To National Security.

Author: Major Terrance J. Reese, United States Marine Corps

Thesis: The United States should treat climate change as a vital national security interest due to the potential impacts that its destabilizing global effects can have on U.S. national security and military strategy.

Discussion: National intelligence estimates support the contention that climate change will have wide-ranging implications for U.S. national security interests over the next few decades. Similarly, in 2013 Navy Admiral Samuel Locklear, Commander of U.S. Pacific Command, identified climate change as the Pacific region's biggest long-term security threat, stating that it "is probably the most likely thing that is going to happen ...that will cripple the security environment, probably more likely than the other scenarios we all often talk about." However, some commentators have argued that climate change is simply not a national security issue in the traditional sense, as it does not concern the survival of the state, and is not related to threats of military aggression by other states.

Applying the Stolberg framework for crafting national interests to assess the U.S. national strategic documents' treatment of climate change, it is clear that the U.S. has indeed linked climate change to national security. Climate change falls most readily within the fourth U.S. enduring interest of maintaining an international order, or as Stolberg puts it, a "stable and secure world order," which the 2010 *National Security Strategy* states is "inextricably intertwined" with the other three enduring interests of ensuring security, while promoting prosperity and respect for universal values at home and abroad. However, the new 2015 *National Security Strategy* took a significant step forward in linking climate change to national security as it lists the issue as one of the nation's top strategic risks to U.S. interests, and elevates its discussion into the security section of the document. Based on this assessment, it is apparent that the U.S. has elected to treat climate change as at least an important, and arguably a vital national security issue.

Conclusion: The 2014 Center for Naval Analyses (CNA) Military Advisory Board, made up of 16 retired Generals and Admirals from the U.S. Armed Forces, asserted that the risks associated with climate change are "comprehensive and accelerating." They also state that "the observed rapidity of climate change" is producing effects that have the potential to elevate from "threat multipliers" to "catalysts for conflict." In light of the arguments presented, U.S. treatment and categorization of climate change as an important to vital national interest is appropriate. Thus, the nation must continue to allocate the proper resources to address the issue, including to the military and its non-combat operations that will be stressed most as a result of the global impacts. This is important even during a fiscally constrained economic environment. Further, the United States must integrate the national security consequences of global climate change into defense planning, and the military must also plan for its effects.

Table of Contents

Page

DISCLAIMER i

EXECUTIVE SUMMARY ii

PREFACE v

INTRODUCTION 1

BACKGROUND 2
Proponents for Linking Climate Change and National Security 2
Opponents for Linking Climate Change and National Security 7

THE NATIONAL INTEREST CRAFTING FRAMEWORK 10

ANALYZING THE CURRENT U. S. NATIONAL STRATEGIC DOCUMENTS 14
National Security Strategy 15
Quadrennial Defense Review 20
National Military Strategy 22

APPROPRIATENESS OF LINK AND CATEGORIZATION 24

CONCLUSION 30

ENDNOTES 33

BIBLIOGRAPHY 37

List of Tables

Page

Table 1. Categorization and Prioritization of National Interests 12

Table 2. Prioritization of Climate Change in the National Security Strategy relative to Stolberg's Core Interests.....16

Preface

Climate change is a controversial issue that has been fiercely debated. This debate has centered mainly on the cause of climate change; that is, whether it is naturally occurring or manmade. Recent literature suggests climate change should be viewed as a potential security threat. Until the last several years, however, there were few assessments that linked climate change and national security. Further, the dialog concerning whether to link climate change and security is just as fierce as the debate over climate change's cause. Still, an appropriate lens through which to assess and analyze whether this link should be established, and if so, to what extent, had yet to reveal itself. However, Dr. Alan G. Stolberg's article entitled "Crafting National Interests in the 21st Century," filled this void. Dr. Stolberg's work provided an excellent framework for examining the extent of the link between climate change and national security from the perspective of the United States. In this paper, the framework was utilized to analyze the U.S. national strategic documents, assess U.S. treatment of climate change as a national security interest, and evaluate whether the treatment is appropriate.

To my beautiful wife Chanelle, thank you for your patience and encouragement throughout this arduous process. You are truly the engine that drives our family. To my three sons, Terrance Jr., Cason, and Jeremiah, thank you for allowing the time and space necessary to complete this project. To Dr. Matthew Slater, Dr. Edward Erickson, and Dr. John W. Gordon, thanks to all of you for providing mentorship, guidance, and support throughout this endeavor. Finally, to Dr. Stolberg, a special thanks to you for providing a construct that could be utilized to complete this work.

…No challenge -- no challenge -- poses a greater threat to future generations than climate change.…The Pentagon says that climate change poses immediate risks to our national security. We should act like it.

President Barack Obama, *State of the Union, January 20, 2015*

INTRODUCTION

Climate change is one of the most controversial and widely debated issues of the 21st century. The arguments concerning climate change are extensive. For example, environmentalists assert that global climate change is the primary threat to the world as we know it, with human activity as its sole cause. Business advocates, on the other hand, argue that climate change science is inconclusive, and thus, it is unwise to prematurely disrupt the economy to address a threat over which humans may have no control. However, there is an even more distinct and intriguing debate occurring in regards to the treatment of climate change as a national security issue, particularly from the perspective of the United States.

In 2008, Thomas Fingar, chairman of the National Intelligence Council under President Bush, testified that: "Global climate change will have wide-ranging implications for U.S. national security interests over the next 20 years."[1] Similarly, in 2013 Navy Admiral Samuel Locklear, Commander of U.S. Pacific Command, identified climate change as the Pacific region's biggest long-term security threat, stating that it "is probably the most likely thing that is going to happen ...that will cripple the security environment, probably more likely than the other scenarios we all often talk about."[2] Contrastingly, however, some commentators have argued that climate change is simply not a national security issue in the traditional sense, as it does not concern the survival of the state and is not related to threats of military aggression by other states.

This paper asserts that the U.S. should treat climate change as at least an important, and perhaps even a vital national security interest due to the potential impacts that its destabilizing global effects can have on U.S. national security and military strategy. The first section of this paper will explore some of the popular arguments of both the proponents and opponents for linking climate change to national security, and provide background and context for follow-on sections. The next section will set out a national interest crafting framework that will be used to analyze U.S. national strategic documents and assess the categorization and priority that the current versions of these documents give climate change in the national security context. The third section will apply the framework to the national strategic documents to determine how climate change is currently being categorized; that is, as either a survival, vital, important, or peripheral interest. The final section will address whether linking climate change to U.S. national security, and its categorization, is appropriate or advisable. It is important to note that for the purposes of the argument contained in this paper, the actual cause of climate change will not be addressed. It is assumed as a fact whether the cause is natural variation, or man-made.[3]

BACKGROUND: SURVEY OF THE PROPONENTS AND OPPONENTS

The following sub sections will explore some of the popular arguments of both the proponents and opponents for linking climate change to national security. This discussion will provide background, context, and set the stage for discussions to come.

