

**NOTE: EMBEDDED LINKS IN CLASS MEETINGS WITHOUT ATTRIBUTION ARE MY VIDEO LECTURES RELATED TO THE COURSE**

**Climate Security**

Winter 2021  
Convening in the Virtual Space

Professor: Cullen Hendrix

Meetings: Mon. & Wed. 12-1:15 PM  
Email: [cullen.hendrix@du.edu](mailto:cullen.hendrix@du.edu)

Office: Sie Complex 1144  
“Office” Hours: Wednesdays 10-12 or by  
appointment  
Website: [www.cullenhendrix.com](http://www.cullenhendrix.com)

**Course Overview**

*“The threats we face today are not the same as those we faced ten or even five years ago. We must prepare to meet the challenges of the future, not keep fighting the wars of the past. We must build a foreign policy that leads with diplomacy and revitalizes our alliances, putting American leadership back at the table and rallying the world to meet global threats to our security—from pandemics to climate change, from nuclear proliferation to the refugee crisis.”*

– President-Elect Joe Biden, 2020

Since the dawn of agriculture (~7000 BCE), but rapidly accelerating in the industrial age (1750 CE to the present), humanity has conducted an uncontrolled experiment in bending the natural environment to fit human needs and desires. Despite the perceived distance that technology has placed between our physical environments and our daily lives, human interactions with our natural environment are still fundamental – and set to be disrupted by climate change, one of the most vexing issues of our time. It poses a wicked problem: a socio/cultural problem that is seemingly impossible to solve due to incomplete knowledge, the number of people and opinions involved, the large changes required, and the linked nature of the problem with other major social issues and problems.

Since the end of the Cold War, much attention has been paid to the role of natural resources and environmental scarcity as a potential source of conflict, ranging from “water wars” between states sharing a common river basin to communal conflict between pastoralists and farmers in the Sahel and even the Syrian Civil War. This course will survey the impacts of climate change on livelihoods and human security, evaluate the expanding literature on environmental impacts on conflict, and address the emerging role of environmental stressors and climate change as US national security issues.

**Course Modality**

Due to COVID, our class will be convening fully online with both synchronous (i.e., we’re all looking at one another and talking, like we would be in a conventional class) and asynchronous (i.e., pre-recorded lectures and Canvas-based activities) components. Each week, you will get several lectures’ worth of material in the form of pre-recorded videos via the [course YouTube playlist](#). These videos should be viewed and digested before class; they will be the first line items for each meeting in the “Course Meetings” section below. I will try to keep them fresh and fun—at least by stodgy professor standards. My pop culture references will probably land like a Led Zeppelin.<sup>1</sup>

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<sup>1</sup> See, I’m off to a bad start already.

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For this reason, our synchronous portion of the class—when we will engage in discussion and group activities—will be **one hour in length**, from 12 to 1 PM, though I reserve the right to spill over a few minutes if things are really getting interesting. For that reason, I would ask that you block off **12 to 1:15 PM on Mondays and Wednesdays**.

A lot of our time together will be spent on small group activities, which are a great way to make new friends and learn from your classmates. Over my career, I've come to learn that I learn just as much from my peers as I do from my professors. I hope that will be your experience as well.

COVID is trying for all of us in different ways. I will extend understanding and grace to each and every one of you; I ask in return is that you do the same. I will fall short sometimes, but it will never be for lack of effort or dedication. I presume the same will be true for all of you as well. We're all in this together.

**Required Readings**

There are no required books for this course. All course readings can be accessed via the course Canvas page (look under "Files") or embedded links in this syllabus. The most up-to-date discussions of climate security take place in shorter, more focused journal articles and policy reports. As such, our course readings will be drawn from these sources. The reading load can be substantial at times, so it is important that you learn to read strategically, digesting the most important information each reading has to offer. Course readings (as listed below) will be made available on Canvas. Many will require the use of a proxy server or access to a DU computer. All assignments will be turned in electronically via Canvas.

**Evaluation**

Class Participation/Attendance	15%
CNH Diagram – due February 8	20%
Data Visualization Assignment – due February 22	20%
Ad/Disad Assignment – due March 1	20%
Final Examination – due March 19	25%

Final grades will be assigned as follows:

A: 92.5–100%, A-: 90.0–92.4%, B+: 87.5–89.9%, B: 82.5–87.4%, B-: 80.0–82.4%, C+: 77.5–79.9%, C: 72.5–77.4%, C-: 70.0–72.4%, D+: 67.5–69.9%, D: 62.5–67.4%, D-: 60.0–62.4%, F: ≤ 59.9%

**Class Participation (15%)**

Students are expected to come to class meeting having read closely all of the assigned texts and prepared to discuss them in detail. At base, this means being able to answer the following questions:

1. What is the author's thesis, or the central argument they are making?
2. What kind of evidence does the author marshal in defense of their thesis? How well presented, and how convincing, is the evidence?
3. How does the author's argument relate to or fit in with those of the other authors addressed in this class?
4. What is the practical relevance of the author's argument for policymakers, practitioners, or affected communities and actors?

