

Can China Stop Climate Change? Politics, Geopolitics, and China's Role in the World's Renewable Energy Revolution

Tuesdays 1:45 – 4:45 PM EST

Center for the Study of Contemporary China, Room 416, Perelman Center for Political Science and Economics, 133 South 36th Street, Philadelphia, PA, 19104

This class looks at one of the most important issues facing the world today: China's climate policy and its role in the global energy transition away from fossil fuels. The course aims to expose students to the driving forces behind China's position and policy related to climate change and its involvement in the global energy sector, with strong emphasis on technology and international relations. The course will also examine barriers and challenges related to meeting China's ambitious climate commitments. The course will be featured as part of the pilot phase of the China Education Initiative, which provides enrolled students with the opportunity to engage with key questions and issues related to China through a travel component May 12-21, which this year is planned to examine a solar energy project in the United Arab Emirates built and largely financed by Chinese entities. Another important part of the course will be guest speakers representing government officials; multilateral institution officials; researchers; journalists; and civil society. This course will be conducted in a seminar format. Prior coursework related to, or knowledge of, China, science, technology, or environmental issues will be helpful, but is not a prerequisite.

The course will have two major components. The first will focus on the driving forces shaping China's climate, energy, and environmental policies. This component will give students a common reference point to understand China's climate and energy policy, and expose students familiar with these issues to how China's distinctive political and economic systems bear on climate and energy policy specifically. This first component will also emphasize issues like growing Chinese consumer awareness of and concern for sustainability issues; energy security; and the changing role of environmental activism within China. The second major component will focus on China's climate, energy, and environmental policies and the positions Beijing has taken in multilateral climate and other environmental negotiations. Emphasis will be placed on different future energy and sustainability trajectories, and the policy and other choices involved in choosing one trajectory over another. This component will also include modules on China's expanding overseas environmental footprint through the Belt and Road and other overseas development initiatives; its role in non-energy-related environmental issues like fisheries and wildlife trafficking; and the growing involvement of Chinese businesses, banks, and other non-state commercial entities in sectoral sustainability efforts.

This course will be conducted in a seminar format. Most of each class session will be focused on discussion but will also include short overview/framing remarks from the instructor, and many if not all class sessions will also feature a guest speaker. Students will take turns providing their

own framing remarks for class discussions, based on the readings, as well as moderating class discussions and where applicable introducing guest speakers. All students are expected to attend all classes unless ill, participating in religious observances, or extenuating circumstances apply; and are also expected to actively participate in class discussions. Active participation in the travel component, including being on time for meetings and scheduled events; being engaged in meetings and scheduled events; and abiding by all local laws in the United Arab Emirates and University disciplinary codes of conduct, is a requirement for the course.

Students will complete two papers as part of the class: a ~5-page short paper and a ~10-page research paper that draws on the course material. In the short paper, each student should pose a question, topic, or position related to the course material and outline an approach to answering or defending it, respectively, including citing several sources. In the longer paper, students should put forward an argument and substantiate it with scholarly materials including books, journal articles, and/or primary source material or data. Students will also deliver a ~10 minute presentation to the class on the subject of their research paper. In addition, students will be responsible for leading one or more meetings during the travel component.

Prior coursework related to, or knowledge of, China, science, technology, or environmental issues will be helpful, but is not a prerequisite.

Instructor: Scott Moore, scott.moore@upenn.edu

Course Overview:

1. Introduction: China and Climate Change (January 17) [Scott Moore]
2. Contextualizing the Environment, Climate Change, and China's Rise (January 24) [Peter Jin]
3. China and Global Environmental Issues (January 31) [Dawn Murphy]
 - a. Gabriella Gibson; Eleni Pisinis
4. China's Environment: History and Geography (February 7) [Isabel Hilton]
 - a. Javier Farach; Yena Suh
5. Politics, Economics, and China's Environmental Policy (February 14) [Alex Wang]
 - a. Arnav Aggarwal; Willow Wilkes
6. China's Energy System and Energy Policy (February 21) [Michael Mann]
 - a. Laura Lee Ru Ye; Serena Camici
7. China, Clean Technology Innovation, Development, and Policy (February 28) [Stacy-ann Robinson]
 - a. Yesenia Hanif; Anvit Rao
8. Spring Break / Short Papers Due (March 7)
9. China, Climate Change, and Geopolitics (March 14) [TBC]
 - a. Jennifer Frank; Cindy Liu
10. China and International Climate Negotiations (March 21) [TBC]
 - a. Vanessa Frigon; Deyi Zhang

