E 1722

The Politics of the Environment and Climate Change

Dustin Tingley[1]

Course Description

Climate change has evolved over the past four decades into one of the most pressing challenges to the sustainable development of human societies. Climate politics reflect well-established environmental and economic perspectives, but also raise new, unique issues. This course takes a realistic look at how politics is a fundamental political problem, the politics of addressing climate change, and the effects of climate change on politics and governance itself. We will examine how policies get constructed and implemented, and will consider local, national, and international contexts. We will ask questions like: How will climate change affect water resources, food supplies, and conflict? How will policies affect fossil-fuel dependent economies? How are people, companies, and governments responding?

Assignments:

1) Two short (1000 word) policy memos. These memos will engage with a contemporary problem and have you propose an argument and solution to a policy maker. For students taking the course for graduate credit, they will need to complete a third policy memo assignment.
2) A group project that will culminate in the submission of a "slide deck" policy proposal. This project will enable students to choose a topic of their own interest. There is an option to complete this assignment as an individual for those that do not want to, or cannot, work in a group setting.

Exams

This course will have a closed book final exam that will be cumulative.

Grading:

[1] A first version of this course was co-designed and taught with Steve Ansolabehere. We are grateful to Inde Halligan, Madeline Ranalli, Henrietta Reily and Grace Kim for assistance in designing this course and Dan Schrag and the Harvard University Center for the Environment for feedback and support.

Undergraduate Credit

Final grades will be based on the following assignments:

Policy memos 1 and 2	40%
Group/Individual project	15%
Final exam	30%
Class participation	15%

Graduate Credit

Final grades will be based on the following assignments:

Policy memos 1, 2 (3)	40%
Group/Individual Policy Project	15%
Final exam	30%
Class participation	15%

Participation:

There will be multiple discussion forums, case studies, and simulations requiring your participation via the Canvas site. We will monitor closely your participation in these activities. You will not be graded for the quality of your participation, but you will be graded on whether or not you participated. This is our way of "taking attendance."

There will be designated times each week when the teaching fellows will hold an optional online discussion section for anyone who wishes to participate. They will also be available for questions. These section meetings are not required.

The lesson videos, reading, case studies, and most online discussions are designed so that you can view, read, and participate at a time during the week that is convenient for you. It is our expectation that you complete your participation in these items in the course week in which they are assigned (beginning and ending on Mondays at 9:00 A.M. ET, Eastern U.S. time.)

Not completing these participation aspects of the course during this time will mean you will lose participation points. The only exception is if you have made prior arrangements with the TF.

Simulation

In the end of week 10, and then for all of week 11, there will be a simulation of negotiating an international environmental treaty in which you may be assigned a negotiating role. Unlike most weeks in the course, during Week 11 you may need to participate frequently throughout the week. You will not be able to complete all your participation in one day. Everyone is expected to engage in this simulation, but you will be able to choose your level of engagement.

Readings:

The syllabus lists required readings for each week.

The syllabus lists a number of supplementary readings. Supplementary readings may be particularly helpful if you are having difficulty with a concept or are conducting background research for policy projects. **They are not required to excel in the class, but instead are there if you are interested.** They can be useful for example for pursuing a project or getting a deeper background in a particular area you are interested in.

Required books

Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge University Press. ($17). Available electronically through Harvard library!

Course Website:

You can access the course website through Canvas course site. The course syllabus and all course-related links can be found there, at: https://canvas.harvard.edu/courses/112619

Policies

Written assignments are to be double-spaced, size 12 font, with normal margins and must be submitted electronically via the Canvas web submission system linked with each assignment (not emailed). Students are expected to submit assignments on due dates unless they have approval from the relevant University official (Dean, Doctor, etc.) **prior** to the due date. The assignment system prevents uploads that are late. Late assignments without **prior** approval will not be accepted unless there is also a demonstration of an emergency situation by a relevant official. Due dates of approved late submissions will be the day after the emergency ends. *Non-emergency extensions will not be granted.* Submitting an assignment 5 minutes prior to the due date is a bad idea.

Students should be aware that in this course collaboration on any work not explicitly labelled group work, and submitted for formal evaluation, is not permitted. This means that you may not discuss your paper assignments with other students. All work should be entirely your own and must use appropriate citation practices to acknowledge the use of books, articles, websites, lectures, discussions, etc., that you have consulted to complete your assignments. Collaboration is highly encouraged in other ways, such as studying for exams and making group notes on the recommended readings.