All students are expected to participate in class meetings—not every time, but be consistent contributors to our discussions and breakout discussions. Attendance is **not** participation in and of itself. Some say showing up is 80% of success, but I don't. To get a good participation grade, you will need to be in class and talking (and talking intelligently) regularly. This is an opportunity to question and build on the work of giants (and some

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Lilliputians) in the field. From time to time, we will supplement our Zoom discussions with online discussions via Canvas.

Participation will be assessed as follows:

- 90-100%: The student regularly contributes to class discussion, raises interesting points and answers questions posed by the discussion leader, respects the rights of others to contribute to discussion, remains on topic and avoids irrelevant or “filler” comments.
- 80-89%: The student meets the requirements for an A, but speaks up rarely.
- 70-79%: The student regularly contributes to class discussion, but falls short of the guidelines for a B either by raising irrelevant topics, being unaware of the participation of others (e.g., talking over others or jumping in too regularly), and/or avoiding questions posed by the discussion leader.
- 60-69%: The student meets the requirements for a C but only speaks up rarely.
- 0-59%: The student rarely, if ever, contributes to class discussion and does so in an unformed or disruptive manner.

Learning is maximized when many different viewpoints are expressed in the classroom. Classroom discussion should be civilized and respectful to everyone and relevant to the topic we are discussing. Name calling, verbal attacks, excessive sarcasm, and other negative exchanges are counter-productive to learning about topics and dealing with differences of opinion or position.

You will receive a mid-quarter “grade” after week 4 of the class so that you know where you stand and can adjust accordingly.

**CNH Diagram (20%)**

Throughout the course, we will be using the coupled natural and human systems (CNH or CHANS) framework for analyzing complex interactions between human populations and their environments. These complex interrelationships can be depicted graphically. Each student will be responsible for developing a CNH schematic on a coupled natural and human system related to climate change and environmental security. You will be provided with several examples to guide your work.

**Data Visualization Assignment (20%)**

We’ve all heard the adage that a picture is worth a thousand words. In scientific communication, a figure – a visual depiction of data that provides insight that is better expressed visually than by text – can be worth even more. Each student will be responsible for identifying a data source related to climate change and environmental security, broadly defined, developing a compelling figure, and providing an accompanying caption. Examples will be provided in class and in the assigned readings. More specific instructions will be forthcoming.

**Ad/Disad Assignment (20%)**

This assignment is designed to help hone your argumentation skills and help you see multiple sides of an issue. You will be given a statement of the following variety (this will be familiar to those of you with a debate background):

- *Resolved, the right to immigrate due to climate change should be a human right observed and facilitated by all countries.*
- *Resolved, to ensure national security, the US military budget should be halved, with the savings re-invested in agencies (Environmental Protection Agency, the National Oceanic and Atmospheric*

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*Administration, Department of the Interior, Department of Health and Human Services, etc.) tasked with addressing climate change.*

- *Resolved, climate change poses a greater threat to humanity than thermonuclear war.*

Your task will be to then argue for and against the resolution, i.e., **for** the right to immigrate due to climate change and **against** the right to immigrate due to climate change, in two position statements: the Advantage and Disadvantage. Each position shall be a statement of no longer than 500 words each (total assignment of 1,000 words, not including references if applicable). Further details will be discussed in class.

### **Final Examination (25%)**

Last but not least, you will have a take-home, open-book and open-note (i.e., you can use your materials) final examination consisting of two essay prompts. Each response should be no more than 1,000 words. The prompt will be provided on Friday of week 9 and will be due **March 19**.

### **Students with Disabilities**

My goal is to foster an open, creative environment for all students. If you have a disability/medical issue protected under the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act and need to request accommodations, please make an appointment with the Disability Services Program (DSP); 303.871.2372/ 2278/ 7432; located on the 4th floor of Ruffatto Hall; 1999 E. Evans Ave. Information is also available on line at <http://www.du.edu/disability/dsp>.

### **Honor Code**

All students are expected to abide by the University of Denver Honor Code. These expectations include the application of academic integrity and honesty in your class participation and assignments. The Honor Code can be viewed in its entirety at this link: <http://www.du.edu/studentlife/ccs/index.html>.