Proponents for Linking Climate Change and National Security

Richard A. Matthew, an associate professor in the Schools of Social Ecology and Social Science at the University of California, Irvine, and founding director of the Center for Unconventional Security Affairs,[4] identified a three-pronged argument for linking climate

change to national security. Essentially, he states that national security issues encompass (1) anything that weakens the elements of national power; (2) contributes to state failure; or (3) leads to, supports, or amplifies the causes of violent conflict.[5] Climate change has the potential to negatively impact all three of these prongs.[6]

According to Matthew, national power is influenced by various factors. These factors include those of the environmental variety, such as geography and natural resources, as well as military and intelligence capacity. Other factors include a plethora of social dynamics, such as population size and cohesiveness, regime type, and the size and performance of the national economy.[7] Matthew asserts that climate change is capable of negatively impacting all of these elements of national power, to include limiting the effectiveness of militaries to project and exercise power.[8]

Perhaps the greatest area of concern related to the effects of climate change on national power is its potential to destabilize economic development, particularly in poor and fragile states. Noted economist Paul Collier has argued that the bottom billion people on the planet currently live in states that are failing to develop or are falling apart.[9] Collier asserts that these states are often entangled in conditions and processes that inhibit development.[10] These conditions include chronic violent conflict, internal competition for valuable natural resources, instability in border countries that creates chronic trans-boundary stress, and government corruption and inefficiency.[11] The potential impacts of climate change, including an increase of catastrophic events such as floods, droughts, heat waves, fires, pandemics, and crop failures, would likely overburden these states, and as a result, weaken a central element of national power.[12]

The second challenge to national security presented by climate change is its potential to exacerbate the negative conditions of fragile states. The 2009 World Disasters Report published by the International Federation of the Red Cross and Red Crescent Societies reflects that:

> The threat of disaster resulting from climate change is twofold. First, individual extreme events will devastate vulnerable communities in their path. If population growth is factored in, many more people may be at significant risk. Together, these events add up to potentially the most significant threat to human progress that the world has seen. Second, climate change will compound the already complex problems of poor countries, and could contribute to a downward development spiral for millions of people, even greater than has already been experienced.[13]

The 2010 report notes that the cost of climate-related disasters tripled from 2009 to 2010 to nearly $110 billion.[14] It is apparent that disasters are very costly. As a result, these traumatic events can be devastating from a state failure perspective because they necessitate the reallocation of scarce finances in order to address emergency relief. This shift of resources strains, if not completely obliterates significant capacity building efforts, such as improving infrastructure, investing in skills development, and implementing employment and poverty-reduction programs.[15] Consequently, the functional capacity of the government is negatively impacted.

Matthew asserts that a similar case can also be made for the dispersed, long-term impacts that climate change could have on food security, public health, urban development, rural livelihoods, and other related issues.[16] Climate change could result in people being "displaced into marginal lands or unwelcoming communities, enticed by extremist ideology, compelled to resort to crime in order to survive, or take up arms, all of which risk overtaxing the government, deepening social divisions, and breeding distrust and anger in the civilian population."[17] However, he contends that the most severe climate change hazard is the possibility that states will fail because they can no longer function as their territories disappear under rising seas. As

an example, he references the Maldives and some 40 other island states as imminently in danger due to sea change.[18] Matthew also points to glacial-outburst floods, which could cause a comparable level of devastation in countries such as Nepal, and a warming of the northeast Atlantic Ocean as a result of a change in the ocean conveyer, which could cause the United Kingdom, for example, to disappear under several feet of ice within a few years.[19] The result is that many vulnerable countries have no choice but to make these existential threats the centerpiece of their national security efforts.

The third challenge to national security presented by climate change that will be discussed is its potential to amplify the causes of violent conflict. Thomas Homer-Dixon,[20] focuses on the adverse social effects that result from the scarcity of water, cropland, and pasture.[21] He argues that scarcity results from a decrease in the supply of a resource, an increase in the demand for a resource, or a socially engineered change in access to a resource.[22] Under circumstances of resource scarcity, Homer-Dixon contends that developing countries may experience one of two conditions: resource capture, in which one group seizes control of the resource; or ecological marginalization, in which people are forced to move into resource-poor lands. Either of these dynamics may contribute to violent conflict.[23] Similarly, Colin Kahl[24] argues that resource scarcity may generate state failure, defined as a collapse of functional capacity and social cohesion, or state exploitation, in which a collapsing state acts to preserve itself by giving greater access to natural resources to groups it believes can prop it up.[25] As Matthew posits, consistent with the perceptions of Homer-Dixon, Kahl, and many others, it is reasonable to suggest that the scarcity of resource caused or exacerbated by climate change, could become key drivers of violent conflict in the near future.[26]

A related issue of concern and potential climate change-related key driver of violent conflict is "climate refugees." In 2006, Sir Nicholas Stern projected that climate change-related effects, such as rising sea levels, massive flooding, and long, devastating droughts, could cause the permanent displacement of approximately 200 million people by the mid-2000s.[27] Such a huge exodus of poor people from rural to urban areas, and across ethnic, economic, and political boundaries, could result in massive humanitarian crises that would place a tremendous management burden on the international community. Andrew Guzman, an economist and international legal expert at the University of California (Berkeley), further asserts that this flood of "climate migrants" will heighten border tensions, create vast new refugee camps, and send displaced people streaming into cities in need of shelter and basic human services at a rate that could create an unprecedented humanitarian crisis.[28] Under such circumstances, resultant violent conflict and other forms of social unrest are not hard to envision.

Stern's projection is essentially a rough estimate, and thus, has been the target of criticism from other commentators. Henrik Urdal, for example, argues that

> [The] potential for and challenges related to migration spurred by climate change should be acknowledged, but not overemphasized. Some forms of environmental change associated with climate change like extreme weather and flooding may cause substantial and acute, but mostly temporal, displacement of people. However, the most dramatic form of change expected to affect human settlements, sea-level rise, is likely to happen gradually, as are processes of soil and freshwater degradation.[29]

Ultimately though, no one can predict the impacts of climate change-related migration with one-hundred percent certainty.

The publication of the 2007 Intergovernmental Panel on Climate Change (IPCC) reports were the impetus for many periodicals that reflected many of the concerns mentioned above. The 2007 Center for Naval Analyses (CNA) Corporation report entitled, *National Security and the Threat of Climate Change*,[30] concluded that "climate change acts as a threat multiplier for

instability in some of the most volatile regions of the world."[31] The report also concluded that "projected climate change will add to tensions even in stable regions of the world."[32] Similarly, the German Advisory Council on Global Change's report, *World in Transition: Climate Change as a Security Risk*, stated that "Climate change will overstretch many societies' adaptive capacities within the coming decades."[33]

In sum, a great deal of the recent writings on the potential impacts of climate change on national security contend that climate change will weaken already fragile states, contribute to violent conflict, intensify population displacement, increase vulnerability to disasters, and disrupt poverty alleviation programs. These concerns are more pronounced in areas such as South Asia, the Middle East, and sub-Saharan Africa, where large numbers of people, widespread poverty, fragile governments, and agricultural economies collude to intensify vulnerability in these regions.[34]

Opponents of Linking Climate Change and National Security

While the trend in recent writings advocates for establishing a link between climate change and national security, there has also been a wave of arguments to the contrary. The three main arguments concern: (1) the characterization (or mischaracterization) of what constitutes national security; (2) skepticism regarding the link of climate change with state failure and violent conflict; and (3) denunciation of the theoretical link between the actual impacts of climate change and social impacts.

