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Research Article

Facing an Unpredictable Threat: Is NATO Ideally Placed to Manage Climate Change as a Non-Traditional Threat Multiplier?

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Abstract: This paper examines NATO's perception of climate change as a non-traditional threat multiplier. For well over a decade, European as well as Pentagon and other U.S. government studies and policy documents have noted that as the planet continues to warm, arable land continues to disappear, cyclones become more powerful, droughts increase in impact, food shortages are more frequent, and thousands of climate migrants are on the move. All of these climate change-related factors significantly increase the likelihood of conflict escalation. The threat multiplier characteristic of climate change will only exacerbate problems such as government instability, the spread of disease, conflicts over water supplies, the strengthening of terrorism, and widespread migration. This research explores NATO's initiatives to deal with this non-traditional threat multiplier and analyzes how different schools of international relations theory define climate change and address this security concern. In addition, the article provides insights into how climate change-induced threats affect the socio-economic and political security of nation states and what that means for NATO. Finally, the research provides a review of the Alliance's engagement, policy frameworks, operations, and units responsible for tackling threats originating from climate change. It concludes with the recommendation that NATO has made significant progress on placing climate change on its threat radar, but that the Alliance will have to do more to integrate these concerns because current efforts are not sufficient to meet future security challenges stimulated by increase in the average global temperature.

Keywords: NATO, climate change, security, international relations.

Introduction

Climate change represents a non-traditional threat to international security and the future existence of modern civilization. Year after year, drought, famine, storms, and flooding become more and more frequent and destructive. Besides being a non-traditional threat, climate change impacts are a threat multiplier. Multiplier effects of climate change are reflected in a worsened ability for families to provide for themselves, increasing refugee and migration flows, and may even act as a catalyst for the spread of diseases, potentially causing or exacerbating lethal pandemics. Increased occurrence of extreme weather patterns and major natural disasters amplify the risk of and result in significant population displacement.[1] Increased temperatures and the resulting negative effects will not bypass military operations, personnel, and installations. For example, sea level rise and increased incidence of hurricanes will directly affect military facilities, increase the cost of security, and impede states' and alliances' capacity to address traditional threats.[2]

The North Atlantic Treaty Organization (NATO) is the biggest and most powerful military alliance in the world. Its main responsibility is to provide security for North America and its European member states; however the Alliance has long been directly and indirectly engaged in providing security to non-NATO member states. Ever since the September 11 attacks, NATO has taken on a range of non-traditional military roles such as assisting in counter-piracy operations, enforcing no-fly zones, peacekeeping, working with various multilateral organizations on institution-building in fragile states, providing humanitarian assistance, etc.

This article addresses the following research question: To what extent is NATO capable of managing climate change as a non-traditional threat multiplier? First, the essay examines the theory of realism and its perception of threat. This theoretical framework was chosen because NATO is an organization that originated in the Cold War, during which realist philosophy was the dominant theory, responsible for the creation of the Alliance. Realism also defined the purpose and course of action into the twenty-first century. This paper argues that realism does not offer adequate solutions to combating climate change. As an alternative, this paper introduces Ulrich Beck's concept of the common risk society and Copenhagen School's theoretical framework, the constructivist school of international relations, as a theoretical framework through which climate change can be understood as a non-traditional security issue.

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1 Jürgen Scheffran, "Climate change and security," *Bulletin of the Atomic Scientists* 64, no. 2 (2008): 19-26, p. 22.

2 Wendell C. King, "Climate Change: Implications for Defense," Intergovernmental Panel on Climate Change 5th Assessment Report, June 2014, available at http://gmaccc.org/wp-content/uploads/2014/06/AR5_Summary_Defence.pdf (accessed April 2, 2016).

Furthermore, the paper establishes the idea that climate change is a non-traditional threat that has multiplier effects on international security. The argument is strengthened by establishing a link between climate change impacts and negative consequences on socio-economic and political security. Lastly, the discussion shifts towards a review of NATO's policies, frameworks, and units responsible for addressing climate change as a non-traditional security threat.

This paper concludes that NATO has recognized the importance of climate change as a security threat, but that NATO's organizational mechanisms and divisions that are responsible for coping with climate change impacts are still evolving. This process faces new challenges, especially after the election of the U.S. President Donald Trump, who is highly skeptical regarding the issue of climate change. One must note, however, that in March 2017 U.S. Secretary of Defense James Mattis stated that climate change is already impacting operations of the U.S. armed forces and that combatant commands should incorporate these risks into their planning.[3] Thus, it is clear that climate change is not completely excluded from the security agenda of the new administration in the White House. This paper emphasizes the broader idea that the climate change is a significant threat to security and that NATO should be one of the main players addressing this issue on the global level and serving as a role model for other states and regional organizations.

Traditional Views and the Realist Perception of Threat

The idea of security clearly distinguishes between military and non-military threats. Traditionally, the academic sphere of international relations has given more attention to so-called "hard" threats, which are roughly defined as military induced threats among and towards the states. This concept was established with the Westphalian peace treaty in 1648 and has remained a respected element of security doctrine into the twentieth and twenty-first centuries. A modern interpretation of this view on security was given by Walter Lippman in his book, *U.S. Foreign Policy: Shield of the Republic*. According to Lippman, "a nation is secure to the extent to which it is not in danger of having to sacrifice core values, if it wishes to avoid war, and is able to, if challenged, to maintain them by victory in such war."[4] Lippman claims that the existence of the state revolves around security, which is divided into military and political security.

Realism is the oldest—and in military circles, the most respected—theory of international relations. The theory clearly provides answers to dilemmas such as why states go to war and how states should respond to potential threats. In

[3] Andrew Revkin, "Trump's defense chief cites climate change as national security challenge," *Science*, March 14, 2017, available at http://www.sciencemag.org/news/2017/03/trump-s-defense-chief-cites-climate-change-national-security-challenge (accessed April 18, 2017).

[4] Walter Lippman, *U.S. Foreign Policy: Shield of the Republic* (Boston: Little, Brown and Company, 1943), 53.

general, realist scholars view security through four main assumptions, through which they define the international system. First, sovereign states are the main actors in the international system. States have governments, defined borders, and military might, all of which give them the legitimacy to rule and exercise power. Second, states live and act in an anarchic system. This philosophy came from seventeenth century English intellectual Thomas Hobbes, who coined the Latin phrase *bellum omnium contra omnes*, which translates into the 'war of all against all.' This dictum summarizes the idea that human nature, hence states, revolves around constant struggle and mistrust. Second, in an anarchic system, states are only interested in their own survival and perceive treats to be dangerous only when they rise to a level on which another state may be moved to exercise its military power. Third, realists believe that because the international system is driven by anarchy, all states seek to acquire power. This power offers security and survival. The drive to obtain power is the main force behind political interaction, arms races, and occasional security competition. Fourth, military power is the basic element that defines the strength of the state.

