



SYLLABUS

ENR 4450

Climate Change Policy
Fall 2020

COURSE OVERVIEW

Instructor

Instructor: Dr. Matt Hamilton

Email address: hamilton.1323@osu.edu

Office hours: Wednesdays at 10:00-11:00 am

Office: <https://osu.zoom.us/j/9821352022?pwd=VDBHMDZLSGxRZ1VmempIMjQ3K1I2QT09> ***

Course meetings

Days and time: Tuesdays and Thursdays, 12:45-2:05 pm ***

Location: Kottman Hall 333 ***

*** ENR 4450 will be offered as an in-person OR online course. All lectures, exercises, and other course materials will be made available on the course Carmen website, and students who wish to participate in ENR 4450 as a fully online course will be able to do so. The online version will be asynchronous, meaning that students will not be required to participate during set times each week. You may switch between modes of instruction at any time, for any reason.

- If you plan to participate online, please monitor Modules for the introductory video (to be posted prior to the week of 8/24), which will explain expectations for online participation, provide an overview of the course, and walk through the syllabus.
- If you plan to participate in-person, please attend classes at the times and location provided above.

Questions? Email me at hamilton.1323@osu.edu. Thank you.

Course description and goals

Despite broad agreement among climate scientists that climate change is occurring and that a strong policy response is needed to avoid severe impacts in the coming decades, governments have yet to take action at the scales that would mitigate climate change and/or blunt its effects. ENR 4450 picks apart the complexity of climate change governance and explores the following questions: What is the policy problem—how is climate change occurring and what impacts are projected? What approaches have been proposed to facilitate adaptation to these impacts and/or mitigate climate change itself? What institutions dominate climate change policy at different scales (local to global; domestically and internationally)? Why is it so challenging for governments and other key stakeholders to implement meaningful climate change policies?

Credit hours

3

Course learning outcomes

By the end of this course,

- You will understand how the implementation of climate change policies hinges on the dynamics of policy processes.
- You will understand the social science theories and frameworks that can help diagnose and address weaknesses in climate change governance.
- You will understand the variety of climate change mitigation and adaptation policy instruments that have been proposed.

Course format

This course will be divided into two parts. The first part will broadly focus on the “what” of climate change policy: *what is the policy problem and what measures have been proposed in order to address different policy goals*. The first part of the course will also examine the psycho-social factors that can complicate efforts to achieve these policy goals. The second part of the course will focus on the “how” of climate change policy: *how policy processes operate, how psycho-social factors shape these processes in different contexts, and how governance of climate change intersects with other issues of governance* (e.g., environmental justice).

COURSE MATERIALS AND TECHNOLOGIES

Readings

- There is no textbook for the course. All readings will be posted to Carmen unless otherwise specified.

Course technology

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24x7.

- **Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)
- **Email:** 8help@osu.edu
- **TDD:** 614-688-8743

GRADING AND FACULTY RESPONSE

How your grade is calculated

ASSIGNMENT CATEGORY	PERCENT OF GRADE
Weekly reading questions (0.2% each)	10
Written assignments (15% each)	60
Exam 1	15
Final exam	15
Total	100

See assignment descriptions, below, for details and due dates.

Assignment descriptions

Weekly reading questions (~0.2% each; 10% collectively). Every Friday, I will provide reading questions for the material to be covered in the following week. These questions will be posted in Carmen. There will be 2-4 questions each week that will be graded. Your answers to the reading questions will be due at 7:00 a.m. on the day the reading is due.

Written assignments (15% each; 60% collectively). Students will complete four written assignments in which they reflect on how current events relate to concepts discussed in class.

The topic of each “reflection” will be up to you but must be 1) the subject of current reporting in newspapers and 2) based on climate change policy instruments/process that we have focused on in recent weeks (see themes, below). Deadlines and themes for each reflection are as follows:

- Reflection #1 (*policy instruments*) due at 11:55 pm on September 25
- Reflection #2 (*psycho-social factors*) due at 11:55 pm on October 14
- Reflection #3 (*global and national policy processes*) due at 11:55 pm on November 4
- Reflection #4 (*subnational policy processes*) due at 11:55 pm on November 20

Exams (30%). There will be one in-class exam (15%) and a cumulative final exam (15%). The two exams will consist of a mix of multiple choice, true/false and essay questions designed to test understanding of the readings and class discussions. Make-up exams will be scheduled only for medical reasons that can be properly documented.

Late assignments

The maximum grade of written assignments will decrease by 5% for each day late, including weekends. Late penalties will not be applied in cases of emergencies or other excused absences if documentation is provided.