There have been three important criticisms levied concerning the characterization of what constitutes a national security issue from a plain language perspective. Stephen Walt, a noted realist theorist, asserts that climate change is simply not a national security issue for the United States.[35] Walt argues that most of the problems that climate change will either cause or

exacerbate, and the responses that these problems may prompt, will be best described as humanitarian issues. For Walt and other realist thinkers, national security is about the survival of the state, which is traditionally related to threats of military aggression by other states. Walt's position is that the United States should essentially conduct a cost-benefit-like analysis, considering the gains that would come from expanding the domain of national security into areas where immediate or near term threats to the survival or even well-being of the United States are vague or unknown. Otherwise, national security issues would be driven by dramatic and urgent rhetoric rather than concrete threats.[36]

Other critical scholars posit a different concern regarding linking climate change to national security. Daniel Deudney,[37] Barry Buzan,[38] and Ole Waever,[39] are all concerned with what they believe are efforts to militarize or securitize climate change and the environment.[40] Similar to Walt, these scholars are not suggesting that climate change is a trivial matter. Instead, they are concerned about the wisdom of framing climate change as a national security issue, and consequently, linking it to military and intelligence resources. They argue that such a link could hinder certain forms of global cooperation by drawing climate change into the zero-sum mentality of national security.[41]

The second argument against tying climate change to national security regards the relationship between environmental stress, violent conflict, and state failure. Critics of this literature, such as Nils Petter Gleditsch[42] and Marc Levy,[43] point to its methodological and analytical weaknesses. They assert that studies have been inconclusive. While there is an apparent correlation between certain forms of environmental change, such as sudden changes in water availability, and violent conflict or state failure, these findings are tentative and must compete with other variables that also correlate with disastrous social outcomes.[44] Critics also

highlight the fact that the literature that proposes integrating climate change and national security based on arguments that environmental stress contributes to violent conflict and state failure, are relatively new and largely speculative. The primary concern is that after the initial flood of largely theoretical claims advanced in the 1990s, there has been little progress in weeding through these claims, or bolstering and clarifying the most promising claims with empirical data.[45]

The third and final argument advanced against linking climate change and national security is essentially a direct attack against the IPCC reports, which are the foundational documents upon which the case for integrating climate change and national security is built. While the actual impacts of climate change, including increases in the amount of carbon in the atmosphere, the severity of storms, the average global temperature, and the like, are well documented, the social impacts that result from these trends are not nearly as concrete.[46] To this point, Dr. Steven E. Koonin, a former Undersecretary for Science in the Department of Energy (DOE), asserts that the idea that "climate science is settled" is "misguided."[47] He argues that this idea has distorted the public and policy debates on environmentally-related issues, inhibited the scientific and policy discussions that need to be had about the climate. Further, he states that we are very far from the knowledge needed to make good climate policy. [48]

Thus, in addition to arguing that climate change is simply not a national security issue in the traditional sense, that is, it does not concern the survival of the state or threats of military aggression by other states, the primary arguments against linking climate change to national security concerns the uncertainty surrounding it and its ultimate impacts.

THE NATIONAL INTEREST CRAFTING FRAMEWORK

Before setting out the framework this paper will use to analyze U.S. national strategic documents, it is important to define the key term "national interest." National interests are quite simply those goals that a particular state actor deems desirable and believes will impact the state positively.[49] Attaining these interests should improve the political, economic, security, environmental, and/or moral well-being of a population and the state or nation to which they belong.[50] This principle applies both within the territory of the actor, and to any external relations that the actor may undertake.[51] The limitations of national power should not unduly constrain the development of the interests as while the interest may not be fully attainable, it can establish the parameters for goals and objectives that can be achieved within the limits of the actor's actual power resource base.[52] The interests should be designed to tell the policymaker why and how much he should care about an issue. Essentially, interests help determine what kind and how much attention should be given to challenges, threats, and opportunities.

Dr. Alan G. Stolberg states in his article entitled *Crafting National Interests for the 21st Century* that all seven national security strategies drafted during the course of the Clinton administration identified three core interests that have remained timeless in some manner, shape, or form for the United States.[53] They include: "provid[ing] for the common defense, promot[ing] the general welfare, and secur[ing] the blessings of liberty to ourselves and our posterity."[54] These core interests, which are also all consistent with the preamble to the U.S. Constitution, were translated in those national security strategies into the modern day interests of; enhancing security at home and abroad (security), promoting prosperity (economic well-being), and promoting democracy and human rights (democratic values).[55] All three of these, now 21st century core interests, have also evolved as a result of the American experience in the aftermath

of the two world wars of the 20th century into what can be considered a fourth core interest for the United States: *the pursuit of a stable and secure world order*. Stolberg explained this fourth core interest in the following manner:

> A favorable world order based on the "establishment of a peaceful international environment in which disputes between nations can be resolved without resort to war and in which collective security rather than unilateral action is employed to deter or cope with aggression."[56]

Stolberg also asserted that global stability in the new century would necessitate steady international partnerships, securing areas around the world in which the U.S. has significant economic interests, and sustaining the capability and capacity to respond to humanitarian and disaster crises or other concerns, to include protecting the global environment, minimizing destabilizing refugee flows, and providing support for health problems caused by food and water shortages. Stolberg essentially focuses on stability as a core U.S. interest as it is central to U.S. national security policy. The loss of stability is the principle risk of global climate change.[57] Still, while Stolberg highlights four core interests, the descriptions of each indicate that he does not regard them as co-equals. These interests are instead listed in order of priority.

Those who assess national interests must understand the categorization and prioritization of the interest in order to decide what types of resources to allocate toward the attainment of the interest, and in what amount. Categorization can provide both a framework for systematic evaluation of national interests, as well as a way to distinguish short-term from long-term interests with time as the basis.[58] Customarily, there have been two to four different categories of interests, which are designed to delineate the different levels of intensity, or in other words, the order of priority, for any interest. Prioritization is critical because interests may conflict with one another.[59]

A principal difference between the approaches is how they regard survival interests and vital interests. The primary difference between a survival interest and a vital interest is the nature and imminence of a military threat to the actor.[60] Both terms address the life of the actor, one dealing with the imminent danger of death with the other being only potentially fatal. In this case, the time difference is the key.[61] If one believes there are specific interests where the very survival or existence of the actor is at stake, then four categories of intensity become applicable, discussed below in their order of degree—Survival, Vital, Important, and Peripheral (See Table 1).[62] Some commentators may argue that the United States does not have many traditional survival interests today, but this type will be included for the sake of completion.