Academic Integrity

You are responsible for understanding Harvard Extension School policies on academic integrity (https://www.extension.harvard.edu/resources-policies/student-conduct/academic-integrity) and how to use sources responsibly. Not knowing the rules, misunderstanding the

rules, running out of time, submitting the wrong draft, or being overwhelmed with multiple demands are not acceptable excuses. There are no excuses for failure to uphold academic integrity. To support your learning about academic citation rules, please visit the Harvard Extension School Tips to Avoid Plagiarism (https://www.extension.harvard.edu/resources-policies/resources/tips-avoid-plagiarism), where you'll find links to the Harvard Guide to Using Sources and two free online 15-minute tutorials to test your knowledge of academic citation policy. The tutorials are anonymous open-learning tools.'

Special accommodations:

Harvard Extension School Accessibility Services Office is responsible for providing accommodations to students with disabilities. You can find more information about the process for applying for accommodations by visiting their website at https://www.extension.harvard.edu/resources-policies/accessibility-services-office-aso

Collaboration Prohibited on Policy Memos and Exams:

Students should be aware that in this course collaboration on any work not explicitly labelled group work, and submitted for formal evaluation, is not permitted. This means that you may not discuss your paper assignments with other students. All work should be entirely your own and must use appropriate citation practices to acknowledge the use of books, articles, websites, lectures, discussions, etc., that you have consulted to complete your assignments. Collaboration is highly encouraged in other ways, such as studying for exams and making group notes on the recommended readings.

Communication:

The TFs and Professor Tingley will endeavor to answer emails within 24 hours during weekdays. Email can be less efficient than real-time conversations. If your question requires a lengthy response please arrange for a real-time conversation.

Office Hours and Contact Info for Instructors:

Professor Tingley's office hours are by appointment. Email him.

Sections, Office Hours, and Contact Info for Teaching Fellows:

The teaching fellow for the course is Andi Zhou (azhou@g.harvard.edu). Office hours are by appointment; email him if you would like to schedule a time.

Sections will be held on Thursdays at 12:00pm and 6:00pm (Eastern Time U.S.).

Summary of Key Dates:

January 23 Monday is first day of semester

Policy memo 1: Assigned February 6 and due February 16

Group project membership due February 20; Proposals due February 27; submission due March 30

Policy memo 2: Assigned March 27 and due April 13

Graduate memo (Graduate credit only): Assigned April 17 and due April 27

Final exam TBA

Section 1: Climate change is a political problem

Week 1 Setting the Stage

January 23

<u>Lesson 1</u> Setting the Stage 1: Climate Impacts on Society and the Planet

Learning Objectives

-Identify the range of impacts climate change will have on different societies and ecosystems

-Categorize impacts across time, geography or both

Readings

Global warming will happen faster than we think, Y Xu, V Ramanathan, DG Victor – 2018, Nature, https://www.nature.com/articles/d41586-018-07586-5

Temple, James. 2021. "The rare spots of good news on climate change" https://www.technologyreview.com/2021/12/23/1042973/climate-change-action-progress-clean-energy/

Supplementary Readings

"Introduction: Paths to Witnessing, Ethics of Speaking Out", Nancy Lipton Rosenblum, Daedulus, Fall 2020, https://www.amacad.org/publication/introduction-paths-witnessing-ethics-speaking-out

Problems with COP... climate pledges based on flawed data? https://www.washingtonpost.com/climate-environment/interactive/2021/greenhouse-gas-emissions-pledges-data/

https://www.nytimes.com/interactive/2021/10/25/climate/world-climate-pledges-co26.html

<u>Lesson 2</u> Setting the Stage 2: The political and economic context of combatting climate change

Learning Objectives

-Identify how different industries are contributing to climate change, and the difficulties or opportunities they face

-Describe cross-national differences in contributing to climate change

-Describe cross-national/cross-institutional differences in fighting against climate change

-Understand changes in levels of other pollutants and environmental threats over time.

-Identify the core pieces to the transition

Readings

https://www-economist-com.ezp-prod1.hul.harvard.edu/schools-brief/2020/04/23/why-tackling-global-warming-is-a-challenge-without-precedent

Supplementary reading

Young, Oran. 2009. Whither the Arctic? Conflict or Cooperation in the Circumpolar North. Polar Record 45 (232): 73-82.

McKibben, Bill, "The Future is Electric", New York Review of Books, https://www-nybooks-com.ezp-prod1.hul.harvard.edu/articles/2021/11/04/the-future-is-electric/

Review Session: No Section meeting

Week 2 Interests and Institutions

January 30

Lesson 1 Incentives, preferences and institutions

Learning Objectives

- Describe why climate change is a collective actional problem

- Distinguish between public good problems and common pool resources problems

- Describe how political institutions—both formal and informal—can be sources of positive change in addressing climate change and other environmental problems

Readings

Ostrom, E. (2010). Beyond markets and states: polycentric governance of complex economic systems. *American economic review*, *100*(3), 641-72.

Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge University Press. Chapters 1-3

Supplementary readings

Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge University Press. Chapters 4-6.

Finnegan, Jared, 2022, "Institutions, Climate Change, and the Foundations of Long-term Policymaking." *Comparative Political Studies*.

Lesson 2 Proponents and Opposition to Climate Change Policies

Learning Objectives

- Why are interest groups often more effective at shaping policy?

- What industries will lose from climate policies, and could they pivot?

- Identify examples of "odd bed-fellows"

- What industries have most effectively obstructed policy? How do they work with/against political actors?

Readings

Colgan, Jeff D., Jessica F. Green, and Thomas N. Hale. 2020. "Asset Revaluation and the Existential Politics of Climate Change." International Organization

Oreskes, N., & Conway, E. M. (2011). *Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. Bloomsbury Publishing USA. Chapter 6.

Supplementary Readings

Oreskes, N., & Conway, E. M. (2011). *Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. Bloomsbury Publishing USA. Other chapters.

https://www.cesifo.org/en/publikationen/2021/journal-complete-issue/cesifo-forum-052021-winners-and-losers-energy-and-climate

https://www.latimes.com/opinion/op-ed/la-oe-oreskes-supran-exxonmobil-20170901-story.html

Brookings Institute, Elaine Kamarck, The Challenging Politics of Climate Change

Review Session: Content Review

Week 3 Environmental and Climate Justice/Ethics
February 6th

Lesson 1 Climate and Environmental Justice

Learning Objectives

-Identify why environmental harms and climate impacts will often fall disproportionally on marginalized communities, and how these communities have mobilized to assert sovereignty and protect their land and resources.

-Identify which policies will mean that the costs will be borne by lower income people and which policies will mean that the costs of changing our energy systems will be borne by higher income people.

Mini-case

Cancer Alley

Readings

"Three faces of climate justice", *Annual Review of Political Science*, 2022, by Nives Dolšak and Aseem Prakash. Vol. 25:283-301

Roosevelt Project Gulf coast case, Jason Beckfield et al, pages 1-30, https://ceepr.mit.edu/wp-content/uploads/2022/12/2022-The-Roosevelt-Project-Gulf-Coast-Case-Study.pdf

Supplementary Readings

Racism as a Motivator for Climate Justice, Mark A. Mitchell, *Daedulus* Fall 2020, https://www.amacad.org/publication/racism-motivator-climate-justice

Bullard, R. D. (2005). The quest for environmental justice: Human rights and the politics of pollution (1st ed.).

Lesson 2 Normative accounts of the politics of climate

Learning Objectives

-Identify different normative criteria that are useful for understanding the politics of climate change

-Identify limitations of these approaches across different environment and climate topics.

Readings

Gardiner, Stephen M. "Ethics and climate change: an introduction." *Wiley Interdisciplinary Reviews: Climate Change* 1.1 (2010): 54-66. https://doi.org/10.1002/wcc.16 https://wires-onlinelibrary-wiley-com.ezp-prod1.hul.harvard.edu/doi/pdfdirect/10.1002/wcc.16

Highly Recommended Readings

Political Theory on Climate Change, Melissa Lane, Annual Review of Political Science, Vol. 19, 2016, https://www.annualreviews.org/doi/pdf/10.1146/annurev-polisci-042114-015427

Supplementary Readings

"The Political Theory of Climate Change: State of the Field", Melissa Lane and Nancy Rosenblum, https://www.ssrc.org/programs/anxieties-of-democracy/working-group-on-climate-change/climate-change-reports/

Caney, Simon, "Just Emissions," Philosophy and Public Affairs 40 (2012) 255-300

Shue, Henry, "Subsistence Emissions and Luxury Emissions," Law and Policy 15 (1993): 39-59.

John Barry, Arthur P.J. Mol & Anthony R. Zito (2013) Climate change ethics, rights, and policies: an introduction, Environmental Politics, 22:3, 361-376, DOI: 10.1080/09644016.2013.788861

Miller, David. National Responsibility and Global Justice. Oxford University Press, 2007

Review Session

-Content review

-Discuss ways your hometown has changed—or is expected to change—due to economic transitions, impacts of climate change.