Grading scale

93–100: A
90–92.9: A-
87–89.9: B+
83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C
70 –72.9: C-
67 –69.9: D+
60 –66.9: D
Below 60: E

Communications, faculty feedback and response time

Notifications and updates will be communicated through Carmen and/or in class. If you need to communicate with me by email, please include “ENR 4450” in the subject. You may also communicate with me at the beginning or end of class, or by scheduling a meeting. I am providing the following list to give you an idea of my intended availability throughout the

course. Remember that you can call **614-688-HELP** at any time if you have a technical problem.

- **Grading and feedback:** For large weekly assignments, you can generally expect feedback within **10 days**.
- **E-mail:** I will reply to e-mails within **24 hours on school days**.

PARTICIPATION AND ATTENDANCE

Student participation requirements

- Participation is important, and students are expected to contribute constructively to class activities and discussions. Your participation will contribute to everyone's understanding of topics.

Student attendance requirements

- Attendance at live Zoom sessions is not mandatory but is highly encouraged for all students with the ability to participate. Recordings of live Zoom sessions will be posted in the Modules section of the course website for students who are not able to attend the live sessions, or who wish to review a lecture later. Exams will evaluate your understanding of concepts that are discussed in class but are not covered in the readings. More importantly, lectures will help you contextualize and more completely understand material, which will enable you to get the most out of this course.

OTHER COURSE POLICIES

Academic integrity policy

POLICIES FOR THIS COURSE

- **Quizzes and exams:** You must complete the midterm and final exam yourself, without any external help or communication.
- **Written assignments:** Your written assignments should be your own original work. You are encouraged to ask a trusted person to proofread your assignments before you turn them in, but no one else should revise or rewrite your work.
- **Reusing past work:** In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on

past research or revisit a topic you've explored in previous courses, please discuss the situation with me.

- **Collaboration and informal peer-review:** The course includes many opportunities for formal collaboration with your classmates. While study groups and peer-review of major written projects is encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please ask ahead of time.

OHIO STATE'S ACADEMIC INTEGRITY POLICY

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's *Code of Student Conduct*, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's *Code of Student Conduct* is never considered an "excuse" for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- The Committee on Academic Misconduct web pages ([COAM Home](#))
- *Ten Suggestions for Preserving Academic Integrity* ([Ten Suggestions](#))
- *Eight Cardinal Rules of Academic Integrity* (www.northwestern.edu/uacc/8cards.htm)

Copyright disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Title IX

All students and employees at Ohio State have the right to work and learn in an environment free from harassment and discrimination based on sex or gender, and the university can arrange interim measures, provide support resources, and explain investigation options, including referral to confidential resources.

If you or someone you know has been harassed or discriminated against based on your sex or gender, including sexual harassment, sexual assault, relationship violence, stalking, or sexual exploitation, you may find information about your rights and options at titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu. Title IX is part of the Office of Institutional Equity (OIE) at Ohio State, which responds to all bias-motivated incidents of harassment and discrimination, such as race, religion, national origin and disability. For more information on OIE, visit equity.osu.edu or email equity@osu.edu.

Your mental health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life Counseling and Consultation Services (CCS) by visiting ccs.osu.edu or calling (614) 292- 5766. CCS is located on the 4th Floor of the Younkun Success Center and 10th Floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at 614.292.5766 and 24 hour emergency help is also available through the 24/7 National Prevention Hotline at 1.800.273.TALK or at suicidepreventionlifeline.org.

Diversity

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to

provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting accommodations

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307, 098 Baker Hall, 113 W. 12th Ave.

COURSE SCHEDULE

*** Note that readings listed below include required and recommended readings. Please consult the Modules section of the course website for up-to-date information on which readings are required and which are recommended.

Part 1: Climate change policy instruments

Class 1: August 25 | Introductions; overview of syllabus and course

- No readings

Class 2: August 27 | Biophysical basis for climate change and its impacts (i.e., how do we know what *should* be informing climate change policy?)

- IPCC, 2018: Summary for Policymakers. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press
 - *This report summarizes a lot of information. Do not try to memorize the findings presented here. Instead, pay attention to the core messages (i.e., the bolded blue text following subheaders; e.g., A.1), how this report is organized, and how information is presented.*

Class 3: September 1 | Mitigation policy instruments: regulation

- Friedman, Lisa. "Do Environmental Rules Matter?" The New York Times, April 20, 2020, sec. Climate. <https://www.nytimes.com/interactive/2020/04/19/climate/climate-crash-course-5.html>.
- Davenport, Coral. "Defying Trump, 5 Automakers Lock In a Deal on Greenhouse Gas Pollution." The New York Times, August 17, 2020, sec. Climate. <https://www.nytimes.com/2020/08/17/climate/california-automakers-pollution.html>.
- **Pages 153-154** of Aldy, Joseph E., and Robert N. Stavins. "The Promise and Problems of Pricing Carbon: Theory and Experience." *The Journal of Environment & Development* 21, no. 2 (June 1, 2012): 152–80. <https://doi.org/10.1177/1070496512442508>.