All realists agree on these four core assumptions. Nevertheless, various realist schools have different opinions about how states respond to threats. The views of *classical realist* views are best summarized in Hans Morgenthau's book, *Politics Among Nations,* in which the author implies that states are doomed to conflict because of humans' natural instinct for survival and our desire to acquire power.[5] In Morgenthau's view, the only threat to states were other states. The essence of this thinking is focused on rational fears and natural inclinations, which in the classical realist point of view are natural human motives. While *structural realism* originated in classical realism, it differs from classical realism in the fact that it does not focus on human nature but rather on the actual structure of the international system. Structural realists, adherents to the views of Kenneth Waltz, argue that the international system is anarchic and that in order to survive, states need to seek power.[6] While classical realists focus more on the anarchical character of human nature, structural relists emphasize their argument that the international political system is anarchic. Both schools, however, support the idea that threats to security are human- and/or state-inflicted.

Structural realism is further divided into *defensive realism* and *offensive realism*. Defensive realism is not concerned with the idea of maximization of state power. On the contrary, instead of maximizing power, states build enough capacity to allow them to survive by maintaining their position in the system.[7] Defensive realist Stephen Walt of Harvard University explains that

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5 Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace*, 5th ed., Revised (New York: Alfred A. Knopf, 1978), 4-15.

6 Kenneth Waltz, *Theory of International Politics* (Long Grove: Waveland Press, 2010), 74-75.

7 Waltz, *Theory of International Politics*, 179.

states tend to form alliances in order to counter threats. When Walt refers to a threat, he is thinking of a scenario in which weaker states form an alliance to counter an attempt by a revisionist state to upset the balance of power.[8] Offensive realists support the same basic concept, but employ a different pattern of thinking. They claim that in order to survive, states need to amass as much power as they can. The most prominent offensive realist, John Mearsheimer, claims that interaction between states is dominated by a rational desire to achieve hegemony in a Hobbesian world.[9] Like classic and structural realists, their offensive and defensive colleagues perceive threat in the traditional state-centric form.

The youngest school of realism, *neorealism*, suggests that the behavior of states is not conditioned by motivations of power and security, but the internal structure of states. Randall Schweller, in his article "Unanswered Threats: A Neoclassical Realist Theory of Underbalancing," describes how the internal capabilities of states will in the end determine the pattern of actions and success rates of their policies.[10] This theory offers a different realist-based explanation of how a state should react to external threats to its borders. Again, the main threat to state security is defined as traditional war.

Do realist thinkers view climate change as a threat to national security? Classical realists view climate change as an opportunity for states to seek power in competition with other states in order to secure their survival.[11] The problem starts with the idea that climate change is a threat that does not discriminate between borders and has multiplier effects across global ecosystems. This means that in order for states to survive and mitigate threats, they must work on multilateral environmental agreements and protocols, adopt domestic environmental legislation, and cooperate in international environmental organizations and institutions. Offensive realism sees climate change as an opportunity for one state to maximize its military capabilities while better preparing itself for potential climate challenges, while other states could use funds to recover from catastrophes caused by climate change.[12] This approach is very shortsighted and does not focus on finding solutions to deal with the threat. Defensive realism enhances the idea that immediate advantages like the formation of temporary alliances are more attractive to a state's survival *modus*

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[8] Stephen M. Walt, "Alliance Formation and the Balance of World Power," *International Security* 9, no. 4 (Spring 1985): 3-43.

[9] John Mearsheimer, *The Tragedy of Great Power Politics* (New York City: W. W. Norton & Company, 2001), 4-7.

[10] Randall L. Schweller, "Unanswered Threats: A Neoclassical Realist Theory of Underbalancing," *International Security* 29, no. 2 (Fall 2004): 159-201, p. 160.

[11] John Baylis, Steve Smith, and Patricia Owens, *The Globalization of World Politics: An Introduction to International Relations*, 3rd ed. (Oxford: Oxford University Press, 2011), 99-100.

[12] Baylis, Smith, and Owens, *The Globalization of World Politics*, 105-106.

operandi than long-term considerations such as ratification of climate agreements.[13] Advocates of this school think that the international system of cooperation provides only short-term gains, which result in moderate change in the behavior of states.

Neoclassical realists claim that states with democratic institutional settings will continue to focus on the immediate advantages of fossil fuel energy while states with socialist governments will be better positioned to deal with climate change.[14] This is also a very narrow and non-flexible understanding. Consider, for instance, that the largest global carbon dioxide (CO_2) emitter in the world is communist China, while, for example, democratic Scandinavian countries are states with extremely environmentally friendly policies.

The biggest drawback of the realist pattern of thinking is the fact that it does not include threats originating from nature. Another problem of realism is its failure to recognize the trans-border and non-traditional threat multiplier character of climate change. Realists view cooperation between states as an action of last resort, but proper mitigation of climate change can only be achieved through extensive global cooperation and action.

Realism provides an effective insight into states' behaviors and actions when it comes to traditional war, intra-state conflict, geopolitics, alliances, and the balance of power. Nonetheless, realist theory is quite limited when it comes to defining climate change as a threat and providing answers as to how states should act with respect to it. As the analysis of the different schools of realism showed, all of them have very little to offer when it comes to mitigating climate change. According to realists, states are driven by the wish to gain power on the expense of other states. When faced with environmental disasters caused by climate change, however, states actually need to cooperate in order to mitigate the negative impacts of climate change. Realist logic implies that states should focus on maximizing their power rather than cooperating to protect the planet. Climate change does not fall into any of these categories. For that reason, the theory does not provide an adequate insight to climate change as a serious threat to global security.

Definition of Security beyond Realism and Climate Change as a Non-Traditional Threat

Richard Ullman redefined the notion of threat to states when he analyzed the concept of non-military threats arising from outside the state-centric perspective, writing

> [A] threat to national security is an action or sequence of events that (1) threatens drastically and over a relatively brief span of time to degrade

[13] Steve Smith, Amelia Hadfield, and Tim Dunne, *Foreign Policy: Theories, Actors, Cases*, 2nd ed. (Oxford: Oxford University Press, 2012), 193.