Policy Memo 1 Assigned February 6

Week 4 International and Technology Context

February 13

<u>Lesson 1</u> Borders, and the International Political Context

Learning Objectives

-Why does the physical science of climate change make climate change an international problem? Are there parts of this that will make it easier, or harder, for governments to address?

-Why is the international political context of climate change a challenge?

Mini-case

United Nations Environment Programme

Readings

Aklin, M. and Mildenberger, M. 2020. "Prisoners of the wrong dilemma: Why distributive conflict, not collective action, characterizes the politics of climate change." Global Environmental Politics 20(4): 4-27.

Peters, Glen P, Jan C Minx, Christopher L Weber and Ottmar Edenhofer. 2011. "Growth in emission transfers via international trade from 1990 to 2008." Proceedings of the national academy of sciences 108(21):8903–8908.

Recommended Readings

Kennard, Amanda and Keith Schnakenberg "Global Climate Policy and Collective Action: A Comment" XXX, Global Environmental Politics.

Victor, D. G. (2011). Global warming gridlock: creating more effective strategies for protecting the planet. Cambridge University Press.

Scott Barrett, Climate treaties and the imperative of enforcement, 24 Oxford Review of Economic Policy 239 (2008)

Milkoreit, Manjana. "The Paris Agreement on Climate Change—Made in USA?." Perspectives on Politics 17.4 (2019): 1019-1037.

Jason Bordoff and Meghan L. O'Sullivan, "Green Upheaval The New Geopolitics of Energy", *Foreign Affairs,* January/February 2022

Monogan III, J. E., Konisky, D. M., & Woods, N. D. (2017). Gone with the wind: federalism and the strategic location of air polluters. American Journal of Political Science, 61(2), 257-270.

Konisky, D. M., & Woods, N. D. (2010). Exporting air pollution? Regulatory enforcement and environmental free riding in the United States. Political Research Quarterly, 63(4), 771-782.

Lesson 2 The Political Economy of Technology

Learning Objectives

-Know key energy and remediation technologies and understand their capacities and internal costs and external costs.

-What is our current energy mix (in the US, globally)? What is it projected to be moving forward? What lifts are required to make that happen?

-Understand the main policy levers available to governments in shaping the industry and consumer decision-making: taxes, investment or subsidies, standards, regulations, and public ownership.

-Understand the distributional effects of policies on different sectors and interests in the economy (consumers v. producers, high v. low income, etc.)

Mini-case

Should hydrogen be a part of our energy future?

Readings

Jaffe, Adam B, and Robert N Stavins. "The Energy Paradox and the Diffusion of Conservation Technology." Resource and Energy Economics 16 (1994): 91–122.

Recommended Readings

Deutch, J. M., & Lester, R. K. (2004). *Making technology work: applications in energy and the environment*. Cambridge University Press.

Review Session: Content Review

Policy memo 1 due February 16 by 10PM Eastern Standard Time

Section 2: The politics of addressing climate change

Week 5 Cities and Local Politics

February 20

<u>Lesson 1</u> The unavoidable importance of cities

Learning Objectives

-Understand the basic role of local governments in planning and development. How planners control individuals of individual parcels of land, but must constantly deal with broader economic and social forces at work in an urban area.

-Understand different planning approaches: top-down and bottom-up planning, consensus planning, centralized and fragmenting budgeting.

-Understand the planning paradox: making decisions attuned to the interests of existing stakeholders and planning to change the urban area to adapt to a changing economic, environmental, and social forces.

-Understand how climate change affects different cities' environments and economies and, thus, changes the agendas of city governments.

-Understand the linkages between cities and surrounding suburban and rural areas. How do cities affect the economies of surrounding areas? How do cities depend on these surrounding areas? How do these surrounding areas (especially suburbs) rely on cities? How do land use changes in surrounding areas lead to changes in cities?

Mini-case

Cities and infill housing

Readings

Joan Clos, COP21 to New Urban Agenda. https://www.un.org/en/chronicle/article/cop21-new-urban-agenda

Graham Floater and Philipp Rode, "Cities and the New Climate Economy: The Transformative Role of Global Urban Growth" NCE Cities – Paper 01. London School of Economics. https://lsecities.net/wp-content/uploads/2014/12/The-Transformative-Role-of-Global-Urban-Growth-01.pdf

Recommended Readings

Work through the website at C40 Knowledge. https://www.c40knowledgehub.org/s/?language=en_US

Sommer, L. (2020, August 6). Why Sprawl Could Be The Next Big Climate Change Battle. NPR. https://www.npr.org/2020/08/06/812199726/why-sprawl-could-be-the-next-big-climate-change-battle

Graham Floater and Philipp Rode, "Steering Urban Growth: Governance, Policy and Finance" NCE Cities – Paper 02. London School of Economics. https://lsecities.net/wp-content/uploads/2014/12/Steering-Urban-Growth-02.pdf

Lesson 2 Group Project Time

We won't have a recorded lesson, and instead students will use the extra time for their group project.

