
Boston University
Department of International Relations
Department of Geography and Environment

Spring 2008 • CAS IR/GE 599
Science, Politics and Climate Change

Meets Wednesdays
1:00 – 4:00PM
IRC 220

Henrik Selin
156 Bay State Road
Room 403
E-mail: selin@bu.edu

Office Hours:
Mondays 10:00AM-12:00PM
Wednesdays 4:00-5:00PM
Other times by appointment

Introduction

This course will focus on the interplay between science and politics through the analytical perspective of science and technology studies (STS) and apply a STS perspective to climate change science and policy. STS is an interdisciplinary field that examines the societal context in which science is conducted and the interplay between science and politics in identifying and addressing policy issues. The course is designed to introduce students to theoretical debates within the field of STS and to central scientific and political debates that shape climate change policy at global, national and local levels. The course will provide a broad overview of the key analytical concepts, actors, concerns and issues related to the subject. The goal is to understand the larger picture of the intertwining relationships between scientific and political systems that shape policy with a focus on climate change policy.

This course, which will be based on a combination of lectures and extensive class discussion, will begin with an introduction to STS and different way to conceptualize the relationship between science and policy in modern societies. These perspectives will then be applied to the area of climate change science and policy. The course will look at how major climate change assessments are generated, their purpose, how they inform (or do not inform) policy, and ask the question of why some assessments are successful in influencing policy while others are largely ignored. In conjunction with examining these issues, the course will look at major policy development on climate change internationally and in North America. In class, we will discuss the achievements and shortcomings of these policy developments, and how they relate (or do not relate) to each other from the perspective of effective multilevel governance.

Prerequisites

There are no formal prerequisites for this course. Contact the professor if you have any questions.

Attendance & Grading

Great importance will be placed on regular attendance (including arriving on time and not leaving early), active and productive class participation, and timely submission of assignments. There will be a penalty for late submissions of assignments and for irregular attendance, although individual emergencies will be accommodated as far as possible. In such cases, students should make every effort to talk with the instructor before the said class.

The final grade for the class will be calculated as follows:

<input checked="" type="checkbox"/> • Class Participation	10% (20 points)
<input checked="" type="checkbox"/> • Critical Review of STS	25% (50 points)
<input checked="" type="checkbox"/> • Policy Memorandum	15% (30 points)
<input checked="" type="checkbox"/> • Op-Ed	15% (30 points)
<input checked="" type="checkbox"/> • Research Paper	35% (70 points)
TOTAL	100% (200 points)

Assignments

Assignments for the class will be explained in greater detail on the first day of class, but students are required to complete four different individual written assignments in addition to active class participation.

CLASS PARTICIPATION (10% of grade, 20 points)

Class meetings are designed to be a series of discussion meetings, rather than lecture meetings, with full participation by all students. Active student participation will be an important part of the class, and students should come well prepared to speak their mind and to be called upon to speak their mind!

CRITICAL REVIEW OF STS (25% of grade, 50 points)

Students will write a critical review of STS. The review should be approximately 2,000 words long and discuss the strength and weaknesses of STS analysis as a means for understanding scientific investigation and science and politics interplay in theory and practice. The review is due at the beginning of class #6 (February 20). More information about the review will be given in class.

POLICY MEMORANDUM (15% of grade, 30 points)

Students will write a short policy memorandum on U.S. climate change policy. The policy memorandum is due at the beginning of class #11 (April 2). More information about the memorandum will be given in class.

OP-ED (15% of grade, 30 points)

Students will write a climate change related Op-Ed aimed for a major U.S. newspaper (for example, NY Times, Washington Post, the Boston Globe or LA Times). The text shall address some aspect of the climate change issue and follow the general guidelines for an Op-Ed. Students are free to choose their own targeted newspaper, specific topic, and style of writing as long as it is in the general form of an Op-Ed. The Op-Ed is due at the beginning of class #13 (April 16). More information about the op-ed assignment will be given in class.