[14] Baylis, Smith, and Owens, *The Globalization of World Politics*, 106.

> the quality of life for the inhabitants of a state, or (2) threatens significantly to narrow the range of policy choices available to the government of a state or to private, nongovernmental entities (persons, groups, corporations) within the state.[15]

In his essay, "National Security as an Ambiguous Symbol," Arnold Wolfers argues that states vary considerably among themselves on how they rank security threats within their national agendas. Wolfers tries to explain that the international affairs arena is not a game where all states compete by the same rules in order to achieve same goals. "After all that has been said, little is left of the sweeping generalization that in actual practice nations, guided by their national security interests, tend to pursue uniform and therefore imitable policy of security."[16] For states, security—including threats—is an ambiguous symbol that they define alongside their needs at certain time periods and not according to a prescribed pattern of power maximization.

Climate change is definitely not a traditional threat to security. It is a planetary scale threat for people of different classes, different nations, different political ideologies, different countries, and it is hard to predict. The definition of climate change as a non-traditional threat to societies is well summarized in Ulrich Beck's explanation of the risk society concept as a "systematic way of dealing with hazards and insecurities induced and introduced by modernization."[17] Beck tries to explain that states' policies and perceptions are shaped by experiences from the past. In his view, these experiences encourage states to build their national defense system according to the risks that can be easily calculated and controlled. Nevertheless, the problem arises when countries' security wellbeing is exposed to non-traditional threats that cannot be easily calculated. Beck writes, "Risk is ambivalence. Being at risk is the way of being and ruling in the world of modernity; being at global risk is the human condition at the beginning of the twenty-first century."[18]

Understanding climate change as a security threat means understanding security in the twenty-first century. In the traditional sense, security revolves around the idea of survival. Buzan, Waever, and de Wilde of the Copenhagen School introduced the theory that the existential threats to security depend on the "relation to the particular character of the referent object in question."[19]

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[15] Richard H. Ullman, "Redefining Security," *International Security* 8, no. 1 (Summer 1983): 129-153, p. 133.

[16] Arnold Wolfers, "'National Security' as an Ambiguous Symbol," *Political Science Quarterly* 67, no. 4 (December 1952): 481-502, quote on pp. 491-492.

[17] Ulrich Beck, *Risk Society, Towards a New Modernity* (London: Sage Publications, 1992), 260.

[18] Ulrich Beck, "Living in the World Risk Society," *Economy and Society* 35, no. 3 (August 2006): 329-345, p. 330.

[19] Barry Buzan, Ole Waever, and Jaap de Wilde, *Security: A New Framework for Analysis* (Boulder: Lynne Rienner Publishers, 1998), 21.

There is no universal standard that can define threats. The environmental sector encompasses broad fields of threats to security; it ranges from issues of survival of the species to large-scale issues such as minimizing the impact of big floods. Non-traditional threats are harder to define and require different response strategies because they focus on the relationship between human civilization and the biosphere, and not on the relationship among states themselves. Climate change impacts cause two types of threats: (i) easily securitized (e.g. survival of human civilization); and (ii) non-easily securitized (e.g. destruction of the entire ecosystem).

Unlike traditional security threats that imply the ignition of one security risk at different points of time, it is possible—perhaps even likely—that climate change may initiate multiple chronic conditions, which could occur simultaneously on a global level. In 2014, U.S. Secretary of Defense Chuck Hagel unveiled the Pentagon's Climate Change Adaptation Roadmap. The central argument of this document is that climate change is a threat capable of multiplying and aggravating already existing problems (water shortages, droughts, etc.) as well as generating fertile ground for future security threats.[20] Climate change is able to accelerate instability and exacerbate other drivers of insecurity that will simultaneously affect the environmental, economic, social, and political fabric of any modern society.

Nonetheless, the theory of climate security has been exposed to criticism. Alan Dupont, an academic at the University of Sydney, states that environmental threats are not going to act as main triggers of major conflict between states.[21] In his opinion, climate change impacts complicate existing disputes and create tensions, but they do not act as a direct cause of conflict. Daniel Deudney, a professor of Political Science at Johns Hopkins University with strong connections to the theory of geopolitics and republicanism, is completely against the idea of environmental security. According to Deudney, the concept of national security is centered on the idea of organized violence.[22] Hence, he argues that natural disasters are elements of unorganized violence that cannot be included under the umbrella of national security doctrine. In his view, national security planning is characterized by a zero-sum assessment, nationalism, and power maximization. Therefore, threats from climate change are not logical inputs to any of these concepts and including them in security cal-

[20] "2014 Climate Change Adaptation Roadmap," United States Department of Defense, October 13, 2014, available at http://www.defense.gov/News/News-Releases/News-Release-View/Article/605221 (accessed March 10, 2016).

[21] Alan Dupont, "The Environment and Security in Pacific Asia," *ADELPHI Paper* 319 (June 1998), p. 76.

[22] Daniel Deudney, "The Case Against Linking Environmental Degradation and National Security," *Journal of International Studies* 19, no. 3 (December 1990): 461-476, p. 461.

culations only creates confusion in the political leadership and makes them prone to conducting an impetuous foreign policy.

Deudney's concept of national security as organized violence is in complete contrast to the national security policies of some European Union (EU) and NATO member states. Addressing climate change through the mitigation principle has been firmly integrated into EU-wide 20-20-20 greenhouse gases (GHGs) policy reduction targets.[23] Correspondingly, in 2016 the German government issued a white paper, which categorizes climate change as permanent item on its national security agenda.[24] Beck classifies climate change as a threat that is so large it cannot be contained on the national level, but is more a concern with global implications. Moreover, he argues the following on the notion of global risk, "The experience of global risks is an occurrence of abrupt and fully conscious confrontation with the apparently excluded other. Global risks tear down national boundaries and jumble together the native with the foreign."[25]

Wolfers agrees that the nature and source of a threat define the scope of security. Securitizing climate change is necessary because climate change is inseparable from human security. At present, traditional security discourse must reexamine its state-centric conceptual approach to security. A monodisciplinary approach that emphasizes the maximization of power is highly unlikely to comprehend and respond to the serious existential challenges facing humanity in the twenty-first century. In order to properly confront the threat of climate change, states will need to develop an interdisciplinary approach that includes the inputs of a range of experts from environmentalists to defense specialists.