Class 4: September 3 | Mitigation policy instruments: taxes and trading schemes

- The Climate Reality Project. *2017 Handbook on Carbon Pricing Instruments*, 2017. Pages 7-23
- Recommended: **Pages 155-172** of Aldy, Joseph E., and Robert N. Stavins. "The Promise and Problems of Pricing Carbon: Theory and Experience." *The Journal of Environment & Development* 21, no. 2 (June 1, 2012): 152–80. <https://doi.org/10.1177/1070496512442508>.

Class 5: September 8 | Mitigation policy instruments: voluntary programs, nudges, and incentives

- Aldy, Joseph E., and Robert N. Stavins. "The Promise and Problems of Pricing Carbon: Theory and Experience." *The Journal of Environment & Development* 21, no. 2 (June 1, 2012): 152–80. <https://doi.org/10.1177/1070496512442508>. Pages 172-174

- Hagmann, David, Emily H. Ho, and George Loewenstein. “Nudging out Support for a Carbon Tax.” *Nature Climate Change* 9, no. 6 (June 2019): 484–89. <https://doi.org/10.1038/s41558-019-0474-0>.

Class 6: September 10 | Adaptation policy instruments: risk sharing and insurance

- Pielke Jr, Roger, Gwyn Prins, Steve Rayner, and Daniel Sarewitz. “Climate Change 2007: Lifting the Taboo on Adaptation.” *Nature* 445 (February 7, 2007): 597–98. <https://doi.org/10.1038/445597a>.
- Agrawala, Shardul, and OECD, eds. *Economic Aspects of Adaptation to Climate Change: Costs, Benefits and Policy Instruments*. Paris, 2008. Pages 85-104

Class 7: September 15 | Adaptation policy instruments: price signals and markets

- Agrawala, Shardul, and OECD, eds. *Economic Aspects of Adaptation to Climate Change: Costs, Benefits and Policy Instruments*. Paris, 2008. Pages 104-114
- Kiem, Anthony S. “Drought and Water Policy in Australia: Challenges for the Future Illustrated by the Issues Associated with Water Trading and Climate Change Adaptation in the Murray–Darling Basin.” *Global Environmental Change* 23, no. 6 (December 1, 2013): 1615–26. <https://doi.org/10.1016/j.gloenvcha.2013.09.006>.

Class 8: September 17 | Adaptation policy instruments: macro- and micro-finance schemes

- Sovacool, Benjamin K., Björn-Ola Linnér, and Richard J. T. Klein. “Climate Change Adaptation and the Least Developed Countries Fund (LDCF): Qualitative Insights from Policy Implementation in the Asia-Pacific.” *Climatic Change* 140, no. 2 (January 1, 2017): 209–26. <https://doi.org/10.1007/s10584-016-1839-2>.
- Fenton, Adrian, Jouni Paavola, and Anne Tallontire. “Microfinance and Climate Change Adaptation: An Overview of the Current Literature.” *Enterprise Development and Microfinance* 26, no. 3 (September 2015): 262–73. <https://doi.org/10.3362/1755-1986.2015.023>.

Class 9: September 22 | Psycho-social factors that affect policy implementation: culture and politics

- Carmichael, Jason T., and Robert J. Brulle. “Elite Cues, Media Coverage, and Public Concern: An Integrated Path Analysis of Public Opinion on Climate Change, 2001–2013.” *Environmental Politics* 26, no. 2 (March 4, 2017): 232–52. <https://doi.org/10.1080/09644016.2016.1263433>.

- Jasny, Lorien, Joseph Waggle, and Dana R. Fisher. “An Empirical Examination of Echo Chambers in US Climate Policy Networks.” *Nature Climate Change* 5, no. 8 (August 2015): 782–86. <https://doi.org/10.1038/nclimate2666>.

Class 10: September 24 | Psycho-social factors: collective action dilemmas

- Ostrom, Elinor. “Polycentric Systems for Coping with Collective Action and Global Environmental Change.” *Global Environmental Change*, 20th Anniversary Special Issue, 20, no. 4 (October 1, 2010): 550–57. <https://doi.org/10.1016/j.gloenvcha.2010.07.004>.
- Adger, W. Neil. “Social Capital, Collective Action, and Adaptation to Climate Change.” *Economic Geography* 79, no. 4 (2003): 387–404.