RESEARCH PAPER (35% of grade, 70 points)

A short research paper (8 pages for undergraduates and 10 pages for graduate students, single spaced) is due by beginning of class on April 30 (last day of class). This research paper should both be a descriptive and a proscriptive analysis of a particular aspect of climate change assessment, policy making and/or abatement. The paper should be properly referenced and footnoted and written in proper academic style. Additional information regarding the research paper will be given in class and each student will be required to present a paper topic in class on class #10 (March 26). More information about the research paper will be given in class.

Academic Honesty

The *American College Dictionary* defines plagiarism as “Copying or imitating the language, ideas, or thoughts of another author and passing off the same as one’s original work.” Plagiarism is intellectual theft and violates the student honor code. Exact quotations must have quotation marks and the appropriate citation. Paraphrases, even if not exact quotes, must nonetheless have the appropriate citation. Submitting a paper written by someone else, whether ‘borrowed’ from a friend or purchased from a ‘service’, even if updated, constitutes plagiarism.

Using the Internet for research is allowed and encouraged, but plagiarizing its resources is not allowed. Cheating of any sort, submitting the same work for more than one course, deliberately impeding the academic performance of others, and other forms of academic misconduct are serious offenses. As a general rule, if you have any doubts, give credit to the source; if you have any questions, talk to the instructor. Refer to the Academic Conduct Code which will be strictly enforced.

Readings

There are four required textbooks for the course:

- SERGIO SISMONDO. 2004. *Introduction to Science and Technology Studies*. Oxford: Blackwell Publishing.
- SPENCER R. WEART. 2004. *The Discovery of Global Warming*. Cambridge: Harvard University Press.
- CLARK A. MILLER AND PAUL N. EDWARDS. 2001. *Changing the Atmosphere: Expert Knowledge and Environmental Governance*. Cambridge: MIT Press.
- DAVID G. VICTOR. 2004. *Climate Change: Debating America’s Policy Options*. Washington D.C.: Council on Foreign Relations (Also available for free download through the web site of the Council on Foreign Relations).

The textbooks are available for purchase at Barnes and Noble at Boston University Bookstore, various web based book sellers.

The course uses the CourseInfo system. All readings in addition to those found in the required text books will be posted the CourseInfo web site under “Course Documents.”

To ensure meaningful class discussion, it is very important that students have read the assigned readings before the said class.

Course Organization

Class #1

Course Introduction & Class Logistics

- **REAL CLIMATE:** <http://www.realclimate.org>
 - **CLIMATE ARK:** <http://www.climateark.org>
 - **U.S. EPA:** <http://epa.gov/climatechange/index.html>
 - **AN INCONVENIENT TRUTH:** <http://www.climatecrisis.net>
 - **RESPONDING TO CLIMATE CHANGE:** <http://www.rtcc.org>
 - **STSS WIKI:** http://en.stswiki.org/wiki/Main_Page
 - **KENNEDY SCHOOL OF GOVERNMENT PROGRAM ON SCIENCE, TECHNOLOGY & SOCIETY:** <http://www.ksg.harvard.edu/sts/about/whatissts.htm>
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Class #2

Introduction to Science and Technology Studies I Discovering Climate Change I

- **SERGIO SISMONDO.** 2004. *An Introduction to Science and Technology Studies*. Oxford: Blackwell Publishing. Chapters 1-4, p.p. 1-41.
 - **SPENCER R. WEART.** 2004. *The Discovery of Global Warming*. Cambridge: Harvard University Press. Chapters 1-2, p.p. 1-38.
 - **SPENCER R. WEART WEB SITE:** <http://www.aip.org/history/climate>.
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Class #3