Climate Change as a Non-Traditional Threat Multiplier

Since its formation, the earth's climate has been changing. The planet has witnessed multiple periods of climate change that lasted for thousands of years, during which the earth's climate has been warming. The current global warming phenomenon is mostly caused by increasing concentrations of GHGs and other anthropogenic activities. Based on the measurements in ice core samples, scientists have come to the conclusion that present-day GHGs levels are the highest they have been since 800,000 years ago.

In the early nineteenth century, the concentration of CO_2 in the atmosphere was 280 parts per million by volume (ppmv). By the 1960s, emissions rose to

[23] Branko Bosnjakovic, "Geopolitics of Climate Change: A Review," *Thermal Science* 16, no. 3 (2012): 629-654, p. 636.

[24] "The 2016 White Paper on German Security Policy and the Future of the Bundeswehr," The Federal Government of Germany, July 13, 2016, available at https://www.bmvg.de/resource/resource/./2016%20White%20Paper.pdf (accessed April 17, 2017).

[25] Beck, "Living in the world risk society," p. 331.

316 ppmv. Today they are around 420 ppmv.[26] The Intergovernmental Panel on Climate Change (IPCC) temperature threshold defined a "tolerable" increase in global average temperatures as an increase of only 2 degrees Celsius (°C). If the current emissions trajectories hold, however, humanity is heading towards a 5°C increase in average global temperature by the end of the twenty-first century.[27] Even though a 5°C increase sounds like an insignificant number, when observed on a planetary scale, it certainly represents a tremendous fluctuation. The temperature difference between today's temperature and the average global temperature during the last Ice Age was -5°C. During that period, significant parts of North America, Northern Europe, the Atlantic, and the Pacific oceans were covered with huge ice sheets.

Climate change is not principally an environmental concern, however. It is actually a problem that is closely linked to national economic policy, strategic planning, public health, infrastructure, finance, and international security.[28] The impacts of climate change are already dramatically affecting food security, weather patterns, trade relations, access to fresh water, and mass migration. Scientists have already provided mountains of convincing evidence that global warming is distressing the life-support systems on which human beings and other species depend.[29] More importantly, these impacts are occurring much more quickly than some security experts and scientists had predicted. Sea levels are rising, snow and ice cover are decreasing, and both rainfall patterns and growing seasons are changing.

The biggest problem is that these changes are happening in a very short geological time scale. The earth's climate has certainly changed over time, but in the past these alterations—barring extraordinary events like meteor impacts—developed slowly and lasted for thousands of years. This slow pace of climate change gave flora and fauna enough time to adapt and evolve. Scientists Ignacio Quintero and John J. Wiens discovered that species evolve at steady rates at around 1°C per million years.[30] Researchers from the IPCC stated that tempera-

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[26] Mark Maslin, *Climate Change: A Very Short Introduction* (Oxford: Oxford University Press, 2014), 29-45.

[27] Fiona Harvey, "Everything You Need to Know about the Paris Climate Summit and UN Talks," The Guardian, June 2, 2015, available at www.theguardian.com/environment/2015/jun/02/everything-you-need-to-know-about-the-paris-climate-summit-and-un-talks (accessed March 12, 2016).

[28] Carol Dumaine and Irving Mintzer, "Confronting Climate Change and Reframing Security," *SAIS Review of International Affairs* 35, no. 1 (2015): 5-16, p. 6.

[29] Janet Sawin, "Global Security Brief #3: Climate Change Poses Greater Security Threat than Terrorism," World Watch Institute, January 2016, available at http://www.worldwatch.org/node/77 (accessed February 25, 2016).

[30] Ignacio Quintero and John J. Wiens, "Rates of Projected Climate Change Dramatically Exceed Past Rates of Climatic Niche Evolution among Vertebrate Species," *Ecology Letters* 16, no. 8 (2013): 1095-1103, p. 1095.

tures are going to rise between 2°C and 4°C in the next hundred years.[31] When calculated, the results lead us to the grim finding "that matching projected changes for 2100 would require rates of niche evolution that are 10,000 times faster than rates typically observed among species."[32]

A recent study by the Organization for Economic Co-operation and Development (OECD) shows that the most economically vulnerable regions are Africa and Asia. Based on data compiled since the 1990s, the OECD projects that gross domestic product (GDP) losses in 2060 will amount to 3.3 percent for the Middle-East and Northern Africa; 3.7 percent for South-and South-East Asia; and 3.8 percent for Sub-Saharan Africa.[33] Furthermore, GDP surges in Latin America, -1.5 percent by 2060, and Eurasia, which includes Europe, China, and Russia, in 2.1 percent GDP loss by 2060. In total, societies across the globe are facing a global average 2 percent of GDP loss.[34]

Climate change will negatively affect food production in tropical and temperate climates. Crops are adversely affected by drought and other extreme weather events. In the last hundred years the world significantly increased its food production and experienced dynamic growth in population. "Exposed and/or vulnerable regions will suffer from risks to all aspects of food security, including food access, utilization, and price stability, and could even experience full breakdowns of food systems."[35] In the summer of 2013, for instance, Russia was hit by an extremely destructive drought. A state of emergency was declared in twenty regions across the country. In the end, a ten percent drop in Russian production caused a forty percent increase in global wheat markets.[36] Since the early 2000s, Syrian President Bashar al-Assad enforced an agricultural strategy with a goal of attaining self-sufficiency in national food production. During the effort to increase agricultural output, the country overused its water reserves. To make matters worse, Syria was home to one million Iraqi refugees,

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[31] Quintero and Wiens, "Rates of Projected Climate Change Dramatically Exceed Past Rates."

[32] Quintero and Wiens, "Rates of Projected Climate Change Dramatically Exceed Past Rates."

[33] "The Economic Consequences of Climate Change," Organization for Economic Co-operation and Development, November 3, 2015, available at http://www.oecd-ilibrary.org/environment/the-economic-consequences-of-climate-change_9789264235410-en (accessed April 5, 2016).

[34] "The Economic Consequences of Climate Change."

[35] Philippe Vitel, "Climate Change, International Security and the Way to Paris 2015," North Atlantic Treaty Organization Parliamentary Assembly, March 20, 2015, available at http://www.nato-pa.int/Default.asp?SHORTCUT=3767 (accessed January 20, 2016).