Review Session:

TBD

Group Policy Project groups submitted by February 20 10PM EST

Week 6 Regional and National Context
February 27

<u>Lesson 1</u> Adaptation planning

Learning Objectives

-Explain the meaning of vulnerability, risk and resilience planning and provide examples

-Differentiate between mitigation and adaptation, and how they can relate to each other

-Identify technologies that could help with adaptation and challenges behind their adaptation.

Mini-case

Adaptation and the City of Boston

Readings

John McPhee, "Atchafalaya" from The Control of Nature. Farrar, Straus, Giroux, 1987. . https://www.newyorker.com/magazine/1987/02/23/atchafalaya

https://legal-planet.org/2018/12/05/were-never-going-to-meet-our-ghg-transportation-goals-until-we-radically-rethink-our-cities/

Group Policy Project proposals due February 27

<u>Lesson 2</u>

The Appalachian Carbon Transition

Learning Objectives

- Identify "easy political wins" to transition local fossil fuel industries and workers in this region. What are the not easy wins.

- What makes fossil energy jobs often so entrenched despite their relatively small employee base nationally?

-Identify the sources of credibility problems in the transition of the SWPA economy away from fossil fuels

Mini-case

Partisan realignments and natural gas discovery

Readings

Gazmararian, Alex and Tingley, Dustin, *Uncertain Futures: How Climate Transitions Could Fail and What We Can Do*, forthcoming, Cambridge University Press, chapter 1 and 2

Supplementary Readings

Roosevelt Project, Appalachia/SWPA Chapter, https://scholar.harvard.edu/files/dtingley/files/roosevelt_swpa.pdf, pgs. 5-24

https://www.brookings.edu/research/the-case-for-us-cooperation-with-india-on-a-just-transition-away-from-coal/

Other Roosevelt chapters at http://ceepr.mit.edu/roosevelt-project/about-the-project

Review Session

Content review

Week 7 Group Projects

Week of March 6

Students should use this time to work on their group projects.

Week 8 Spring Break

March 11 – March 19

Spring Break! No class

Week 9 National Politics Continued
March 20

Lesson 1 National policy making

Learning Objectives

- Understand the role of national policy making in *setting incentives* for industry and consumers.

- Understand what actors are involved in different areas of federal government and their communication with each other.

-What are the Clean Air Act and Clean Water Act and what powers do they give to the federal government in regulating pollution? How effective have these been? How does the EPA operate? How did Massachusetts v. EPA give the EPA the power to regulate carbon emissions?

- Who are the key rule-makers in the bureaucracy? How does rule making differ from legislation? Why do we need both to move forward?

Mini-Case

2022 Inflation Reduction Act

Readings

Rabe, B. G. (2004). *Statehouse and greenhouse: The emerging politics of American climate change policy*. Brookings Institution Press. Chapters 1.

Gazmararian, Alex and Tingley, Dustin, *Uncertain Futures: How Climate Transitions Could Fail and What We Can Do*, forthcoming, Cambridge University Press, chapter 2

Supplementary Readings

Leah Stokes (2020), *Short Circuiting Policy: interest groups and the battle over clean energy and climate policy in the American states*, MIT Press

https://hbswk.hbs.edu/item/who-pays-for-wildfire-and-hurricane-damage-everyone

Rabe, B. G. (2004). *Statehouse and greenhouse: The emerging politics of American climate change policy*. Brookings Institution Press, remaining chapters.

Review Session

Content review.

Lesson 2 -Consumers and Voters

Learning Objectives

- Identify the advantages and disadvantages the mass public has in influencing policy

- Explain why individuals might not be motivated to change their behavior

- Identify regional differences in public opinion on climate policy

- Discuss how people act differently as consumers and as voters

Mini-case

Energy Star

Readings

Ansolabehere S, Konisky DM. Cheap and Clean: How Americans Think about Energy in the Age of Global Warming. Cambridge: MIT Press; 2014, Chapter 3

Gaikwad, Nikhar, Federica Genovese, and Dustin Tingley. "Creating Climate Coalitions: Mass Preferences for Compensating Vulnerability in the World's Two Largest Democracies." American Political Science Review (2022): 1-19.