Table 1. Categorization and Prioritization of National Interests

Prioritized Categories	Description	Examples
Survival	• Single most important type of interest • Essence of existence – protection from imminent threats or attacks • Protected by any means necessary.	Prevent threat NBC attacks on state or military abroad.
Vital	• Very significant to well-being of state • Failure to attain is costly, but not necessarily catastrophic	Prevent regional proliferation WMD and delivery systems.
Important	• Significant, but not critical • Failure to attain may cause serious harm to foreign interests • Pursued through compromise, not confrontation	Discouraging massive human rights violations in foreign countries.
Peripheral	• Does not threaten security or well-being, but nice to have	Enlarging democracy for its own sake.

Source: Based on Stolberg's "Crafting National Interests in the 21st Century" (2010)

Survival interests represent the single most important interests for any actor. This is the very essence of the actor's existence—the protection of its citizens and their institutions from attack by enemies, both foreign and domestic. It addresses an imminent threat of attack and is an interest that cannot be compromised. Failure to attain these interests is potentially catastrophic.

Actors will protect these interests by any means necessary, to include the use of military force. Some examples include preventing, deterring, and reducing the threat of nuclear, biological, and chemical (NBC) weapons attacks on the state or its military forces abroad, or preventing the emergence of hostile major powers or failed states on the borders of the actor crafting the interest.[63]

Vital interests are those that are so significant to an actor's well-being that its leadership can compromise only up to a certain point. Beyond that point, however, compromise is no longer possible because the potential harm to the actor becomes intolerable. Attaining the interest would greatly benefit the actor, while failure would carry costs to the actor that are severe but not necessarily catastrophic. Such costs could severely prejudice but not strictly imperil the ability of the actor's government to safeguard and enhance the well-being of its populace. Traditional examples of vital interests include preventing the regional proliferation of weapons of mass destruction (WMD) and delivery systems, preventing the emergence of a regional hegemon in important regions, and promoting the well-being of allies and friends and protecting them from external aggression.[64]

Important interests are those that are significant but not critical to the actor's well-being. Failing to achieve these interests may cause serious concern and harm to the actor's foreign interests, but conflicts concerning these interests are likely to be resolved with compromise and negotiation, rather than confrontation. The potential value of either achieving or suffering damage to these interests would be moderate. Important interests differ from vital and survival interests in the perceived degree of danger to the actor and the amount of time available to find a peaceful solution to the issue. Conventional examples of important interests include promoting

freedom and democracy in strategically important state actors without destabilization, and discouraging massive human rights violations in foreign countries.[65]

Lastly, peripheral interests involve neither a threat to the actor's security nor to the well-being of its populace.[66] Moreover, they do not seriously affect the stability of the international system. Protection of such interests is desirable, but damage to them has little direct impact on the ability of the actor to safeguard its populace. Examples of peripheral interests include enlarging democracy everywhere for its own sake, and preserving the territorial integrity or political constitution of other actors everywhere.[67]

In sum, the Stolberg framework set out above attempts to identify where certain national interests fall in relation to the nation's core interests, including enhancing security, promoting prosperity, promoting values, and pursuing a stable and secure world order, and the categorization and prioritization of these national interests as either, survival, vital, important, or peripheral. The following section will utilize this framework in order to analyze the most current versions of the U.S. national strategic documents, and assess their treatment of climate change in the national security context.

ANALYZING THE CURRENT U. S. NATIONAL STRATEGIC DOCUMENTS

There are three overarching national strategic documents that guide U.S. military strategy. These include the National Security Strategy (NSS), the National Defense Strategy (NDS), and the National Military Strategy (NMS). The NSS is an executive-level document, promulgated by the President, which sets the overarching international security priorities of the country. Essentially, it establishes the "ends" of U.S. national security. The second document is the National Defense Strategy (NDS) produced by the Secretary of Defense (SECDEF). The

NDS translates the President's guidance in the NSS to mission specific priorities in the U.S. Department of Defense (DOD). However, the last NDS was published in 2008. Hence, for the purpose of this discussion, this paper will analyze the Quadrennial Defense Review (QDR) report, the DOD document that analyzes strategic objectives and potential military threats. The QDR essentially provides the "means" for U.S. national security strategy. The third document is the National Military Strategy (NMS) promulgated by the Chairman of Joint Chiefs of Staff (CJCS). The NMS provides direction for military activities by articulating a set of interrelated objectives from which the Service Chiefs and combatant commanders can identify desired capabilities, and against which CJCS can assess risk. In other words, the NMS provides the "ways."[68] All of these documents are supposed to be updated regularly to reflect changing priorities and world conditions (NSS is supposed to be updated annually but this rarely happens). The rest of this section will address the current national strategic documents in more detail, and provide an assessment of these documents using the Stolberg framework discussed above.

National Security Strategy

The NSS is a critical document produced by the President's National Security Council (NCS). The document outlines the strategic approach to security in the current environment and presently describes four major enduring interests of our nation. Prior to 2010, the NSS did not identify global climate change as a risk for which the U. S. should prepare its military, and only the 2006 NSS even mentioned climate change, solely in the context of balancing economic growth with the reduction of greenhouse gases.[69] However, in 2007 evidence of a growing consensus regarding the import of climate change as a potential national security issue began to emerge.

The 2007 CNA Corporation arranged for eleven retired three-star and four-star Generals and Admirals to provide advice, expertise, and perspective on the impact of climate change.[70] This was the first time high level military leaders had ever commented on climate change as a potential national security issue. The result was the CNA report on *National Security and the Threat of Global Climate Change,* in which these leaders underscored the need for the military to plan for the effects of global climate change, and for the U.S. to integrate the national security consequences of global climate change into defense planning.[71] The 2010 NSS was the first to explicitly identify climate change as a potential risk to U.S. national security, mirroring many of the concerns identified in the CNA report previously mentioned.

Table 2. Prioritization of Climate Change in the National Security Strategy relative to Stolberg's Core Interests.

Stolberg's Core Interests	NSS Enduring Interests*	Prioritization of Climate Change in 2010 NSS	Prioritization of Climate Change in 2015 NSS
Security	Security		**X**
Prosperity	Prosperity		
Values	Values		
Stable and Secure World Order	International Order	**X**	

Source: Based on Stolberg, "Crafting National Interests in the 21st Century" (2010) and National Security Strategies for 2010 and 2015. *The NSS indicates that all four enduring interests are "inextricably linked," meaning pursuit of any one has impacts on the others.

Paralleling Stolberg's core interests, the 2010 NSS identifies what it refers to as four enduring national interests, including: security of the U.S., its citizens, and U.S. allies and partners (security); a strong, innovative, and growing U.S. economy in an open international economic system that promotes opportunity and prosperity (prosperity); respect for universal values at home and around the world (values); and an international order advanced by U.S. leadership that promotes peace, security, and opportunity through stronger cooperation to meet global challenges (international order).[72] The document points out the interconnectedness of

these interests, noting that neither can be pursued in isolation, but that action in any one will have impacts on the others (See Table 2).