Class 11: September 29 | Psycho-social factors: cognition and affect

- Clayton, Susan, Patrick Devine-Wright, Paul C. Stern, Lorraine Whitmarsh, Amanda Carrico, Linda Steg, Janet Swim, and Mirilia Bonnes. “Psychological Research and Global Climate Change.” *Nature Climate Change* 5, no. 7 (July 2015): 640–46. <https://doi.org/10.1038/nclimate2622>.
- Grothmann, Torsten, and Anthony Patt. “Adaptive Capacity and Human Cognition: The Process of Individual Adaptation to Climate Change.” *Global Environmental Change* 15, no. 3 (October 2005): 199–213. <https://doi.org/10.1016/j.gloenvcha.2005.01.002>.

Class 12: October 1 | Exam 1 review

Class 13: October 6 | Exam 1

Part 2: Climate change policy processes

Class 14: October 8 | Global and transnational mitigation processes

- Keohane, Robert O., and David G. Victor. “Cooperation and Discord in Global Climate Policy.” *Nature Climate Change* 6, no. 6 (June 2016): 570–75. <https://doi.org/10.1038/nclimate2937>.

Class 15: October 13 | Global and transnational adaptation processes

- Lesnikowski, Alexandra, James Ford, Robbert Biesbroek, Lea Berrang-Ford, Michelle Maillet, Malcolm Araos, and Stephanie E. Austin. "What Does the Paris Agreement Mean for Adaptation?" *Climate Policy* 17, no. 7 (October 3, 2017): 825–31. <https://doi.org/10.1080/14693062.2016.1248889>.
- Termeer, C. J. A. M, A. Dewulf, S. I. Karlsson-Vinkhuyzen, M. Vink, and M. van Vliet. "Coping with the Wicked Problem of Climate Adaptation across Scales: The Five R Governance Capabilities." *Landscape and Urban Planning*, Special Issue Working with wicked problems in socio-ecological systems: More awareness, greater acceptance, and better adaptation, 154 (October 1, 2016): 11–19. <https://doi.org/10.1016/j.landurbplan.2016.01.007>.

Class 16: October 15 | U.S. national mitigation processes

- Aldy, Joseph E. "Real World Headwinds for Trump Climate Change Policy." *Bulletin of the Atomic Scientists* 73, no. 6 (November 2, 2017): 376–81. <https://doi.org/10.1080/00963402.2017.1388673>.
- Berardo, Ramiro, and Federico Holm. "The Participation of Core Stakeholders in the Design of, and Challenges to, the US Clean Power Plan." *Climate Policy* 18, no. 9 (October 21, 2018): 1152–64. <https://doi.org/10.1080/14693062.2018.1478792>.
 - "Guest Interview" of Fede Holm

Class 17: October 20 | Non-U.S. national mitigation processes

- Savage, Luiza Ch. "The U.S. Left a Hole in Leadership on Climate. China Is Filling It." *POLITICO*, August 15, 2019.
- Aamodt, Solveig, and Iselin Stensdal. "Seizing Policy Windows: Policy Influence of Climate Advocacy Coalitions in Brazil, China, and India, 2000–2015." *Global Environmental Change* 46 (September 1, 2017): 114–25. <https://doi.org/10.1016/j.gloenvcha.2017.08.006>.

Class 18: October 22 | U.S. national adaptation processes

- Reidmiller, DR, CW Avery, DR Easterling, KE Kunkel, KLM Lewis, TK Maycock, BC Stewart, Donald J Wuebbles, David W Fahey, and Kathy A Hibbard. "Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume." *US Global Change Research Program, Washington, DC, USA*, 2018. Appendix 1 (pages 1387-1409)

Class 19: October 27 | Non-U.S. national adaptation processes

- Least Developed Countries Expert Group. *National Adaptation Plans. Technical Guidelines for the National Adaptation Plan Process*. Bonn, Germany: UNFCCC secretariat, 2012. Pages 10-18.
- Berrang-Ford, Lea, Robbert Biesbroek, James D. Ford, Alexandra Lesnikowski, Andrew Tanabe, Frances M. Wang, Chen Chen, et al. "Tracking Global Climate Change Adaptation among Governments." *Nature Climate Change* 9, no. 6 (June 2019): 440–49. <https://doi.org/10.1038/s41558-019-0490-0>.