[36] Javier Blas, "Wheat Soars after Russian Crop Failure," *Financial Times*, November 8, 2012, available at http://www.ft.com/cms/s/0/7cbc024c-2998-11e2-a5ca-00144feabdc0.html (accessed March 25, 2016).

which contributed to additional social stress. From 2006 to 2010, large parts of the country were hit by consecutive droughts. When drought hit again in 2011, desperate farmers went to the cities and started protesting; when mixed with a complex ethnic composition and social structure in crisis, the drought certainly contributed to increasing tensions.[37] It is hard to claim that drought sparked the Syrian Civil War; however we can state that socio-economic despair triggered by successive droughts between 2006-2011 accelerated social unrest in that nation.[38]

Climate change will create public health issues through increases in heat-stress mortality, tropical vector-borne diseases, urban air pollution problems, and decreases in cold-related illnesses. "Areas where malaria is currently endemic could experience intensified transmission (on the order of fifty to eighty million additional annual cases, relative to an estimated global background total of five hundred million cases)."[39] Natural disasters between 1990 and 1999 killed 600,000 people.[40] Extreme and unpredicted fluctuations in temperatures cause heat stress (hyperthermia) or extreme cold (hypothermia) that often end in heart and respiratory failure. In the summer of 2003, high temperatures caused an estimated 70,000 more deaths as compared to the average death rate in previous years.[41] Warmer temperatures increase levels of evaporation and disturb rainfall patterns. This increases the risk of diarrhea, a disease that on average takes around two million lives annually. Diarrhea also increases the spread of trachoma, an eye infection that can lead to blindness.[42]

Environmental disasters are able to severely hurt modern economies. When hurricane Sandy ravaged the east cost of the U.S. and parts of the Caribbean, an estimated 1.8 million structures and homes were destroyed or damaged. Economic losses surpassed US$ 65 billion. Tourism was the hardest hit industry, with 10,000 job cuts and losses of US$ 1 billion.[43] In the aftermath of hurricane

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[37] Caitlin E. Werrell, Francesco Femia, and Troy Sternber, "Did We See It Coming? State Fragility, Climate Vulnerability, and the Uprisings in Syria and Egypt," *SAIS Review of International Affairs* 35, no. 1 (2015): 29-46, p. 33.

[38] Mark Fischetti, "Climate Change Hastened Syria's Civil War," *Scientific American*, March 2, 2015, available at http://www.scientificamerican.com/article/climate-change-hastened-the-syrian-war/ (accessed March 25, 2016).

[39] "Climate Change and Health," Film (July 2011), World Health Organization video, 7:03, Posted July 19, 2011, available at www.youtube.com/watch?v=Z5gtjhWJ-3M (accessed January 28, 2016).

[40] "Ten Facts on Climate Change and Health," World Health Organization, October 2012, available at http://www.who.int/features/factfiles/climate_change/en/ (accessed January 28, 2016).

[41] "Ten Facts on Climate Change and Health."

[42] "Ten Facts on Climate Change and Health."

[43] Diana Liverman and Amy Glasmeier, "What Are the Economic Consequences of Climate Change?" *The Atlantic*, April 22, 2014, available at www.theatlantic.com/

Katrina, US$ 40 billion in claims were filed and the city of New Orleans' population decreased by 18 percent when compared to pre-storm levels.[44] In one of their reports that surveyed more than 1,500 leading global private companies, the Carbon Disclosure Project stated that climate change is the main threat to business security. The report also stated that more than one third of companies experienced disruption in production from rainfall or drought which caused a 31 percent increase in production costs.[45]

Pre-existing poverty multiplies the chances of failure when a state or region is faced with a massive flood or long drought. The majority of low-income countries are situated in tropical zones closer to the equator. On average they are hotter, which has traditionally limited their agricultural outputs, and as temperatures increase, the amount of agricultural output decreases further. For example, negative climate impacts are predicted to generate a welfare loss equivalent to a quarter of total income in sub-Saharan Africa and certain parts of Asia.[46] In 2011, Thailand was hit by unusually destructive floods. In total, sixty-five out of country's seventy-seven provinces were affected. They lasted from July 2011 until January 2012, affecting the everyday lives of 13 million people. Total losses were US$ 45 billion, which classifies this event as one of the top five natural disasters in recorded history.[47]

Climate change can be classified as a threat multiplier for countries suffering from political instability and ethnic tensions. Socio-economic differences in the northern part of Nigeria, particularly in the Sahel region, are stark. In the last decade, more than hundred villages have been abandoned due to desertification. Migration and unrelated population growth have added supplementary stress to already unstable relations between ethnic groups in the Muslim north and Christian south. In 2010, this led to land disputes and uprisings that were fueled by religious differences in which approximately a thousand people lost their lives.[48] Moreover, amplified desertification of the Nigerian Sahel left many people in despair, strengthening the influence of terrorist organizations,

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business/archive/2014/04/the-economic-case-for-acting-on-climate-change/360995 (accessed January 29, 2016).

[44] Liverman and Glasmeier, "What Are the Economic Consequences of Climate Change?"

[45] Beth Platow, "Climate Change and the Supply Chain," *Fronetics*, July 22, 2015, available at http://www.fronetics.com/climate-change-and-the-supply-chain/ (accessed March 3, 2016).

[46] Richard Tol, "The Economic Effects of Climate," *Journal of Economic Perspectives* 23, no. 2 (2009): 29-51, p. 35.

[47] "2011 Thailand Floods," *AON Benfiled*, March 14, 2012, available at http://thoughtleadership.aonbenfield.com/Documents/20120314_impact_forecasting_thailand_flood_event_recap.pdf (accessed April 7, 2016).

[48] Marcus DuBois King and Jay Gulledge, "The Climate Change and Energy Security Nexus," *Fletcher Forum of World Affairs* 25, no. 44 (2013): 25-44, p. 30.

such as Boko Haram, an al-Qaeda affiliate. Boko Haram used the power vacuum and inefficiency of the central national government to position itself as an ambassador, representing the grievances of northern Nigerians. Boko Haram's actions infringed upon the Nigerian government's ability to provide security.

NATO and Climate Change

NATO first defined and recognized environmental challenges as potential threat to security in 1969. The first organizational mechanism focusing on environmental challenges was the Committee on the Challenges of Modern Society (CCMS). CCMS utilized knowledge gained through networks of national experts working on scientific publications examining defense-related environmental issues. Teams of experts funded by member states tackled problems affecting ecosystems and quality of life through three to five year pilot studies, shorter term projects, conferences, workshops, and roundtables.[49]

In 2006, CCMS merged with NATO's Science for Peace and Security (SPS) Program. SPS is a policy tool and platform for dialogue based on scientific research, innovation, and knowledge exchange. It provides funding, expert advice, and support to NATO-led operations and activities developed with partner states. NATO defines the environmental sphere within two concepts: security and protection. First, environmental security reflects responses to security challenges originating from the physical and natural environment. Second, environmental protection is defined as safeguarding physical and natural environment from the detrimental impact of military activities.