While climate change is mentioned throughout the 2010 NSS, it is specifically discussed under the section covering the fourth enduring national interest of international order. The document acknowledges that the "danger from climate change is real, urgent, and severe" and that its effects would result in new conflicts over refugees and resources, suffering caused by drought and famine, catastrophic natural disasters, and the degradation of land across the globe. The 2010 NSS likens climate change to other national security challenges such as violent extremism, nuclear proliferation, and the promotion of global prosperity, in that it "cannot be solved by one nation or even a group of nations. The primary challenge of our international order, it goes on to say, will therefore be the ability of the U.S. to facilitate the broad and effective global cooperation necessary to confront climate change, as well as other 21st century issues.[73]

Earlier this year, however, the Obama Administration released its long-awaited, updated 2015 NSS, which reaffirmed the assertion that climate change is an urgent and growing threat to national security, contributing to increased natural disasters, refugee flows, and conflicts over food and water. The 2015 NSS further reiterates that U.S. leadership across the globe would remain grounded in the four enduring national interests outlined in the 2010 NSS mentioned above.[74] Additionally, the document lists climate change as one of the nation's top strategic risks to U.S. interests. Other risks that made the cut include catastrophic attack on the U.S. homeland, threats or attacks against U.S. citizens abroad and our allies, global economic crisis or widespread economic slowdown, proliferation and/or use of weapons of mass destruction, and severe global infectious disease outbreaks.[75] The 2015 NSS also lists major energy market

disruptions, and significant security consequences associated with weak or failing states (including mass atrocities, regional spillover, and transnational organized crime), as strategic risks to U.S. interests.[76]

An analysis of the NSS reveals the ascension of climate change in the U.S. national security realm, moving from not being mentioned at all to being regarded as a top national strategic risk. The 2010 NSS identified the pursuit of an international order as the nation's fourth enduring interest, which mirrors Stolberg's fourth core interest of creating a stable and secure world order. It is evident from the structure of that document that the drafters saw climate change as falling squarely within this core or enduring interest. Further, the document established a clear link between climate change, conflict, and instability. This echoed the concerns of the many of the proponents for linking national security and climate change discussed above.

In regards to the categorization and intensity, it is apparent that the 2010 NSS treated climate change as at least an important, and potentially a vital national security interest. The section of the document dedicated to climate change considers the perceived danger related to it as real, urgent, and severe. This is language most readily associated with that of a vital interest, and arguably even a survival interest, though the lack of an imminent military threat posed by climate change all but eliminates categorization as a survival interest from the equation.

While security is traditionally viewed as a vital, and in many cases a survival interest, other national interests do not enjoy this heightened status. Prosperity and values related national interests are treated as important at best, since the degree of danger to the actor is usually considerably low, and the amount of time available to find a peaceful solution is more generous. However, in this case, the 2010 NSS regards all four enduring interests as inextricably

intertwined. Consequently, no single interest can be pursued in isolation. Positive or negative action in one area will impact all four. Thus, if establishing an international order is tied to security, then arguably it is vital by definition. This lack of distinction is driven by the fact that in the 21st century, U.S. national security is tied largely to the effects of issues that have no natural boundaries. Additionally, the fourth enduring interest, centered on maintaining international stability outside of the purview of international institutions, is unique to the sole "benevolent" superpower from a national perspective. Therefore, it is apparent from an analysis of the 2010 NSS that combating the effects of climate change is regarded as at least important, and perhaps even vital to national security.

If the U.S. regarded climate change as a potentially vital national security interest according to the 2010 NSS, the 2015 NSS takes this argument a step further. While the 2010 NSS made clear that the four enduring interests are inextricably linked, they are also listed in order of priority, from most important to least important, in both the 2010 and 2015 NSS documents. The 2015 NSS document elevates the crux of the climate change discussion up from the fourth enduring interest of maintaining international order, to the principal enduring interest of maintaining the security of the United States, its citizens, and U.S. allies and partners, and as stated above, lists climate change as one of the nation's top strategic risks to U.S. interests.

While traditionalists would argue that climate change should not even be linked to national security, some may have at least been open to placing it in the new aged, 21st century international order category. The U.S., or at least the current Administration, however, has taken steps to not only evolve its national security policy to include climate change, but has now elevated climate change as a national interest, explicitly regarding the issue as a strategic risk under its principle enduring interest of security.

Quadrennial Defense Review

As previously stated, the last NDS was published in 2008.[77] That document mentions the terms climate or climate change several times, and then, only in passing. Therefore, this paper will utilize the QDR since it intimately related to the NDS and is more up to date. The QDR is a legislatively-mandated review of DOD strategy and priorities, and sets a long-term course for DOD as it assesses the threats and challenges that the nation faces and re-balances DOD's strategies, capabilities, and forces to address today's conflicts and tomorrow's threats. It is a comprehensive effort across the Department, the Joint Staff, the Services, and the Combatant Commands. The document is prepared by the Office of the Secretary of Defense (OSD) and released by the Secretary of Defense (SECDEF) every four years.[78]

The 2010 QDR declared that climate change would be instrumental in shaping the future security environment.[79] This was the first time the QDR had directly addressed the national security threat from climate change in its planning. In 2007, Senate Armed Services Committee members Senators John Warner (R-VA) and Hilary Rodham Clinton (D-NY) added language to the 2008 National Defense Authorization Act (NDAA) requiring DOD to consider the effects of climate change on its facilities, capabilities, and missions.[80] The DOD responded by incorporating and considering the threat of climate change into its long-range strategic plans. The 2010 QDR also acknowledged that the challenges presented by climate change, energy security, and economic stability were distinct, but inextricably linked.[81] The 2010 QDR further asserted that "While climate change alone does not cause conflict, it may act as an accelerant of instability or conflict, placing a burden to respond on civilian institutions and militaries around the world."[82] While the 2010 QDR was actually released prior to the 2010 NSS (February and May, respectively), they were consistent with one another.

The 2014 QDR builds upon the 2012 Defense Strategic Guidance (DSG) priorities, which sought to prepare for the future by rebalancing the nation's defense efforts in a period of fiscal constraint, and advance an updated strategic framework centered on three pillars: (1) defending the homeland, (2) building security globally by projecting U.S. influence and deterring aggression, and if deterrence fails, (3) remaining prepared to win decisively against any adversary.[83] While the 2014 version of the QDR obviously is not nested with the current national security documents, until recently, it was the most up to date strategic document available for analysis.