Supplementary Readings

Javeline, Debra, Tracy Kijewski-Correa, and Angela Chesler. 2019. "Does It Matter If You 'Believe' in Climate Change? Not for Coastal Home Vulnerability." Climatic Change 155(4): 511–532.

Malhotra, Neil, Benoît Monin, and Michael Tomz. "Does private regulation preempt public regulation?." *American Political Science Review* 113.1 (2019): 19-37.

Climate Change: US Public Opinion, Patrick J. Egan and Megan Mullin, *Annual Review of Political Science* Vol. 20, 2017

Victor, D. G., Zaelke, D., & Ramanathan, V. (2015). Soot and short-lived pollutants provide political opportunity. *Nature Climate Change*, *5*(9), 796-798.

Review Session:

Content review

Week 10 Implementation Domestically and Internationally
March 27

<u>Lesson 1</u> Implementation: How do Governments and the International system make, or do not make, things happen?

Learning Objectives

- Differentiate between law making, rule making, and enforcement

- Differentiate between different types of international treaties and how they work

- Identify the different types of challenges that enforcement has depending on the types of environmental problem

- Identify core pieces of legislation, court cases, and treaties and articulate their importance

Readings

Keohane, R. O., & Victor, D. G. (2016). Cooperation and discord in global climate policy. Nature Climate Change, 6(6), 570-575.

Transnational Actors and Transnational Governance in Global Environmental Politics, Thomas Hale, Annual Review of Political Science, Vol. 23, 2020, https://www.annualreviews.org/doi/pdf/10.1146/annurev-polisci-050718-032644

Supplementary readings

"Rethinking Approaches to Climate Change Policy", Scott Barrett, Jessica Green, Robert O. Keohane, and Michael Oppenheimer, https://www.ssrc.org/programs/anxieties-of-democracy/working-group-on-climate-change/climate-change-reports/

Stavins, Robert N. and Robert C. Stowe, eds. "The Paris Agreement and Beyond: International Climate Change Policy Post-2020." Paper, Harvard Project on Climate Agreements, Belfer Center, October 2016.

https://bostonreview.net/forum/charles-sabel-david-g-victor-how-fix-climate

Matto Mildenberger (2020), Carbon Captured: how business and labor control climate politics, MIT Press

Konisky, D. M. (2007). Regulatory competition and environmental enforcement: Is there a race to the bottom?. *American Journal of Political Science*, *51*(4), 853-872.

Victor, D. G., Akimoto, K., Kaya, Y., Yamaguchi, M., Cullenward, D., & Hepburn, C. (2017). Prove Paris was more than paper promises. *Nature News*, *548*(7665), 25.

Tingley, D., & Tomz, M. 2022. The Effects of Naming and Shaming on Public Support for Compliance with International Agreements: An Experimental Analysis of the Paris Agreement. *International Organization*. Vol 76(2) pg 445-468

Tingley, D., & Tomz, M. (2020). International Commitments and Domestic Opinion: The Effect of the Paris Agreement on Public Support for Policies to Address Climate Change. Environmental Politics, 29 (7), 1135-1156

The Collapse of the Kyoto Protocol and the Struggle to Slow Global Warming, David G. Victor

Cullenward, D., & Victor, D. G. (2020). Making climate policy work. John Wiley & Sons.

"Save the Environment, Save American Democracy How a Pro-Climate Vision Can Strengthen America's Social Fabric, Robert O. Keohane and Jeff D. Colgan, *Foreign Affairs*, https://www.foreignaffairs.com/articles/united-states/2021-09-20/save-environment-save-american-democracy.

Understanding Multilateral Institutions in Easy and Hard Times, Robert O. Keohane, Annual Review of Political Science, Vol. 23, 2020, https://www.annualreviews.org/doi/pdf/10.1146/annurev-polisci-050918-042625

Policy Memo 2 Assigned March 27

Week 11

Montreal Protocol Simulation

March 29 – April 9

See Montreal Protocol Simulation page

Readings

Skjaerseth, Jon Birger. "The 'successful'ozone-layer negotiations: Are there any lessons to be learned?." Global Environmental Change 2.4 (1992): 292-300.

Review Session: Content Review/Simulation Debrief

Group Policy project due March 30

Section 3: Climate Change will affect Politics/Governance

Week 12 Changing the agenda and governance

April 10

<u>Lesson 1</u> US States and a Federal Context

Learning Objectives

- Understand how cross-state cooperation occurs, and why it is difficult to build initiatives across state borders.

-Understand the pressure to race to the bottom in environmental regulations in order to compete economically. In what ways does this idea fit and not fit the ways the US states function?