Introduction to Science and Technology Studies II Discovering Climate Change II

- **SERGIO SISMONDO.** 2004. *An Introduction to Science and Technology Studies*. Oxford: Blackwell Publishing. Chapters 5-12, p.p. 42-128.
 - **SPENCER R. WEART.** 2004. *The Discovery of Global Warming*. Cambridge: Harvard University Press. Chapters 3-5, p.p. 39-117.
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Class #4

Introduction to Science and Technology Studies III Discovering Climate Change III

- **SERGIO SISMONDO.** 2004. *An Introduction to Science and Technology Studies*. Oxford: Blackwell Publishing. Chapters 13-16, p.p. 128-172.
 - **SPENCER R. WEART.** 2004. *The Discovery of Global Warming*. Cambridge: Harvard University Press. Chapters 6-9, p.p. 118-201.
 - **SIMON SHAKLEY AND BRIAN WYNNE.** 1995. "Global Climate Change: The Mutual Construction of an Emergent Science-Policy Domain" *Science and Public Policy* 22(4): 218-230 (CourseInfo).
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Class #5

Climate Change Modeling and Uncertainty

- **SHEILA JASANOFF.** 2001. "Image and Imagination: The Formation of Global Environmental Consciousness," Chapter 10 in Clark A. Miller and Paul N. Edwards (Eds.) *Changing the Atmosphere: Expert Knowledge and Environmental Governance*. Cambridge: MIT Press.
- **PAUL N. EDWARDS.** 2001. "Representing the Global Atmosphere: Computer Models, Data, and Knowledge About Climate Change," Chapter 2 in Clark A. Miller and Paul N. Edwards (Eds.) *Changing the Atmosphere: Expert Knowledge and Environmental Governance*. Cambridge: MIT Press.
- **STEPHEN D. NORTON AND FREDERICK SUPPE.** 2001. "Why Atmospheric Modeling Is Good Science," Chapter 3 in Clark A. Miller and Paul N. Edwards (Eds.) *Changing the Atmosphere: Expert Knowledge and Environmental Governance*. Cambridge: MIT Press.
- **SIMON SHACKLEY.** 2001. "Epistemic Lifestyles in Climate Change Modeling," Chapter 4 in Clark A. Miller and Paul N. Edwards (Eds.) *Changing the Atmosphere: Expert Knowledge and Environmental Governance*. Cambridge: MIT Press.

Class #6

Global Climate Change Science and Policy I

- **CLARK A. MILLER AND PAUL N. EDWARDS.** 2001. "The Globalization of Climate Change Science and Policy," Chapter 1 in Clark A. Miller and Paul N. Edwards (Eds.) *Changing the Atmosphere: Expert Knowledge and Environmental Governance*. Cambridge: MIT Press.
- **MICHELE M. BETSILL.** 2004. "Global Climate Change Policy: Making Progress or Spinning Wheels?" in *The Global Environment* (Eds.) Regina Axelrod, David Downie and Norman Vig. Washington D.C.: CQ Press (CourseInfo).
- **INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE:** <http://www.ipcc.ch>
- **UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE:** <http://unfccc.int>
- **THE EARTH NEGOTIATIONS BULLETIN:** http://www.iisd.ca/process/climate_atm.htm

Class #7

Global Climate Change Science and Policy II

- **PAUL N. EDWARDS AND STEPHEN H. SCHNEIDER.** 2001. "Self-Governance and Peer Review in Science-for-Policy: The Case of the IPCC Second Assessment Report," Chapter 7 in Clark A. Miller and Paul N. Edwards (Eds.) *Changing the Atmosphere: Expert Knowledge and Environmental Governance*. Cambridge: MIT Press.
- **CLARK A. MILLER.** 2001. "Challenges in the Application of Science to Global Affairs: Contingency, Trust and Moral Order," Chapter 8 in Clark A. Miller and Paul N. Edwards (Eds.) *Changing the Atmosphere: Expert Knowledge and Environmental Governance*. Cambridge: MIT Press.
- **ANDREW LAWLER.** 2002. "Battle over IPCC Chair Renews Debate on U.S. Climate Policy" *Science* 296: 232-233 (CourseInfo).