Since the formation of the CCMS, NATO has tried to respect environmental principles and policies under all authorized conditions. For that reason, the Alliance formed two different bodies, the Environmental Protection Working Group (EPWG) and the Specialist Team on Energy Efficiency and Environmental Protection (STEEEP). The EPWG drafts NATO policies that diminish possible harmful impacts of military activities on the environment. The STEEEP integrates environmental protection and energy efficiency regulations into technical requirements and specifications for military hardware, equipment, and machinery.

However, the notion of climate change as a security threat remains underdeveloped, especially when compared to traditional security risks such as traditional war, weapons of mass destruction, and terrorism. The non-traditional threat of climate change was first institutionalized in NATO's agenda in the 2010 Strategic Concept for the Defense and Security of the Members of NATO. Point fifteen in the Security Environment section mentions the climate change in the following context,

[49] "The Committee on the Challenges of Modern Society," North Atlantic Treaty Organization, available at http://www.nato.int/events/0110eapc/english/txt-15.htm (accessed January 21, 2016).

> Key environmental and resource constraints, including health risks, climate change, water scarcity and increasing energy needs will further shape the future security environment in areas of concern to NATO and have the potential to significantly affect NATO planning and operations.[50]

Former Secretary General de Hoop Scheffer highlighted climate change as a non-traditional threat in 2008. His successor, Secretary General Fogh Rasmussen, integrated climate concerns into NATO's functioning mechanism. In 2009, General Secretary Rasmussen stated, "NATO should begin a discussion on how we—NATO as an organization, and individual Allies as well—can do better to address the security aspects of climate change."[51]

It is clear that climate change has been on the Alliance's priority list for years prior to the 2010 Strategic Concept, but until the beginning of this decade it was not integrated into the NATO's agenda. The Emerging Security Challenges Division (ESCD) was established the same year as the Strategic Concept. The ESCD was established to respond to a growing range of non-traditional risks and challenges, with climate change being one of them. The division's goal is to monitor and anticipate threats arising from non-traditional risks and catapult non-traditional security challenges to the center of NATO's radar.

In 2013, NATO adopted the Green Defense framework, which "seeks to increase the Organization's operational effectiveness through changes in the use of energy, while saving resources and enhancing environmental sustainability."[52] The framework highlights NATO's readiness to explore the smart energy domain. Additionally, work within the framework gave birth to the Smart Energy Team (SET), a working group that advises NATO on its efforts to help lower fuel and electricity consumption and identify practical energy-efficient solutions to the Alliance's military forces. The SET should lead to cuts in CO_2 emissions by the world's biggest armed force.

In January 2014, Jens Stoltenberg became the United Nations Special Envoy on Climate Change. The 2014 Wales Summit Declaration stated that climate change and increasing energy needs will shape the global security arena in the future. The Wales Declaration underlined that climate change-induced security

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[50] "Strategic Concept for the Defense and Security of the Members of the North Atlantic Treaty Organization," North Atlantic Treaty Organization, November 20, 2010, available at http://www.nato.int/lisbon2010/strategic-concept-2010-eng.pdf (accessed January 16, 2016).

[51] "Speech by NATO Secretary General Anders Fogh Rasmussen on Emerging Security Risks, Lloyd's of London," North Atlantic Treaty Organization, October 1, 2009, available at www.nato.int/cps/en/natolive/opinions_57785.htm (accessed February 14, 2016).

[52] "NATO Stresses Climate Change Impacts on Security," International Institute for Sustainable Development, September 2014, available at http://climate-l.iisd.org/news/nato-stresses-climate-change-impacts-on-security/change (accessed February 12, 2016).

concerns such as environmental and resource constraints, including health risks and water scarcity, will result in crises that will directly affect NATO. The declaration reinforced the Alliance's stance on the issue that climate change represents a new and growing threat to all NATO member states.

Shortly after the Wales Declaration, the NATO Parliamentary Assembly adopted Resolution 427 on Climate Change and International Security.[53] The document acknowledges that climate change-related risks are significant threat multipliers, recognizes the need to work on climate action with efforts to strengthen the resilience of states, and praises the formation of the Green Defense Framework and the SET. NATO showed readiness and willingness to invest in collective defense and to work to develop capabilities to respond to climate change challenges. During his visit to Croatia in July 2015, General Secretary Stoltenberg emphasized:

> Environment, climate change is critical for promoting development and peace and stability. Development is important both for development and for security. And security is important to provide the foundations for development and for addressing climate change.[54]

At the moment, NATO is undergoing an evolutionary process in integrating the threat of climate change into the organization's *modus operandi*. While the notion of climate change has been recognized, acknowledged, and analyzed, it has not yet been fully integrated into the Alliance's operations. To date, climate change has been a strategic security threat that has for the most part been more actively pursued on the national level.

Consider the fact that the melting of the ice in the far north is making the Arctic more and more accessible. As the Arctic ice continues to retreat, trade routes will remain open for longer periods of time, increasing annual traffic of ships carrying goods and resources in the North. At present, no one owns the Arctic, but Canada, Denmark, Norway, Russia, and the United States have all laid different claims to territories on the Artic. In 2007, Russia sent a diving team to position its flag on the sea floor underneath the ice cap. NATO member state Norway is already adopting a Smart Defense Strategy that centers around a strong focus on the Arctic, both with regards to funding and resource allocation. In 2009, the Norwegian Defense Force made a decision "to relocate the Army's Headquarters functions to the Arctic town of Bodø—1,700 kilometers

[53] "Resolution 427 on Climate Change and International Security," North Atlantic Treaty Organization Parliamentary Assembly, October 2015, available at https://www.actu-environnement.com/media/pdf/news-25462-resolution-otan-2015.pdf (accessed April 14, 2017).

[54] Jens Stoltenberg, "NATO Secretary General Jens Stoltenberg at the Opening Session of the Croatia Forum," North Atlantic Treaty Organization, July 10, 2015, available at http://www.nato.int/cps/en/natohq/opinions_121655.htm (accessed April 14, 2017).

north of Oslo—[bolstering] Norway's commitment to establishing an integrated High North defense system."[55]

Canada is another NATO member state that cares greatly about the Arctic sovereignty issue. Canada deployed Canadian Ranger units to help the indigenous population of the Canadian Arctic to ensure that northern communities are equipped with all necessary goods so that they may reap the benefits of economic activities. Maintaining functional population centers in the Arctic helps Canada protect its national sovereignty in the far North.