Climate change and its impacts are arguably addressed across all three pillars, particularly with respect to mitigating natural disasters at home, and projecting power abroad in order to provide humanitarian assistance and disaster relief. However, the second pillar appears to most neatly encompass environmental security concerns, and thus, the prioritization of mitigating the effects of climate change which could adversely impact international stability, and hence our national security. Still, the 2014 QDR specifically addresses climate change as a national security issue and defense objective throughout the document. The 2014 QDR acknowledges that climate change poses a significant challenge for the United States, and that its impacts are "threat multipliers that will aggravate stressors abroad such as poverty, environmental degradation, political instability, and social tensions – conditions that can enable terrorist activity and other forms of violence."[84] More specifically, the 2014 QDR states:

> Climate change poses another significant challenge for the United States and the world at large. As greenhouse gas emissions increase, sea levels are rising, average global temperatures are increasing, and severe weather patterns are accelerating…Climate change may exacerbate water scarcity and lead to sharp increases in food costs.[85]

The 2014 QDR further recognizes that the effects of climate change will influence resource competition and place additional burdens on economies, societies, and governance institutions

across the globe. Most pertinent to DOD and the military though, climate change will potentially increase the frequency, scale, and complexity of future missions, including humanitarian assistance, disaster relief, and defense support to civil authorities, while also challenging the capacity of our domestic installations to support training activities.

Lastly, the 2014 QDR addresses the potential impacts that climate change could have on the Middle East region, where the U.S. has been intently focused for over the past 13 years. The document points to the fact that hostility endures in the Middle East, and that the competition for resources, including energy and water, will worsen the already torrid religious tensions in the coming years. These tensions could escalate regional confrontations into broader conflicts – particularly in fragile states.[86]

National Military Strategy

The 2011 NMS document specifies the ways and means by which the military will advance U.S. enduring national interests as articulated in the 2010 NSS and is tied to the defense objectives of the 2010 QDR. Though the 2014 QDR was released in March 2014, an updated NMS has not yet been released. The NMS is drafted by the CJCS, in consultation with the geographic and functional Combatant Commanders and the Joint Chiefs of Staff.

The NMS only mentions climate change specifically once in the document, asserting that "the uncertain impact of global climate change combined with increased population centers in or near coastal environments may challenge the ability of weak or developing states to respond to natural disasters."[87] However, the NMS parrots the four enduring interests listed in the NSS and nests with this document, meaning that climate change and its impacts are taken into consideration. The NMS also sets out the national military objectives guided by the 2010 NSS and QDR, which include: countering violent extremism; deterring and defeating aggression;

strengthening international and regional security; and shaping the future force.[88] The third of these, that is strengthening international and regional security, is where climate change and its impacts fall most neatly, as it encompasses the fundamental link between prosperity and security where the military plays a powerful role in maintaining a stable international environment that is critical for prosperity at home. This national objective also embodies the exercise of the nation's "convening power" to address common problems, increase interoperability, and help other nations develop more comprehensive security relations.[89]

The NMS recognizes that the increasing interconnectedness in the international order requires America's foreign policy to employ an adaptive blend of diplomacy, development, and defense. The NMS further acknowledges that while the strength of our military will continue to underpin national security, U.S. leadership will be the key to exercising the full spectrum of power to defend its national interests and advance international security and stability. Lastly, the NMS asserts that the nation's security and prosperity are inseparable, and will be sustained only by its values and leadership in the international order, as in an interdependent world, the enduring interests of the United States are increasingly tied to those of other state and non-state actors. Thus, the ability of the United States to lead as "facilitator, enabler, convener, and guarantor," is the only way to successfully confront the complexity of this global system and the challenges therein.[90] No single issue embodies the ideals mentioned immediately above more clearly than climate change and its potential impacts.[91]

Applying the Stolberg framework detailed above, it is clear that climate change is linked to national security in U.S. national strategic documents. In sum, the four enduring interests set out in the most recent NSS documents mirror those set out in the Stolberg framework, and the fourth enduring interest of pursuing an international order clearly tracks Stolberg's fourth core

interest of creating a stable and secure world order. The NSS documents also establish a clear link between climate change, and conflict and instability. At the least, climate change falls within this fourth enduring interest, which, while arguably having the lowest priority as compared to its counterparts, including security, prosperity, and values, is inextricably connected with these three. However, the long-awaited 2015 NSS advances the position that climate change is a key national security interest even further by elevating the crux of the climate change discussion up from the fourth enduring interest of maintaining international order, to the principal enduring interest of maintaining the security of the nation.

Further, the other strategic documents, namely the QDR and NMS, though not completely nested with the current NSS as they would be in an ideal situation, are consistent with, and in most instances, support the contention that climate change is at least an important, and perhaps a vital U.S. national security interest. Now, the question that will be addressed is whether linking climate change to national security, and classifying it as an important to vital interest is appropriate?

APPROPRIATENESS OF LINK AND CATEGORIZATION

The categorization of climate change as an important and perhaps even a vital national interest in U.S. national strategic documents is appropriate. The proponent arguments discussed above make a compelling case for the need to expand the understanding of national security issues in order to encompass climate change and its potential to exacerbate an increasingly unstable global dynamic. However, the best place to begin such an assessment is with those who serve as a primary resource for protecting these national interests – U.S. military leadership. Accordingly, there is a growing consensus among former high level leaders that climate change

acts as a threat multiplier for instability in some of the most volatile regions of the world, and represents substantial uncertainty and risk for the U.S. military. Additionally, and the fact that climate change appears to be occurring more rapidly than initially projected, failure to act swiftly in response could elevate its impacts from threat multipliers to catalysts for conflict.

As stated earlier, in 2007 the CNA Corporation produced its report on *National Security and the Threat of Global Climate Change* which marked the first time that such an elite body of military leaders expressed their concerns over the security implications of climate change.[92] Retired General Gordon R. Sullivan, former Army chief of staff and chairman of the 2007 CNA Military Advisory Board (MAB), stated that climate change was unequivocally a national security issue.[93] The panel recommended that the United States integrate the national security consequences of global climate change into defense planning, and emphasized the need for the military to plan for its effects.[94] Specifically, they concluded that "Climate change acts as a threat multiplier for instability in some of the most volatile regions of the world," and that "projected climate change will seriously exacerbate already marginal living standards in many Asian, African and Middle Eastern nations, causing widespread political instability and the likelihood of failed states."[95] General Sullivan also contended that the lack of absolute certainty concerning the climate science is no excuse to delay action. This is particularly pertinent in the military context where military leaders customarily consider challenges with imperfect and even conflicting information, weigh the consequences of different courses of action, including the consequences of no action, and make informed decisions.