Class 20: October 29 | U.S. subnational mitigation processes

- Lutsey, Nicholas, and Daniel Sperling. "America's Bottom-up Climate Change Mitigation Policy." *Energy Policy* 36, no. 2 (February 1, 2008): 673–85. <https://doi.org/10.1016/j.enpol.2007.10.018>.
- California Air Resources Board. "California's 2017 Climate Change Scoping Plan," 2017. Pages 1-6
- Davenport, Coral, and Hiroko Tabuchi. "Trump's Rollback of Auto Pollution Rules Shows Signs of Disarray." *The New York Times*, August 20, 2019, sec. Climate. <https://www.nytimes.com/2019/08/20/climate/trump-auto-emissions-rollback-disarray.html>.

Class 21: November 3 | Non-U.S. subnational mitigation processes

- Shan, Yuli, Dabo Guan, Klaus Hubacek, Bo Zheng, Steven J. Davis, Lichao Jia, Jianghua Liu, et al. "City-Level Climate Change Mitigation in China." *Science Advances* 4, no. 6 (June 1, 2018): eaaq0390. <https://doi.org/10.1126/sciadv.aaq0390>.
- Moeliono, Moira, Caleb Gallemore, Levania Santoso, Maria Brockhaus, and Monica Di Gregorio. "Information Networks and Power: Confronting the 'Wicked Problem' of REDD+ in Indonesia." *Ecology and Society* 19, no. 2 (2014). <https://doi.org/10.5751/ES-06300-190209>.

Class 22: November 5 | U.S. subnational adaptation processes

- Moser, Susanne C., Roger E. Kasperson, Gary Yohe, and Julian Agyeman. "Adaptation to Climate Change in the Northeast United States: Opportunities, Processes, Constraints." *Mitigation and Adaptation Strategies for Global Change* 13, no. 5 (June 1, 2008): 643–59. <https://doi.org/10.1007/s11027-007-9132-3>.
- Cervenec, Jason, Aaron B Wilson, Geoff R Dipre, Alana Shockey, and David Celebrezze. *Columbus Climate Adaptation Plan*, 2018. Pages 11-16 and 115-118
 - "Guest Interview" of Jason Cervenec

Class 23: November 10 | Non-U.S. subnational adaptation processes

- Lorenz, Susanne, Suraje Dessai, Piers M. Forster, and Jouni Paavola. "Adaptation Planning and the Use of Climate Change Projections in Local Government in England and Germany." *Regional Environmental Change* 17, no. 2 (February 1, 2017): 425–35. <https://doi.org/10.1007/s10113-016-1030-3>.
- Araos, Malcolm, Lea Berrang-Ford, James D. Ford, Stephanie E. Austin, Robbert Biesbroek, and Alexandra Lesnikowski. "Climate Change Adaptation Planning in Large Cities: A Systematic Global Assessment." *Environmental Science & Policy* 66 (December 1, 2016): 375–82. <https://doi.org/10.1016/j.envsci.2016.06.009>.

Class 24: November 12 | Cross-cutting dimensions: Environmental justice

- Paavola, Jouni, and W. Neil Adger. "Fair Adaptation to Climate Change." *Ecological Economics* 56, no. 4 (2006): 594–609. <https://doi.org/10.1016/j.ecolecon.2005.03.015>.
- Schlosberg, David, and Lisette B. Collins. "From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice." *Wiley Interdisciplinary Reviews: Climate Change* 5, no. 3 (2014): 359–74. <https://doi.org/10.1002/wcc.275>.

Class 25: November 17 | Cross-cutting dimensions: International development

- Yeeles, Adam. "Sustainable Development and Climate Goals." *Nature Climate Change* 9, no. 7 (July 2019): 497–98. <https://doi.org/10.1038/s41558-019-0516-7>.
- World Bank Group. *World Bank Group Climate Change Action Plan 2016–2020*. Washington, D.C: World Bank Publications, 2016. Pages 1-8.

Class 26: November 19 | Cross-cutting dimensions: Morality and intergenerational ethics

- Treves, Adrian, Kyle A. Artelle, Chris T. Darimont, William S. Lynn, Paul Paquet, Francisco J. Santiago-Ávila, Rance Shaw, and Mary C. Wood. "Intergenerational Equity Can Help to Prevent Climate Change and Extinction." *Nature Ecology & Evolution* 2, no. 2 (February 2018): 204–7. <https://doi.org/10.1038/s41559-018-0465-y>.
- Sanklecha, Pranay. "Should There Be Future People? A Fundamental Question for Climate Change and Intergenerational Justice." *Wiley Interdisciplinary Reviews: Climate Change* 8, no. 3 (2017): e453. <https://doi.org/10.1002/wcc.453>.

Class 27: November 24 | Exam 2 review

Class 28: December 1 | Exam 2

Class 29: December 3 | How do people (maybe you?) shape climate change policy? (Career models)

- No readings