The United Kingdom (UK) has incorporated climate change in its national defense planning, introducing climate change study programs in its military staff colleges. In 2009, the British Ministry of Defence published guidance entitled "Defence in Changing Climate," a document that outlines principal objectives and identifies concrete targets for GHGs reduction in the sphere of the UK's military concerns.[56] The Ministry's climate change strategy became effective in March 2012. Soon after the adoption of the strategy, the Ministry created the position of Climate and Energy Security Envoy to act as a focal point for representing this institution in the climate change and security realm.[57]

Spain formed a Military Emergencies Unit to respond to climate disasters. By 2012, this military unit had responded to ninety climate change-ignited disasters, most of them on domestic territory.[58] Defense strategy documents in Denmark, the Czech Republic, Germany, Italy, the Netherlands, and Poland all mention climate security, but do not yet have concrete mechanisms, units, and departments that respond to these security threats. The French military developed several climate and security projects, but has admitted that its leadership is just starting to acknowledge more seriously the importance of climate change in the national security nexus. In 2011, close to 4.5 percent of the French defense budget was allocated to financing environment and future defense policy. The Dutch government has invested millions of Euros in strengthening costal flood defense mechanisms, and Denmark has allocated 2.2

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[55] Gerard O'Dwyer, "Norway Prioritizes High North Equipment," Defense News, March 11, 2015, available at http://www.defensenews.com/story/defense/policy-budget/warfare/2015/03/03/norway-russia-arctic-northern-high-north-archer-cv90/24272749/ (accessed April 10, 2016).

[56] Michael Brzoska, "Climate change and the military in China, Russia, the United Kingdom, and the United States," *Bulletin of the Atomic Scientists* 62, no. 2 (2012): 43-54, p. 48.

[57] United Kingdom Ministry of Defence, "Defence Infrastructure Organisation estate and sustainable development: How the Ministry of Defence estate is adapting to climate change, including nature conservation on the estate," June 21, 2013, available at https://www.gov.uk/guidance/defence-infrastructure-organisation-estate-and-sustainable-development (accessed April 11, 2016).

[58] Richard Youngs, *Climate Change and European Security* (New York: Routledge, 2014), 75.

percent of its defense budget to improve the climate change disaster response capacity of the Home Guard Command.[59]

The issue of climate change encompasses a broad spectrum of human security, which may or may not include national security. So far, the U.S. has made the most progress in addressing this issue, as compared to the other twenty-eight NATO members.

> Under the 2007 Global Climate Change Security Oversight Act, the United States initiated a far more systematic program of research on global climate change impacts on military requirements, operations, doctrine, organization, training, material, logistics, personnel, and facilities and on the actions needed to address such impacts.[60]

The 2008 U.S. National Defense Authorization Act directed the U.S. Department of Defense to evaluate the capability of armed forces to respond to natural disaster (e.g. floods, wildfires, droughts, etc.) and other missions the armed forces may be asked to conduct domestically or in foreign countries.[61]

The Pentagon's 2014 Climate Change Adaptation Roadmap is a concise document that outlines the effects of extreme weather events and rising temperatures on military training, operations, acquisitions, and infrastructure. The document is designed to become the basis for long-term planning for security risks that arise from the increase in global temperatures. This report is significant because it utilizes strong language implying that climate change is not only a future, but rather a present security threat multiplier. In response to this document, the U.S. Department of Defense has: (i) collected historic data and potential future vulnerabilities from coastal locations and developed regional sea-level rise scenarios for 704 coastal locations; (ii) evaluated military installations' vulnerability to global warming impacts and directed military planners to incorporate climate change considerations into certain installation planning efforts; and (iii) demanded that the hazardous impacts of climate change be included in installation master planning as we all as natural resource exploitation planning.[62]

The U.S. armed forces have been actively engaged in studying climate change as a security threat since the end of the Cold War. The U.S. Naval War

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[59] Youngs, *Climate Change and European Security*, 81.

[60] Richard Youngs, "Climate Change and EU Security Policy: An Unmet Challenge," Carnegie Endowment for International Peace, May 2014, available at http://carnegieendowment.org/files/climate_change_eu_security.pdf (accessed April 12, 2016).

[61] Michael Brzoska, "Climate change and the military in China, Russia, the United Kingdom, and the United States," 45.

[62] "DoD Can Improve Infrastructure Planning and Processes to Better Account for Potential Impacts," United States Government Accountability Office, May 2014, available at http://www.gao.gov/assets/670/663734.pdf (accessed April 4, 2016).

College was the first institution that pointed out the potential impact of climate change on future policymaking. The U.S. intelligence community, as well, has been monitoring risks emerging from climate change within the MEDEA program—a collaborative initiative among climate scientists and U.S. intelligence agencies—and has been issuing intelligence reports based on analysis of climate change-related security impacts since 2008.[63]

Although the national defense agendas of some member states are ahead of NATO in responding to climate change impacts, NATO has been engaged in helping Partnership for Peace Program countries to mitigate natural disasters caused by or exacerbated by global warming. In May 2014, a low-pressure cyclone in Bosnia and Herzegovina caused the biggest floods and landslides in recorded history, with flood damages costing close to US$ 2.2 billion.[64] Although fewer than a hundred people died, a significant percentage of critical infrastructure—such as schools, hospitals, roads, and railroads—were destroyed or heavily damaged. In addition, the disaster created 2,100 active landslides across the mountainous Bosnian terrain and dislocated many of the 9,000 marked minefields. Twenty-one NATO members provided humanitarian aid, helicopters, rescue teams, medicines, blankets, and tents across Bosnia and Herzegovina. Upon the request of the Bosnian government, NATO activated the Euro-Atlantic Disaster Response Coordination Centre (EADRCC), which conducted operations in flooded Bosnian territory. Eighteen NATO member states sent boats, water pumps, power generators, humanitarian aid, and helicopters. Without the engagement of NATO's EADRCC and NATO troops on the ground, Bosnia and Herzegovina would have faced serious if not impossible obstacles in its recovery efforts.

Climate change has already become a dangerous reality in the five Central Asian republics. Environmental mismanagement and limited climate-related disaster adaptation, combined with a naturally arid climate that has been profoundly affected by the global rise in temperatures, transformed the region into one that is now increasingly vulnerable to the effects of temperature fluctuations and water shortages. Over the last fifteen years, the rise in temperature melted one-third of all the region's glaciers.[65]

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[63] Caitlin Werrell and Francesco Femia, "Chronology of Military and Intelligence Concerns about Climate Change," The Center for Climate & Security, January 12, 2017, available at https://climateandsecurity.org/2017/01/12/chronology-of-the-u-s-military-and-intelligence-communitys-concern-about-climate-change/ (accessed April 18, 2017).