All members of the University of Denver are expected to uphold the values of Integrity, Respect, and Responsibility. These values embody the standards of conduct for students, faculty, staff, and administrators as members of the University community.

In order to foster an environment of ethical conduct in the University community, all community members are expected to take “constructive action,” that is, any effort to discuss or report any behavior contrary to the *Honor Code* with a neutral party. Failure to do so constitutes a violation of the DU Honor Code. Specifically, plagiarism and cheating constitute academic misconduct and can result in both a grade penalty imposed by the instructor and disciplinary action including suspension or expulsion. As part of their responsibility to uphold the Honor Code, instructors reserve the right to have papers submitted through *SafeAssign* to check for plagiarism against a database of papers submitted previously at DU, a national database of papers, and the Internet.<sup>2</sup>

### **Contacting Me**

I endeavor to be accessible to you on email ([cullen.hendrix@du.edu](mailto:cullen.hendrix@du.edu)). I am not online and at your disposal 24-7, however, so I would not expect a prompt response to an email sent at 11 PM the night before an assignment is due. I will try to answer any email received within 24 hours, though from time to time this may not be possible.

### **Policy on Re-grades/Grade Changes**

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<sup>2</sup> Language in this section is adapted from Dr. Kevin O’Brien’s (Daniels School of Business) syllabus statement on academic integrity/the DU Honor Code.

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Student evaluation is serious business, and I treat it accordingly. Any petition for a re-grade (other than the event of a mathematical error) must be made in writing, and the student must demonstrate specific areas of oversight on my part. If accepted, the petition will result in a full re-grade, as evidence of oversight on my part suggests that the entire assignment would benefit from a closer look. *Your grade may go up or down at this point.*

**Course Meetings**

***Course Overview and the Physical Science Basis***

Introduction and Overview (January 11)

- [Welcome to Climate Security](#)

The Physical Science Basis (January 13)

- [Climate Change: The Physical Science Basis](#)
- IPCC Working Group I. 2013. Summary for Policymakers. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, T.F. Stocker et al., eds. Cambridge: Cambridge University Press.
- deGrasse Tyson, Neil. 2014. [Weather vs. Climate Change](#) and [Simple Explanation of Climate Change](#).

***Climate Change –Social Impacts***

MLK Holiday (January 18—no class meeting)

Coupled Natural Human Systems, pt. 1 (January 20)

- [Coupled Natural and Human Systems](#)
- Liu, Jianguo, *et al.* 2007. Complexity of Coupled Human and Natural Systems. *Science* 317 (5844): 1513-1516.

Coupled Natural Human Systems, pt. 2 (January 25)

- [Coupled Natural Human Systems in the Lake Victoria Basin](#)
- Glaser, Sarah M., Cullen S. Hendrix, Brittany Franck, Karin Wedig, and Les Kaufman. 2019. Armed Conflict and Fisheries in the Lake Victoria Basin. *Ecology and Society* 24 (1).

Climate Change and Livelihoods (January 27)

- [Adaptation, Resilience, and Livelihoods](#)
- Connolly-Boutin, Liette, and Barry Smit. 2016. Climate Change, Food Security, and Livelihoods in Sub-Saharan Africa. *Regional Environmental Change* 16 (2): 385-399.
- Deutsche Welle. 2014. [Philippines: How the Fishing Industry Is Tackling Climate Change](#).

Climate Change and Migration (February 1)

- [Climate Change and Migration](#)
- Black, Richard, Stephen R. G. Bennett, Sandy M. Thomas and John R. Beddington. 2011. Climate Change: Migration as Adaptation. *Nature* 478: 447-449.
- Sengupta, Somini, and Josh Haner (Videographer). 2016. [Heat, Hunger and War Force Africans Onto a 'Road on Fire'](#). *New York Times*, December 15.

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Data Visualization and the Climate-Security Nexus (February 3)

- **NO VIDEO LECTURE FOR THIS MEETING**
- Edward Tufte. 2010. [Beautiful Evidence](#).
- 365 Data Science. Which is the Best Chart, [Parts 1 and 2](#).
- Visme. [Five Data Storytelling Tips to Improve Your Charts and Graphs](#).