11. No Class / Final Paper Proposals (March 28)
12. China, Climate Change, and Overseas Investment (April 4) [Eyck Freymann]
 - a. Isabella Magg; Sourish Jasti
13. World Climate Simulation / China and Middle East Briefing (April 11) [TBC]
14. Final Paper Presentations and Pre-Departure Meeting (April 18) [Kristyn Palmiotto and Hannah Malloy]
15. Final Paper Presentations (April 25)

Key dates: January 12, 2022 (first day of class); January 17 (Dr. Martin Luther King, Jr. Day of Service; no class); January 25 (course selection period ends); February 21 (drop period ends); March 7 (short papers due; no class); March 18 (grade type change deadline); March 28 (no class; final paper proposals due; last day to withdraw from a course); April 18 (final paper presentations I); April 25 (final paper presentations II; last class); May 2 (final papers due); May 12-21 (course trip)

1. Detailed Course Structure and Readings

NB: Some web links do not automatically show up in Canvas; you may need to click through the hyperlink to access the content.

Week 1: Introduction to China, the Environment, and Climate Change (January 17) [Scott Moore]

- Under the Dome: Parts 1 and 2
- Under the Dome Summary
- What is China doing about climate change? [SCMP]

Week 2: Contextualizing China and Climate Change (January 24) [Peter Jin]

- IPCC Climate Change 2021: The Physical Science Basis: Summary for Policymakers
- IPCC Climate Change 2022: Impacts, Vulnerability, and Adaptation: Summary for Policymakers
- Sandalow et al.: Guide to Chinese Climate Policy 2022, Introduction and Part I (pages 6-38)

Week 3: China and Global Environmental Issues (January 31) [Dawn Murphy]

- Economy, The River Runs Black: The Environmental Challenge to China's Future: Chapter 1
- Mallory, China's Distant Water Fishing Fleet
- Katz, How's China's Ban on Importing Waste Has Stalled Global Recycling
- Nuwer, The Key to Stopping the Illegal Wildlife Trade: China
- Lin et al., China's international trade and air pollution in the United States
- 14th Five Year Plan: Sections 1 and 11; Article XLI

Week 4: China and the Environment: History and Geography (February 7) [Isabel Hilton]

- Elvin, Retreat of the Elephants: Introductory Remarks; Chapter 3 (The Great Deforestation: an Overview)
- Shapiro, Mao's War Against Nature: Introduction; Chapter 1; Chapter 5
- Moore, Legitimacy, Development, and Sustainability
- Latham and Watkins, "Beautiful China" speech to the 19th Party Congress

Week 5: Drivers of China's Energy and Environmental Policy (February 14) [Alex Wang]

- Economy, The River Runs Black: The Environmental Challenge to China's Future: Chapters 2 and 5
- Moore, Pollution Without Revolution (*note: to read this article you may need to register for a free account on ForeignAffairs.com. I recommend using your UPenn email address*).
- China 2007 National Climate Change Action Plan [Section 1.3, 2.1, 2.2, 2.3, 4.1, 4.2, 4.3, 4.4, 4.5, 5.1, 5.2]
- 13th National Five-Year Plan for the Development of Strategic Emerging Industries: Sections 1, 5, 8, 9

Week 6: China's Energy System and Climate and Energy Policy (February 21) [Michael Mann]

