

INTEGRATING CLIMATE CHANGE INTO PROFESSIONAL MILITARY EDUCATION

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ABSTRACT

Despite its vast potential to shape the global security environment, climate change remains underrepresented in national security curricula, including professional military education institutions. This article draws on the authors' experience leading the first climate security course offered at the National War College to illustrate a viable approach to building climate literacy among national security practitioners and related audiences. This article describes the course structure, explains the key topics discussed, and highlights essential pedagogical considerations for teaching climate security to rising strategic leaders and professional audiences. The authors intend for their experience to provide a roadmap for other instructors who seek to incorporate global climate change into their national security or political science courses at all academic levels.

Keywords: climate security, military education, national security

This article provides an overview of the authors' experience integrating issues related to global climate change into professional military education at the U.S. National War College (NWC). Our expertise is relevant for developing curricula for current or future national security practitioners at military and civilian institutions. The authors' experience leading a climate security course for national security officials who will take on senior government and military positions is a viable pedagogical approach to tackling these challenging and politically sensitive issues. This article identifies topics relevant to this audience and best practices for instructing students whose day jobs involve designing, implementing, and overseeing military operations and national security policy. Incorporating climate security and related concerns into courses of instruction for national security practitioners, including uniformed military officers, is an essential first step to ensuring policymaking agendas can meaningfully address climate security matters.

It is important to note at the outset that our experience primarily relates to teaching a course targeted at climate security issues. The authors contend that this approach is necessary but not sufficient. Climate security should be explored in standalone courses on broader, related topics such as international relations, contemporary statecraft, or global economics. Targeted instruction on these issues is critical to equipping practitioners with the knowledge and analytical frameworks necessary to meet the daunting array of emerging climate challenges that await them

as their careers progress. A failure to effectively educate practitioners on climate issues portends disastrous consequences for international security as the global climate crisis grows more acute over the coming decades.

Within this paper, the authors use the word “practitioners” to describe government officials who drive policy outcomes and are responsible for national security decision-making (Sarkesian et al., 2013). They are distinguished from traditional academic audiences by the nature of their role within the policymaking ecosystem, their degree of familiarity with advanced educational approaches, and the amount of time they can dedicate to studies outside their government responsibilities. However, the authors contend that the analysis in this paper offers salient considerations for academic programs targeting the U.S. or allied militaries, the broader national security establishment, and civilian students alike. The article begins with an overview of the NWC and the format of the climate security course the authors designed and taught at the college in 2021. The authors then surveyed climate topics relevant to practitioners and analyzed best practices gleaned from the course assessment.

INTEGRATING CLIMATE CHANGE INTO THE NWC CURRICULUM

Recognizing the challenges the U.S. national security establishment faced during World War II, the NWC was founded in 1946 to provide promising U.S. national security leaders with advanced education in national security strategy. The NWC is today an element of the larger National Defense University, and both institutions are located on the grounds of Fort Lesley J. McNair in Washington, DC. There are slightly more than 200 students, consisting of 59 percent military officers (with equal representation from air, land, and sea services) and 41 percent civilians drawn from the Department of State and other federal departments and agencies (NWC, 2016). Each student spends one academic year at NWC and is required to take a set of core courses and several elective courses to receive their master’s degree in national security studies. The NWC curriculum focuses on integrating all elements of national power into national security strategy. The core curriculum has traditionally focused on the theory and history of warfare, the study of contemporary statecraft, and the interrelationship between domestic politics and international affairs.

Despite a broad array of elective offerings, it was only in 2021 that the NWC offered its first course dedicated to climate security at the authors’ initiative. The course, *The Threat of the Century: Global Climate Change and Its Implications for National Security* was among the first courses at the NWC to integrate the relationship between global climate change and national security at any senior service college. The class met for two hours once a week for 12 weeks and was conducted online due to the COVID-19 pandemic. The course was designed to help develop a cadre of climate-literate national security practitioners who understand how climate-related issues are already affecting U.S. national security interests at the strategic level and will inevitably shape cross-cutting government policies over the years ahead.

The *Threat of the Century: Global Climate Change and Its Implications for National Security* course focused on how climate change issues can and should be incorporated into the design and

execution of national security policy as well as the ways in which climate change threatens to undermine the national security establishment's traditional definition of its institutional mission. While climate security topics were at the forefront of the course, related economic, political, and cultural perspectives were included in seminar discussions to establish a comprehensive sense of the strategic implications of climate change. Interdisciplinary approaches are advantageous and arguably unavoidable when teaching practitioners involved in national security policy about climate change, as it poses an inherently interdisciplinary set of challenges.

THE THREAT OF THE CENTURY: GLOBAL CLIMATE CHANGE AND ITS IMPLICATIONS FOR NATIONAL SECURITY

The course was organized into three blocks. The first two blocks were framed thematically, emphasizing the security and diplomatic dimensions of climate change in block one and focusing on its economic implications in block two. The third block involved analyzing a series of case studies to examine past efforts at managing global challenges, including climate change, domestically and internationally.