Shortly after the 2007 CNA report was released, John Stuhltrager, an attorney with the Army Environmental Command and chairman of the ABA Section of Environment, Energy, and Resources Law Student Programs Committee, published an article in which he asserted that

climate change represents substantial uncertainty and risk for the U.S. military.[96] As the military is largely responsible for executing the types of operations that will be most needed to respond to the consequences of climate change, including humanitarian relief, disaster assistance, and stability operations, Stuhltrager opines that "the military cannot wait for the science to be perfected to begin planning for the potential effects of global climate change" or "morally judge the causes of global climate change."[97] From the U.S. military's perspective, Stuhltrager contends, all that matters is that climate change is occurring and the results will have impacts on military operations. Rather than concentrating on the causes of climate change, or even how to prevent it, he states that the military must plan for the risks posed by global climate change, which regardless of cause, are potentially disastrous.[98]

To begin the planning for global climate change, Stuhltrager asserted that the military must first understand the potential effects to which it may be required to adapt, including "direct" effects such as changes in precipitation that restrict access to potable water, and "indirect" effects, such as the mass movement of populations in response to drought induced by climate change. However, he concluded that the most serious effects that climate change could have on national security relates to already weakened and failing governments, particularly in Africa, where the principal concerns for U.S. security interests include "the use of failing and failed states for terrorist training and U.S. access to petroleum and strategic mineral resources upon which the U.S. and the global economy depend." [99] Climate change, he argues, "may put those African countries essential to U.S. strategic objectives and regional stability at risk by causing water and food scarcity and the potential for mass migration and ensuing ethnic conflicts."[100]

In 2014 the CNA's MAB reconvened, this time as a group of 16 retired Generals and Admirals from the Army, Navy, Air Force, and Marine Corps "to re-examine climate change in

the context of a more informed, but more complex and integrated world," and to provide an update to its 2007 report. In addition to validating its 2007 findings, the 2014 MAB concluded that the risks associated with climate change, as identified in its 2007 report, are "comprehensive and accelerating."[101] The MAB stated that "the observed rapidity of climate change" is producing effects that have the potential to elevate from "threat multipliers" to "catalyst for conflict" without a focus on building resilience in the most vulnerable parts of the world, both at home and abroad.[102] The MAB further stated that its members have grown increasingly concerned over the lack of comprehensive action by the international community to address projected climate change issues, and asserts that the U.S. has an obligation to take a leadership role through congressional action, as neither the DOD, nor any other agency, can act alone to address the impacts of climate change. As to the military specific impacts of climate change, the MAB concludes that our military forces could become strained in the coming decades as forces are increasingly called upon to respond in the wake of extreme weather events at home and abroad, limiting their ability to respond to other contingencies. Projected climate change will also make training more difficult, while simultaneously, increasing risk "to critical military logistics, transportation systems, and infrastructure, both on and off base."[103]

The MAB made six specific findings which are largely consistent with the proponent arguments for linking climate change to national security discussed earlier. First, the MAB found that U.S. (and the international community) actions have been insufficient to respond and adapt to the challenges associated with climate change projections. The Board contends that the only way to reduce long-term risks is to pair resilience improvement efforts with actionable agreements regarding the stabilization of climate change. Secondly, the MAB stated that climate

change impacts are already accelerating instability in vulnerable areas of the world, and serving as "catalysts for conflict" rather than "cooperation and change."[104]

Third, the MAB asserts that rapid population growth, especially in coastal and urban areas (or what the Navy and Marine Corps refers to as the "littorals"), and complex changes in the global security environment have intensified the need to understand the strategic security risks of projected climate changes. These developments demand that leaders become more imaginative and critical in their thinking about these issues. Fourth, the MAB contends that the U.S. and the international community are unprepared for the pace of change in the Arctic as a result of the accelerated melting of "old ice" that region, which will make it more accessible to a wide variety of human activities, including shipping, resource extraction, fisheries, tourism, and other commerce.[105] Fifth, the Board asserts that the projected climate impacts on the food, water, and energy security nexus will become intensified as the world's population and living standards continue to grow. As fresh water, food, and energy are "inextricably linked," these stressors will likely result in an increase in security implications as decisions are made concerning the allocation of these finite resources. Finally, the Board contends that projected climate change impacts inside the the U.S. will challenge key elements of national power and encumber homeland security, specifically with regards to the military, infrastructure, economic, and social support systems.[106]

The MAB also made six recommendations for addressing the potential climate change impacts on U.S. national security which largely correspond to their findings. First, the MAB asserts that the U.S. should take a global leadership role in preparing for the projected impacts of climate change, to include building resilience for the projected impacts of climate change and developing sustainable and more efficient energy solutions to help slow climate change. Second,

the MAB recommends that the U.S. military's Combatant Commanders (CCMDs), in accordance with National Intelligence Estimates, should factor in the impacts of projected climate change across their full spectrum of planning and operations, including working with nations and emerging nongovernmental and intergovernmental stakeholders to lower risk in those areas where the impacts of climate change likely will serve as a catalyst for conflict, in their areas of responsibility.[107]

Third, the MAB contends that the U.S. should accelerate and consolidate its efforts to prepare for increased access and military operations in the Arctic. Perhaps most importantly, the Board recommends assigning the Arctic region to one CCMD in order to expedite crisis response and requirements generation. Further, the MAB asserts that the United States should become a signatory to the UN Convention on the Law of the Sea (UNCLOS) in order to provide it with better standing in resolving future disputes in the Arctic region.[108]

Fourth, the MAB recommended that climate adaptation planning should consider the "water-food-energy" nexus to ensure comprehensive decision making, as rapidly growing population and urbanization, combined with changes in weather patterns, will stress resource production and distribution, particularly water, food, and energy. Fifth, the MAB asserts that the failure to include a range of probabilities because it is not precise is unacceptable, and thus, the projected impacts of climate change should be integrated fully into the National Infrastructure Protection Plan and the Strategic National Risk Assessment.[109]

Finally, in addition to conducting comprehensive assessments of the impacts of climate change on mission and operational resilience, the MAB recommends that the DOD "develop, fund, and implement plans to adapt, including developing metrics for measuring climate impacts and resilience." The MAB states that the DOD should place a greater emphasis on the projected

impacts of climate change on both DOD facilities and associated community infrastructures. This recommendation includes decisions to be made through any future processes, including base realignment and closure (BRAC), as well as expanding climate projections in planning and design factors for new bases, training facilities, or other infrastructure.[110]

The U.S. has already begun the implementation of some of these recommendations, most notably with regards to taking a global leadership role in preparing for the projected impacts of climate change. The most visible example of this is the U.S.- China Joint Announcement on Climate Change in which both countries recognized that they "have a critical role to play in combating global climate change, *one of the greatest threats facing humanity*," and acknowledged that "Tackling climate change will…strengthen national and international security. [111] Further, the 2015 NSS, as discussed above, has elevated climate change as a top strategic risk to national security, consistent with the findings of the 2014 CNA report. Unless one believes that the U.S. is simply paying lip service or engaging in rhetoric regarding the issue of climate change, these efforts further support the contention that the U.S. recognizes climate change as an important, and perhaps even a vital national security interest.