Class #8

Climate Change Security and Environmental Justice

- **THE CNA CORPORATION.** 2007. *National Security and the Threat of Climate Change*. Alexandria: CAN Corporation (CourseInfo).
- **DALE JAMIESON.** 2001. "Climate Change and Global Environmental Justice," Chapter 9 in Clark A. Miller and Paul N. Edwards (Eds.) *Changing the Atmosphere: Expert Knowledge and Environmental Governance*. Cambridge: MIT Press.

Class #9

Transatlantic Climate Change Science and Policy

- **EUROPEAN UNION WEB SITE:** http://ec.europa.eu/environment/climat/home_en.htm
- **JØRGEN WETTESTAD.** 2005. "The Making of the 2003 Emissions Trading Directive: An Ultra-quick Process Due to Entrepreneurial Proficiency?" *Global Environmental Politics* 5(1): 1-23 (CourseInfo).
- **BYRON W. DAYNES AND GLEN SUSSMAN.** 2005. "The 'Greenless' Response to Global Warming" *Current History* 104(686): 438-443 (CourseInfo).
- **DAVID G. VICTOR.** 2004. *Climate Change: Debating America's Policy Options*. Washington D.C.: Council on Foreign Relations. "Memorandum to the President" p.p. 1-75 and "Appendix A, Appendix B, Appendix C, Appendix D," p.p. 117-157.
- **UNITED STATES HOUSE OF REPRESENTATIVES.** 2007. *Political Interference with Climate Change Science under the Bush Administration*. Washington DC: House of Representatives, Committee on Oversight and Government Reform (CourseInfo).

Class #10

U.S. Climate Change Science and Policy I

- **DAVID G. VICTOR.** 2004. *Climate Change: Debating America's Policy Options*. Washington D.C.: Council on Foreign Relations. "Speech One, Speech Two and Speech Three," p.p. 75-114.
- **BARRY RABE.** 2006. "Second Generation Climate Policies in States: Proliferation, Diffusion, and Regionalization," in Henrik Selin and Stacy D. VanDeveer (Eds.) *Climate Change Politics in North America: The State of Play*. Canada Institute of the Woodrow Wilson International Center for Scholars, p.p. 17-26 (CourseInfo).

Student Research Paper Discussion

Oral and written presentation of research paper topic and tentative paper outline (1 page).

Class #11

U.S. Climate Change Science and Policy II

- **HENRIK SELIN AND STACY D. VANDEVEER.** 2007. "Political Science and Prediction: What's Next for U.S. Climate Change Policy?" *Review of Policy Research* 24(1): 1-27 (CourseInfo).
- **HENRIK SELIN AND STACY D. VANDEVEER.** 2006. "Climate Leadership in Northeast North America," in Henrik Selin and Stacy D. VanDeveer (Eds.) *Climate Change Politics in North America: The State of Play*. Canada Institute of the Woodrow Wilson International Center for Scholars, p.p. 27-36 (CourseInfo).

- **MICHELE M. BETSILL.** 2001. "Mitigating Climate Change in US Cities: Opportunities and Obstacles" *Local Environment* 6(4): 393-406 (CourseInfo).
- **PEW CENTER OF GLOBAL CLIMATE CHANGE:** <http://www.pewclimate.org>.
- **CITIES FOR CLIMATE PROTECTION:** <http://www.iclei.org>.
- **REGIONAL GREENHOUSE GAS INITIATIVE:** <http://www.rggi.org>.
- **CALIFORNIA CLIMATE CHANGE PORTAL:** <http://www.climatechange.ca.gov>.