- Sandalow et al.: Guide to Chinese Climate Policy 2022, Part II (pages 39-212)
- Bloomberg News, The Secret Origins of China's 40-Year Plan to End Carbon Emissions
- Carbon Brief, China Briefing [Analysis of Paris Pledges + Interview]
- BP Energy Outlook: China

Week 7: China, Clean Technology Innovation, Development, and Policy (February 28) [Stacy-ann Robinson]

- Goldman Sachs, China Net Zero
- IEA, An Energy Sector Roadmap to Carbon Neutrality in China [Executive Summary]
- Lewis, Green Innovation in China: Chapters 1-3
- Gallagher, The Globalization of Clean Energy Technology: Chapters 1, 4, 7

Week 8: No Class [Spring Break; Short Papers Due March 7]

Week 9: China, Climate Change, and Geopolitics (March 14) [TBC]

- Moore, the New Geopolitics of Climate
- Erickson and Collins, Competition with China Can Save the Climate
- Rachman, Easternization: Asia's Rise and America's Decline: Chapters 1-3 and 14
- Kerry and Khanna, Don't Let China Win the Green Race

Week 10: China and International Climate Negotiations (March 21) [TBC]

- Finamore, Will China Save the Planet?: Introduction, Chapters 1 and 5
- Conrad, China in Copenhagen

- 2014 US-China Presidential Joint Statement on Climate Change
- 2021 US-China Joint Declaration on Climate Change
- Moore, From the 20th Party Congress to COP-27

Week 11: No Class [Final Paper Proposals Due March 28]

Week 12: China, Climate Change, and Overseas Investment (April 4) [Eyck Freymann]

- Gallagher, Chinese Overseas Investment Policy
- PRC Ministry of Commerce, Guidelines for Green Development [In Chinese; use Google Translate]
- Schiermier, China's Pledge on Overseas Coal
- Ma and Gallagher, Who Funds Overseas Coal Projects?
- Murphy, China's Rise in the Global South: Chapters 1, 3, 6, and 9

Week 13: World Climate Simulation / China and Middle East Briefing (April 11) [TBC]

- [China's Growing Role in the Middle East](#) (Webinar)

Week 14: Final Paper Presentations and Pre-Departure Meeting (April 18) [Kristyn Palmiotto and Hannah Malloy]

Week 15: Student Presentations II / Roundtable Discussion (April 25) [Scott Moore]

Final Research Papers Due (May 2)

2. Instructor Biography

Note: I'm happy to answer brief questions via email, but for complex or detailed questions, please see me during office hours (which are held by appointment).

Scott Moore is a political scientist whose interests center on environmental sustainability, technology, and international relations. His first book, *Subnational Hydropolitics: Conflict, Cooperation, and Institution-Building in Shared River Basins* (Oxford University Press, 2018), examines how climate change and other pressures affect the likelihood of conflict over water within countries. At Penn, Scott is Director of the Penn Global China Program. Previously, Scott was a Young Professional and Water Resources Management Specialist at the World Bank Group, and Environment, Science, Technology, and Health Officer for China at the U.S. Department of State, where he worked extensively on the Paris Agreement on climate change. Prior to entering public service, Scott was Giorgio Ruffolo Post-Doctoral Research Fellow with the Belfer Center for Science and International Affairs at Harvard University. Scott's research and commentary on a wide range of environmental and international affairs issues has appeared in a range of leading scholarly journals and media outlets, including *Nature*, *The China Quarterly*, *Foreign Affairs*, and *The New York Times*. Scott holds doctoral and master's degrees

from Oxford University and an undergraduate degree from Princeton. He is a Truman, Fulbright, and Rhodes Scholar.

3. Course Materials

Readings to be accessed via Canvas. Every attempt has been made to avoid requiring that students purchase books or readings, though where books are assigned for reading presentations students are strongly encouraged to visit the library and consult the full original text (or Ebook, if available). I will also occasionally add readings in response to breaking news events, so please also check both the Course Modules section and the Course Materials @ Penn Libraries section of Canvas for readings.