-Understand FERC and state regulation and development of the grid

-How can state regulatory capacity slow solutions to problems? In what ways are states places where stakeholders can negotiate new approaches and policies?

Readings

Rabe, B. G. (2004). *Statehouse and greenhouse: The emerging politics of American climate change policy*. Brookings Institution Press, Chapters 4

Supplementary Readings

Leah Cardamore Stokes (2020), Short Circuiting Policy: interest groups and the battle over clean energy and climate policy in the American states, MIT Press

https://hbswk.hbs.edu/item/who-pays-for-wildfire-and-hurricane-damage-everyone ?

<u>Lesson 2</u> Climate Impacts on Governance and Government Capacity

Learning Objectives

-Identify what governance and government capacity is and why it matters

-Identify how climate change is creating new governance challenges domestically and internationally

Readings

Ezra Klein, What if American Democracy Fails the Climate Crisis?
https://www.nytimes.com/2021/06/22/magazine/ezra-klein-climate-crisis.html

Obradovich, N., Tingley, D., & Rahwan, I. (2018). Effects of environmental stressors on daily governance. *Proceedings of the National Academy of Sciences*, 115 (35), 8710-8715.

Belcher, O., Neimark, B., & Bigger, P. (2020). The US military is not sustainable. *Science*, *367*(6481), 989-990.

https://www.nytimes.com/2021/10/01/opinion/climate-change-geoengineering.html

Supplementary Readings

Mittiga, Ross. 2021. Political Legitimacy, Authoritarianism, and Climate Change. American Political Science Review, 1-14. doi:10.1017/S0003055421001301

https://ceobs.org/the-militarys-contribution-to-climate-change/

Emily Farris, Future directions in civil-military responses to natural disasters
https://www.brookings.edu/wp-content/uploads/2016/06/05-civ-mil-disasters-ferris.pdf

https://gwagner.com/books/geoengineering-the-gamble/; https://gwagner.com/talk-geoengineering

Jesse L. Reynolds and Gernot Wagner. Highly decentralized solar geoengineering. Environmental Politics, DOI: 10.1080/09644016.2019.1648169

https://www.defenseone.com/technology/2021/08/climate-change-already-disrupting-military-it-will-get-worse-officials-say/184416/

Deutsch, Judith. 2016. The Military's 'Securitization' of Climate Change. Counterpunch, May 5.

The National Intelligence Council. 2021. Global Trends 2040. Section 1, Section 2.3 (Environment and Energy), Section 4 (Looking to the Future)

https://ceobs.org/the-militarys-contribution-to-climate-change/

https://ceobs.org/topics/military-and-the-environment/

https://www.newsecuritybeat.org/2018/02/climate-change-complicate-politics-u-s-military-bases/

Review Session

Content review

Policy Memo 2 Due April 13 by 10PM Eastern Standard Time.

Week 13 Natural resources and non-violent impacts
April 17

Lesson 1 The politics of water in an era of climate change

Learning Objectives

- Identify how property rights—and battles over them—influence the politics of water

- Understand how cross-border flows of water can create opportunities for international conflict and cooperation

Mini-case

The California drought

Readings

https://www-economist-com.ezp-prod1.hul.harvard.edu/asia/2014/11/27/water-in-them-hills

https://www-economist-com.ezp-prod1.hul.harvard.edu/the-economist-explains/2021/02/11/why-is-the-grand-ethiopian-renaissance-dam-contentious

https://www.nytimes.com/2021/10/17/us/san-diego-drought.html

Explained, "Worlds Water Crisis". Netflix. April 2020, https://www.youtube.com/watch?v=C65iqOSCZOY

Supplementary Readings

Tir, Jaroslav, and Douglass Stinnett. 2012. Weathering Climate Change: Can Institutions Mitigate International Water Conflict? Journal of Peace Research 49 (1): 211-225.

Gleick, Peter H. 1993. Water and Conflict: Fresh Water Resources and International Security. International Security 18 (1): 79-112.

https://www.youtube.com/watch?v=glgCA9WmqkI – "The War for Australia's Water"

Graduate Policy Memo Assigned April 17.

Lesson 2 Non-violent impacts of climate change that have political consequences

Learning Objectives

- Identify impacts that climate change will have that can then lead to political problems

- Evaluate which problems might arise sooner than later, and which will have the clearest impacts on politics

- Identify political and other solutions that might dampen the effects of these factors on political outcomes

Readings

https://www-economist-com.ezp-prod1.hul.harvard.edu/schools-brief/2020/05/16/damage-from-climate-change-will-be-widespread-and-sometimes-surprising

Black, Richard, Stephen R. G. Bennett, Sandy M. Thomas and John R. Beddington. 2011. Climate Change: Migration as Adaptation. Nature 478: 447-449.