Risks to U.S. and Allied Interests

The first block examined risks to U.S. and allied interests resulting from rising seas, resource conflicts, mass migration, and other anticipated effects of global climate change. The course focused on strategies the U.S. national security establishment should employ to prepare for the growing political, economic, and military threats associated with climate change at home and abroad. This block also reviewed the unique challenges climate change poses for the Department of Defense, which depends on dozens of facilities worldwide that are now at risk of flooding and other climate-related disasters. In recent years, this was illustrated by massive storm damage to Offutt and Tyndall Air Force Bases and other military installations (Klare, 2019; Department of Defense, 2019). These discussions linked the course material with the institutional interests of the students. They emphasized the challenges climate change poses to both long-term U.S. national interests and near-term government operations. The block concludes with a discussion on the strategic opportunities climate change may present for the Western alliance and its adversaries, including energy production, new trade routes in the Arctic, and perhaps even hastening increased global cooperation against shared threats (Congressional Research Service, 2021).

The Global Energy Market

The course's second block considered the global energy market and how it is likely to evolve in the years ahead. Readings and seminar discussions revolved around the complexity of oil and gas markets (United Nations Environmental Program, 2019a, 2019b); the technical, political, and cultural challenges associated with nuclear energy; and the prospects for renewables to become a more significant share of the world's energy mix over the decades ahead (Azevedo et al., 2020). The block culminated with an examination of options that societies could select to reduce their

energy consumption, thereby extending the “carbon budget” the world must “spend” before the Earth becomes increasingly uninhabitable (Naimoli & Ladislaw, 2020).

Past Climate Change Initiatives

The third block focused on past efforts to deal with the problem of climate change and other global challenges of a similar scale. Within this framing, international efforts to prevent ozone depletion, culminating with the 1987 Montreal Protocol, were presented as a (rare) positive example of multilateral cooperation. On the other hand, diplomatic breakdowns during the 2009 Copenhagen Summit (and several other international climate meetings) showcased the perennial challenges of building international consensus and delivering policy results at the global level. It is worth noting that global climate change involves a potential set of costs and risks that are even greater than what was at stake in Montreal. Acting against the risk of ozone depletion did not affect the wholesale reinvention of the world’s political economy, as may be required to meet the challenge of global climate change at this stage. The earlier case, while instructive, did not feature the many layers of difficulty associated with today’s international climate negotiations, including the debate over what wealthier countries may “owe” countries that are still developing, in terms of underwriting climate adaptation efforts, as a matter of “climate justice.” The course also dedicated time to study the influence of domestic political and economic forces on the ability of the United States to engage meaningfully in international cooperation—or even act as a leader in overcoming the many obstacles to greater multilateral cooperation on climate change.

ASSESSMENT

Students in the course were assessed on two short papers. A policy memo addressed to the Secretary of Defense and an op-ed advocating for what each student felt would be the highest-impact climate-related policies to adopt. The students also completed a final strategy paper in which they drew together their recommendations for how the United States should prepare for the 2021 UN Climate Change Conference (COP26). These assignments were designed to simulate the tasks national security practitioners perform in their actual jobs. Befitting a senior military institution, student submissions were assessed on their use of strategic logic, the realism of their assumptions, the marshaling of relevant data, and the credibility of their recommendations.

The best papers featured sophisticated strategic designs that leveraged political, economic, and cultural ways and means to accomplish climate security-related ends. These kinds of authentic assessments are beneficial when assessing practitioners, as they allow students to use frameworks familiar to government work and compel them to conceptualize problems in terms of ends, ways, and means, as well as risks and costs, which have too often been overlooked in contemporary American policymaking and discourse (Winnefeld, 2020). These assignments accounted for 75 percent of the student’s overall grade, with week-to-week participation in seminars, including a simulation exercise. The students represented each of the primary stakeholders in international climate negotiations, accounting for the remaining 25 percent.

STUDENT RECEPTIVITY

Student reception of the course was very positive, with several students emphasizing their appreciation for the course's focus on developing practical solutions to addressing climate security concerns. Consistent with the course's analytic approach, students felt they gained an enhanced understanding of the dramatic near-term impact climate change will have on their departments, agencies, or service, as well as the broader U.S. government. Some students noted the potential to integrate further relevant issues into the syllabus, including the possibility for more efficient "operational" or deployable energy sources, the impact growing domestic political polarization may have on climate-related policy options, and the challenges associated with increasing technological dependence on rare earth minerals.

The NWC will continue to offer this course in future academic years with two new directors, an active duty and a retired military officer. In the 2021 fall semester, the course was fully enrolled, demonstrating the growing relevance of global climate change concerns to national security practitioners. We expect the new instructors and their successors to leverage their unique professional experiences to enhance the course and continue institutionalizing climate security issues into the NWC curriculum, developing lessons learned that can be applied to wider professional military education and civilian academic institutions.

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