[64] "Bosnia and Herzegovina Recovery Needs Assessment," European Commission, May 19, 2014, available at http://ec.europa.eu/enlargement/pdf/press_corner/floods/rna-executive-summary.pdf (accessed April 12, 2016).

[65] "The Glaciers of Central Asia: A Disappearing Resource," United Nations Development Program, December 2011, available at www.envsec.org/publications/brochure_the_glaciers_of_central_asia_dec_2011.pdf (accessed April 10, 2016).

Melting glaciers disrupt regional water flaws. The largest rivers in the region originate in the mountainous republics of Tajikistan and Kyrgyzstan; both republics are home to some of the Soviet era's largest dams. At the same time that these glaciers are retreating, fresh water levels are additionally impacted by hydroelectric dams. Turkmenistan, Uzbekistan, and Kazakhstan are feeling the consequences of reduced downstream river flows. Tajikistan and Kyrgyzstan are trying to fight their water shortages by retaining a larger amount of water in the dam reservoirs, but as shortages are becoming more severe, there is less water left for the agricultural economies of downstream countries. From 2004 to 2009, NATO worked to support integrated water resources management for a wetlands restoration project in the Aral Sea basin.[66] Additionally, NATO was engaged in a project using a comprehensive multidisciplinary approach to assess the geo-environmental security of the Toktogul hydroelectric power station, which is the largest of its kind in Central Asia.

It is clear that threats emanating from global warming will exceed national and regional scopes. Climate change is a threat operating on a planetary scale, simultaneously activating multiple security challenges. Climate impacts will directly affect military facilities, personnel, and hardware. NATO cannot ignore the perils of climate change. Conversely, the Alliance will become more actively engaged in dealing with it. Since the publishing of the Strategic Concept in 2010 NATO started addressing this problem. Nevertheless, the Alliance can improve and catch up in institutionalizing the notion of climate change at the heart of organization by harmonizing its policy with the efforts already done by American, British, Canadian, Norwegian, or any other member state governments that could offer good solutions. In 2009, the former General Secretary Fogh Rasmussen laid out a robust list of objectives for NATO which are still relevant when applied to current context.

Future prospects for NATO's involvement in the realm of climate change security could be paralyzed by U.S. President Donald Trump. Since the beginning of his presidential campaign as well as his presidency, Donald Trump has demonstrated skepticism towards climate change phenomenon.[67] Moreover, key members of Trump's administration are climate change deniers (i.e. head of U.S. Environmental Protection Agency Scott Pruitt), fossil fuel industry lobbyists (i.e. U.S. Secretary of Interior Ryan Zinke), and former fossil fuel industry executives (i.e. U.S. Secretary of State Rex Tillerson). The new American administration has already started abolishing domestic initiatives to protect the climate and environment and seems likely to ignore climate change security as a component of wider NATO policy and operations. It is still early to predict changes in the U.S. official climate strategy within the Alliance; however, the

[66] "NATO agrees to extend Environment and Security cooperation initiative," North Atlantic Treaty Organization, June 2010, available at www.nato.int/cps/en/natohq/news_64466.htm (accessed April 14, 2017).

[67] Dana H. Allin, "President Trump," *Survival* 58, no. 6 (2016): 237-248, p. 246.

U.S. withdrawal from the Paris Climate Agreement in June 2017 might have a negative impact on the Alliance's ability to integrate further climate change mitigation and adaptation measures as a security component of NATO's policy and operations.

Conclusion

Climate change is a non-traditional threat that has profound ramifications on a planetary scale. It simultaneously affects every person, rich and poor, as well as every state, big or small, developed or developing, young or old. Climate change is a threat multiplier that will shape the security environment in the twenty first century.

Although NATO is already engaged in developing policy and conducting operations responding to climate change impacts, it is easy to understand why climate change considerations are not yet fully integrated into the Alliance's *modus operandi*. After all, NATO was conceived in the Cold War and—at least until the September 11 attacks—its main purpose has always been to react to traditional threats. Climate change is just one of many threats to which NATO must respond. Realism offers good solutions to analyses of war, conflict, geopolitics, alliances, and balancing behaviors, but it lacks effective solutions when it comes to confronting environmental security threats originating from climate change.

Climate change is a novel non-traditional type of threat with multiplier effects that must be effectively addressed. Hence, as the discussion above demonstrated, the Alliance should address climate change through utilization of a non-traditional approach to security. Beck's risk society theory defines solid strategies to deal with climate change as a non-traditional threat multiplier. Risk society provides a theoretical framework for a systematic approach to dealing with hazards and insecurities induced and introduced by the process of modernization, of which climate change is a perfect example.

NATO will need to implement a stronger and more coherent approach to dealing with climate change. More precisely, the Alliance needs to develop more concrete policies as well as the capacities of partner nation forces to manage environmental security crises. This can include a faster process of sharing climate change-related knowledge between member states and the Alliance. This encompasses learning from capacities that exist on the member state level and upgrading them to work on the Alliance level. NATO militaries need to integrate issues related to climate risk into their training and exercise routines. Moreover, member states need to work on developing a common Alliance strategy for responding to the negative impacts of climate change on military planning and operations. Because there is currently a disparity about how this issue is addressed, all member states must be encouraged to integrate the mitigation of climate risks into their national defense strategies. The United States is currently led by a government that will most probably not focus on the issue, while its European allies such as France, Germany, and the UK already

consider the mitigation of and adaptation to climate change to be one of their most crucial national security priorities. This difference in views has the potential to cause a certain level of disparity in strategic planning of the alliance. Nevertheless, the current U.S. administration's dismissal of this security concern could potentially complicate stronger engagement of the Alliance in the field of climate change security.

At present, NATO exists in a world where it is facing both traditional and non-traditional threats. It has proven itself as an organization that can master traditional threats, but the Alliance must upgrade and accelerate current efforts to develop a more efficient and concrete strategy to respond to the non-traditional threat multiplier of climate change as a security risk. This will require leaders to encourage efforts for deeper integration of climate change threat analysis into policy and planning within the Alliance's strategic thinking, because by doing so the Alliance will avoid paying higher security, economic, and social costs for the greatest problem that will confront humanity in the decades to come.

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