Adaptation Strategies (February 8)

- [Barriers to Adaptation](#)
- Moser, Susanne C., and Julia A. Ekstrom. 2010. A Framework to Diagnose Barriers to Climate Change Adaptation. *Proceedings of the National Academy of Sciences* 107 (51): 22026-22031.
- Liu, John D. 2013. [What If We Change? Hope in a Changing Climate](#) and [What If We Change? Forests of Hope](#).
- **CNH DIAGRAM DUE**

Mitigation Strategies (February 10)

- [Barriers to Mitigation](#)
- Dabelko, Geoffrey D., et al. 2013. *Backdraft: The Conflict Potential of Climate Change Adaptation and Mitigation*. Washington, DC: Wilson Center.

**Climate Change and Security – Linkages**

Environmental Stress and Human Security (February 15)

- Barnett, Jon, and W. Neil Adger. 2007. Climate Change, Human Security and Violent Conflict. *Political Geography* 26 (6): 639-655.
- Al-Jazeera Television. 2011. [Inside Story - Is Climate Change a Global Security Threat?](#)

Natural Disasters and Human Security (February 17)

- [Natural Disasters, Conflict, and Human Security](#)
- Peters, Katie. 2019. Disaster Risk Reduction in Conflict Contexts. *Overseas Development Institute Report*.
- Yale Climate Connections. 2016. [Climate, Hurricanes and Typhoons](#).
- World Bank. 2011. [Climate Change, Natural Disasters and the Urban Poor](#).

Environmental Stress and Civil Conflict (February 22)

- [Environmental Stressors and Civil Conflict](#)
- Reuveny, Rafael. 2007. Climate Change-Induced Migration and Violent Conflict. *Political Geography* 26 (6): 656-673.
- Gleick, Peter H. 2014. Water, Drought, Climate Change, and Conflict in Syria. *Weather, Climate, and Society* 6 (3): 331-340.
- Selby, Jan, and Mike Hulme. 2015. [Is Climate Change Really to Blame for Syria's Civil War?](#) *The Guardian*, November 29.
- **DATA VISUALIZATION ASSIGNMENT DUE**

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Weather Shocks, Global Markets and Political Instability (February 24)

- [Weather Shocks, Global Markets and Political Instability](#)
- Hendrix, Cullen S., and Stephan Haggard. 2015. Global Food Prices, Regime Type, and Urban Unrest in the Developing World. *Journal of Peace Research* 52 (2): 143-157.
- Perez, Ines. 2013. [Climate Change and Rising Food Prices Heightened Arab Spring](#). *Scientific American*, March 4.

Environmental Stress and Interstate War (March 1)

- [Environmental Stress and Interstate Conflict](#)
- [Geopolitics and Resource Wars](#)
- Gleick, Peter H. 1993. Water and Conflict: Fresh Water Resources and International Security. *International Security* 18 (1): 79-112.
- Le Billon, Philippe. 2004. The Geopolitical Economy of 'Resource Wars.' *Geopolitics* 9 (1): 1-28.
- **FIRST AD/DISAD ASSIGNMENT DUE**

Environmental Stress and International Institutions (March 3)

- [International Institutions](#)
- Tir, Jaroslav, and Douglass Stinnett. 2012. Weathering Climate Change: Can Institutions Mitigate International Water Conflict? *Journal of Peace Research* 49 (1): 211-225.
- Young, Oran. 2009. Whither the Arctic? Conflict or Cooperation in the Circumpolar North. *Polar Record* 45 (232): 73-82.
- Kadagi, Isigi, Zachary Lien, and Cullen S. Hendrix. 2020. [Fisheries Management: A Possible Venue for Navigating Fisheries Conflicts in the Indian Ocean](#). *New Security Beat*.

***Climate Change and US National Security***

Climate Change and US National Security (March 8)

- [Climate Change and National Security](#)
- [Climate Security and the UN Security Council](#)
- The National Intelligence Council. 2021. *Global Trends 2040*. Section 1, Section 2.3 (Environment and Energy), Section 4 (Looking to the Future).
- Busby, Joshua W. 2021. Beyond Internal Conflict: The Emergent Practice of Climate Security. *Journal of Peace Research*. DOI: 10.1177/0022343320971019.

Climate Change and the Securitization Dilemma (March 10)

- [Securitization and the Securitization Dilemma](#)
- Deudney, Daniel. 1990. The Case Against Linking Environmental Degradation and National Security. *Millennium* 19 (3): 461-476.
- Deutsch, Judith. 2016. [The Military's 'Securitization' of Climate Change](#). *Counterpunch*, May 5.

Climate Change and the Biden Administration (March 15)

- **LECTURE TO BE WRITTEN – Will provide updates**

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- Climate and Security Advisory Group. 2019. *A Climate Security Plan for America*. Washington: Center for Climate & Security, pgs. 11-32.

Final Meeting and Wrap-Up (March 17)

Take-Home Final Due (March 19)