H. Benveniste , M. Oppenheimer, M. Fleurbaey (2022). "Climate Change Increases Resource-Constrained International Immobility." Nature Climate Change , 12, 634-641, https://www.nature.com/articles/s41558-022-01401-w

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H. Benveniste, M. Oppenheimer, M. Fleurbaey (2020). Effect of Border Policy on Exposure and Vulnerability to Climate Change. Proceedings of the National Academy of Sciences, 117 (43), 26692-26702. doi: 10.1073/pnas.2007597117.

World Bank. 2011. Climate Change, Natural Disasters and the Urban Poor.

https://www.climateone.org/audio/climate-winners-and-losers

Krane, J., & Idel, R. (2021). More transitions, less risk: How renewable energy reduces risks from mining, trade and political dependence. *Energy Research & Social Science*, *82*, 102311. https://www.sciencedirect.com/science/article/pii/S2214629621004035?dgcid=author

H. Benveniste, J. Crespo Cuaresma, M. Gidden, R. Muttarak (2021). Tracing International Migration in Projections of Income Levels and Inequality across the Shared Socioeconomic Pathways. Climatic Change, 166 (39). doi: 10.1007/s10584-021-03133-w.

Review Session

Content review

Week 14 Violence and Class Conclusion

April 24

<u>Lesson 1</u> Climate change, the environment, and violent conflict

Learning objectives

-Identify the mechanisms linking climate change and violent conflict at multiple levels (individual, intrastate, interstate)

-Explain how conflict can exacerbate problems induced by climate change, potentially leading to a vicious cycle

Mini-case

Violence Against Indigenous Amazonian Environmentalists

Readings

Climate Change and Conflict, Vally Koubi, Annual Review of Political Science, Vol. 22, 2019, https://www.annualreviews.org/doi/pdf/10.1146/annurev-polisci-050317-070830

Climate and Conflict Marshall Burke, Solomon M. Hsiang, Edward Miguel Annual Review of Economics 2015 7:1, 577-617 https://www.annualreviews.org/doi/full/10.1146/annurev-economics-080614-115430

Busby, Joshua W. 2021. Beyond Internal Conflict: The Emergent Practice of Climate Security. Journal of Peace Research. DOI: 10.1177/0022343320971019.

Supplementary Readings

Mach, K.J., Kraan, C.M., Adger, W.N. *et al.* Climate as a risk factor for armed conflict. *Nature* **571,** 193–197 (2019). https://doi.org/10.1038/s41586-019-1300-6 https://www.nature.com/articles/s41586-019-1300-6

Civil conflicts are associated with the global climate Solomon M. Hsiang, Kyle C. Meng & Mark A. Cane https://www.nature.com/articles/nature10311 (letter review at https://www.nature.com/articles/476406a)

Insurgency, Terrorism and Organized Crime in a Warming Climate https://climate-diplomacy.org/sites/default/files/2020-10/CD%20Report_Insurgency_170724_web.pdf, summary at https://www.youtube.com/watch?v=CwqNrR2H6xk

Selby, Jan, and Mike Hulme. 2015. Is Climate Change Really to Blame for Syria's Civil War? The Guardian, November 29

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.

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).

Al-Jazeera Television. 2011. Inside Story - Is Climate Change a Global Security Threat?

https://tipofthesphere.substack.com/p/climate-security-bookshelf

Burke, M., González, F., Baylis, P., Heft-Neal, S., Baysan, C., Basu, S., & Hsiang, S. (2018). Higher temperatures increase suicide rates in the United States and Mexico. Nature climate change, 8(8), 723-729.

Graduate Policy Memo Due April 27 by 10PM EST

Lesson 2 Class conclusion

Debrief on course and next steps/opportunities.

Readings

"Witnessing for the Middle to Depolarize the Climate Change Conversation", Daedulus Fall 2020, Robert Harry Socolow, https://www.amacad.org/publication/witnessing-middle-depolarize-climate-change-conversation

"Less Talk, More Walk: Why Climate Change Demands Activism in the Academy", Jessica F. Green, Daedulus Fall 2020, https://www.amacad.org/publication/climate-change-demands-activism-academy

Supplementary Readings

"A Conversation", Nancy Lipton Rosenblum and Rafe Pomerance, Daedulus Fall 2020, https://www.amacad.org/publication/conversation-rosenblum-pomerance

Final Exam (TBD)