4. Course Requirements and Grading

Grading will be primarily based on a ~5-page short paper (20% of final grade) and a ~10-page research paper (40% of final grade) based on course material and discussion. An additional 15% of the grade will be based on the student's presentation, and the final 25% will be based on participation in course discussions.

Grades will be assigned based on the rubric below:

A: Superior work that exceeds all assignment criteria and demonstrates a clear ability and willingness to go beyond the core course material to make connections to other disciplines or issues, uncover additional sources, or formulate original insights into the course material

A-: High-quality work that meets all assignment criteria and demonstrates some ability and willingness to go beyond the core course material to make connections to other disciplines or issues, uncover additional sources, or formulate original insights into the course material

B+: Above-average work that meets all assignment criteria and demonstrates a thorough understanding of and engagement with the course material

B: Average-quality work that meets all assignment criteria but demonstrates only partial understanding of and engagement with the course material

B-: Below-average work that meets some but not all assignment criteria and/or demonstrates limited understanding of and engagement with the course material

C: Below average work that meets few assignment criteria and fails to engage with material in a substantive way

D/F Work that reflects a near-total or total lack of effort and participation with regard to the assignment and/or course material

5. Policies

Violations of these policies may affect grades and may be referred for University disciplinary action.

This course will cover a number of contentious issues on which the views of seminar participants are likely to differ. Seminar participants will need to commit to voicing and addressing such differences in an open and respectful manner.

In order to provide an environment conducive to the free exchange of ideas, we will follow the “Chatham House rule.” Specifically, views expressed during class discussions must be treated in confidence and may not be repeated with attribution (in other words: you can’t repeat to anyone outside the class who said what in class). In addition, no audio, video, or other recording of class discussions by students or outside parties will be permitted.

Students are expected to abide by local laws, including those concerning alcohol and drug use, as well as the University Code of Student Conduct, during the travel component of this course.

Students are expected to abide by the University Code of Academic Integrity.

Absences do not require permission but can be expected to affect participation grades unless due to a personal or family medical emergency or observance of recognized holidays as per the below policy.

1. The University recognizes/observes the following secular holidays: Martin Luther King, Jr. Day, Memorial Day, July 4, Thanksgiving and the day after, Labor Day, and New Year’s Day.
2. The University also recognizes that there are several religious holidays that affect large numbers of University community members, including Christmas, Rosh Hashanah, Yom Kippur, the first two days of Passover, and Good Friday. In consideration of their significance for many students, no examinations may be given and no assigned work may be required on these days. Students who observe these holidays will be given an opportunity to make up missed work in both laboratories and lecture courses. If an examination is given on the first class day after one of these holidays, it must not cover material introduced in class on that holiday.

Faculty should realize that Jewish holidays begin at sundown on the evening before the published date of the holiday. Late afternoon exams should be avoided on these days. Also, no examinations may be held on Saturdays or Sundays in the undergraduate schools unless they are also available on other days. Nor should seminars or other regular classes be scheduled on Saturdays or Sundays unless they are also available at other times.

3. The University recognizes that there are other holidays, both religious and secular, which are of importance to some individuals and groups on campus. Such occasions include, but are not limited to, Sukkot, the last two days of Passover, Shavuot, Shemini Atzerat and Simchat Torah, Chinese New Year, the Muslim New Year, Diwali, Navaratri, Rama Navami, Paryushan, and the Islamic holidays Eid Al-Fitr and Eid Al-Adha. Students who wish to observe such holidays must inform their instructors within the first two weeks of each semester of their intent to observe the holiday even when the exact date of the holiday will not be known until later so that alternative

arrangements convenient to both students and faculty can be made at the earliest opportunity. Students who make such arrangements will not be required to attend classes or take examinations on the designated days, and faculty must provide reasonable opportunities for such students to make up missed work and examinations. For this reason it is desirable that faculty inform students of all examination dates at the start of each semester. Exceptions to the requirement of a make-up examination must be approved in advance by the undergraduate dean of the school in which the course is offered.