Class #12

Communicating Climate Change Science and Policy

- **EUGENE B. SKOLNIKOFF.** 1999. "The Role of Science in Policy: The Climate Change Debate in the United States" *Environment* 41(5): 16-20 and 42-45 (CourseInfo).
- **SUSANNE C. MOSER AND LISA DILLING.** 2004. "Making Climate Hot: Communicating the Urgency and Challenge of Global Climate Change" in *Environment*, 46(10): 32-46, (CourseInfo).
- **SUSANNE C. MOSER.** 2006. "Communicating Climate Change Motivating Citizen Action: An Opportunity for Democratic Renewal?," in Henrik Selin and Stacy D. VanDeveer (Eds.) *Climate Change Politics in North America: The State of Play*. Canada Institute of the Woodrow Wilson International Center for Scholars, p.p. 109-118 (CourseInfo).

Class #13

NGOs, Business and Climate Change Science and Policy

- **JOHN MCCORMICK.** 2004. "The Role of Environmental NGOs in International Regimes" in *The Global Environment* (Eds.) Regina Axelrod, David Downie and Norman Vig. Washington D.C.: CQ Press (CourseInfo).
- **MICHAEL SHELLENBERGER AND TED NORDHAUS.** 2004. *The Death of Environmentalism: Global Warming Politics in a Post-Environmental World* (CourseInfo).
- **JON BIRGER SKJEARSETH AND TORA SKODVIN.** 2001. "Climate Change and the Oil Industry: Common Problems, Different Strategies" *Global Environmental Politics* 1(4): 43-64 (CourseInfo).
- **DAVID L. LEVY AND CHARLES A. JONES.** 2006. "U.S. Business Strategies and Climate Change," in Henrik Selin and Stacy D. VanDeveer (Eds.) *Climate Change Politics in North America: The State of Play*. Canada Institute of the Woodrow Wilson International Center for Scholars, p.p. 73-84 (CourseInfo).
- **VIRGINIA HAUFLER.** 2006. "Insurance and Reinsurance in a Changing Climate," in Henrik Selin and Stacy D. VanDeveer (Eds.) *Climate Change Politics in North America: The State of Play*. Canada Institute of the Woodrow Wilson International Center for Scholars, p.p. 85-98 (CourseInfo).
- **DOVEV LEVINE.** 2006. "Campus Climate Action," in Henrik Selin and Stacy D. VanDeveer (Eds.) *Climate Change Politics in North America: The State of Play*. Canada Institute of the Woodrow Wilson International Center for Scholars, p.p. 99-108 (CourseInfo).

Class #14

The Future of Climate Change Science and Policy

Summary Outline of Class Schedule

Class #1	January 16	<ul style="list-style-type: none">• Course Introduction & Class Logistics
Class #2	January 23	<ul style="list-style-type: none">• Introduction to Science and Technology Studies I• Discovering Climate Change I
Class #3	January 30	<ul style="list-style-type: none">• Introduction to Science and Technology Studies II• Discovering Climate Change II
Class #4	February 6	<ul style="list-style-type: none">• Introduction to Science and Technology Studies III• Discovering Climate Change III
Class #5	February 13	<ul style="list-style-type: none">• Climate Change Modeling and Uncertainty
Class #6	February 20	<ul style="list-style-type: none">• Global Climate Change Science and Policy I
Class #7	February 27	<ul style="list-style-type: none">• Global Climate Change Science and Policy II
Class #8	March 5	<ul style="list-style-type: none">• Climate Change Security and Environmental Justice
Class #9	March 19	<ul style="list-style-type: none">• Transatlantic Climate Change Science and Policy
Class #10	March 26	<ul style="list-style-type: none">• U.S. Climate Change Science and Policy I• Student Research Paper Discussion
Class #11	April 2	<ul style="list-style-type: none">• U.S. Climate Change Science and Policy II
Class #12	April 9	<ul style="list-style-type: none">• Communicating Climate Change Science and Policy
Class #13	April 16	<ul style="list-style-type: none">• NGOs, Business and Climate Change Science and Policy
Class #14	April 30	<ul style="list-style-type: none">• The Future of Climate Change Science and Policy