CONCLUSION

Secretary of State John Kerry has persistently framed his efforts to stop global climate change in terms of "curbing a force that inflames conflicts around the world to the detriment of U.S. safety."[112] He recently referred to climate change a "life-threatening issue" of national security.[113] Indeed, Kerry once compared the potential peril from climate change to the threat of war when during an emotional speech on the Senate Floor he stated that he "believe[d] that the

situation we face [with climate change] is as dangerous as any of the sort of real crises that we talk about [in Iran, Syria, and other trouble spots]."[114]

While one might argue that U.S. national strategic documents do not characterize climate change in quite the same way Kerry suggests, after conducting an analysis of these documents, applying the Stolberg framework for crafting national interests, and assessing the documents' treatment of climate change, it is clear that the U.S. has indeed linked climate change to national security. There should be little argument that climate change, at the least, falls squarely within the fourth U.S. enduring or core interest of maintain an international order, or as Stolberg puts it, a "stable and secure world order," which is inextricably intertwined with the other three enduring interests of ensuring security, while promoting prosperity and respect for universal values at home and abroad. However, the most recent national security strategy goes even further, listing climate change as a top strategic risk to U.S. national concerns, and elevating the issue into the realm customarily reserved for traditional security interests, such as threats of external aggression. Thus, it is apparent that the U.S. has elected to treat climate change as at least an important, and maybe even a vital national security issue. In light of the arguments laid out above, particularly those from U.S. military leadership, this treatment and categorization is indeed appropriate.

As President Obama stated during his 2015 State of the Union address, "no challenge poses a greater threat to future generations than climate change….The Pentagon says that climate change poses immediate risks to our national security. We should act like it."[115] Indeed, if the U.S. wants to do more than pay lip service to climate change and its impacts, the nation must continue to allocate the proper amount of resources to this issue. This must be done even during a fiscally constrained economic environment, and particularly in regards to the military and its

non-combat operations that will be stressed most; namely humanitarian assistance and disaster relief. In other words, the nation must continue to "act like" climate change is important, if not vital, to U.S. national security.

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[36] Ibid.

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[40] Matthew, "Is Climate Change a National Security Issue?," 57.

[41] Ibid.

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[44] Matthew, "Is Climate Change a National Security Issue?," 57.

[45] Ibid.

[46] Ibid.

[47] Steven E. Koonin, "Climate Science Is Not Settled," *Wall Street Journal*, Sept. 19, 2014, 7 pages, http://online.wsj.com/articles/climate-science-is-not-settled- 1411143565; Koonin is currently the director of the Center for Urban Science and Progress at New York University

[48] Ibid.

[49] Alan Stolberg, "Crafting National Interests in the 21st Century," *U.S. Army War College Guide to National Security Issues: Volume II: National Security Policy and Strategy*, (Volume 4, July 2010), 3-14; G. R. Berridge and Alan James, *A Dictionary of Diplomacy*, Hampshire, UK: Palgrave-Macmillan, Second Edition, 2003, 181.

[50] Robert D. Blackwill, "A Taxonomy for Defining U.S. National Security Interests in the 1990s and Beyond," in Werner Weidenfeld and Josef Janning, eds., *Europe in Global Change: Strategies and Options for Europe*, Gutersloh, Germany: Bertelsmann Foundation Publishers, 1993, 103.

[51] Alan Stolberg, "Crafting National Interests in the 21st Century," *U.S. Army War College Guide to National Security Issues: Volume II: National Security Policy and Strategy*, (Volume 5, June 2012) 13-26; Donald E. Neuchterlein, *United States National Interests in a Changing World*, Lexington, KY: The University Press of Kentucky, 1973, pp. 6-7.

[52] Terry L. Deibel, *Foreign Affairs Strategy: Logic for American Statecraft*, New York: Cambridge University Press, 2007, p. 129-133.

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[54] Alan Stolberg, "Crafting National Interests in the 21st Century," *U.S. Army War College Guide to National Security Issues: Volume II: National Security Policy and Strategy*, (Volume 5, June 2012) 13-26, 15-16.

[55] Ibid; The White House, *A National Security Strategy for a Global Age*, Washington, DC: U.S. Government Printing Office, December 2000, 1.

[56] Neuchterlein, *United States National Interests in a Changing World*, 1973, 8, quoted in Alan Stolberg, "Crafting National Interests in the 21st Century," *U.S. Army War College Guide to National Security Issues: Volume II: National Security Policy and Strategy*, (Volume 5, June 2012) , 16.

[57] James Stuhltrager, "Global Climate Change and National Security." Natural Resources & Environment 22, no. 3 (Winter, 2008): 36-40. http://search.proquest.com/docview/207664940?accountid=14746.
United States Cold War strategy centered on maintaining the balance of power with the Soviet Union. The U.S. sought alliances that maintained stability, even when such actions may have been counter to other compelling interests or may have produced long-term negative consequences. Other such examples abound, including U.S. aid to Iraq during the Iran-Iraq war, aid to the mujahedeen in Afghanistan, and support for undemocratic regimes in Southeast Asia and Latin America. Although there may have been downsides to these actions, in the strategic picture, maintenance of a bipolar balance of power and the stability it produced was paramount… Climate change does not create new enemies for the United States or empower our existing foes. It is not a weapon that enemies can harness directly. Instead, climate change is an engine of destabilization, resulting in long-term shifts in weather, precipitation, sea level, food supplies, and population. Our enemies, both current and future, may exploit these shifts for their own gain.

[58] Stolberg, "Crafting National Interests in the 21st Century," (Volume 5, June 2012), 18.

[59] Ibid.

[60] Neuchterlein, 1973, p. 11, as quoted in Alan Stolberg, "Crafting National Interests in the 21st Century," *U.S. Army War College Guide to National Security Issues: Volume II: National Security Policy and Strategy*, (Volume 5, June 2012) , 18.

[61] Ibid., 18.

[62] Alan Stolberg, "Crafting National Interests in the 21st Century," *U.S. Army War College Guide to National Security Issues: Volume II: National Security Policy and Strategy*, (Volume 5, June 2012) , p. 18.

[63] Ibid., 19.

[64] Ibid.

[65] Ibid.

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[67] Ibid.

[68] LtCol T.R. Bryant, "Guidance, Roles, and Missions of the Military Instrument of National Power," Joint and Marine Corps Operations, Marine Corps University Command and Staff College (Quantico, VA: 2014), 13-16.

[69] James Stuhltrager, "Global Climate Change and National Security," Natural Resources & Environment 22, no. 3 (Winter, 2008): 36-40. http://search.proquest.com/docview/207664940?accountid=14746.

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[78] Bryant, "Guidance, Roles, and Missions of the Military Instrument of National Power," 13-16.
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[80] James Stuhltrager, "Global Climate Change and National Security." Natural Resources & Environment 22, no. 3 (Winter, 2008): 36-40. http://search.proquest.com/docview/207664940?accountid=14746.
[81] U.S. DOD, *Quadrennial Defense Review 2010*, 84.
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[87] Joint Chiefs of Staff, *The National Military Strategy of the United States of America* (Washington, DC: Joint Staff, February 2011).
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[89] Ibid; John Roberti, "The 2011 National Military Strategy Briefing to the Precision Strike Association," (PowerPoint presentation, Joint Chiefs of Staff, J5 Strategic Plans and Policy, Washington, DC, 23 February 2011).
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