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**Boston University**  
**Frederick S. Pardee School of Global Studies**  
**Department of Earth and Environment**

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**IR/GE 599**

**Science, Politics and Climate Change**

**Spring 2015**

**Wednesdays**

**1:00 – 4:00PM**

**IRB 102 (154 Bay State Road)**

Henrik Selin

154 Bay State Road

Room 405

E-mail: [selin@bu.edu](mailto:selin@bu.edu)

Office Hours

Wednesdays 4:00-5:00PM

Thursdays 1:00-3:00PM

Other times by appointment

## **Introduction**

This course focuses on the interplay between science, technology and politics through the analytical perspective of science and technology studies (STS), and applies 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 introduces students to STS and to central scientific and political debates that shape climate change policy at global, national and local levels. The course provides a broad overview of the key analytical concepts, actors, concerns, and issues. The goal is to understand the larger picture of the intertwining relationships between scientific, technical and political systems that shape policy with a focus on climate change policy.

This course, which is based on a combination of lectures and extensive class discussion, begins with an introduction to STS and different way to conceptualize relationships between science, technology and policy. These perspectives are applied to the area of climate change science and policy. The course looks 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 examines major policy development on climate change internationally and in North America. In class, we will discuss major 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 that is open to graduate students and upper-level undergraduates. 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	30 points
<input checked="" type="checkbox"/> • Critical Review of STS	40 points
<input checked="" type="checkbox"/> • Policy Memorandum	30 points
<input checked="" type="checkbox"/> • Op-Ed	30 points
<input checked="" type="checkbox"/> • Research Paper	70 points
TOTAL	200 points

## Assignments

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

### CLASS PARTICIPATION (30 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 (40 points)

Students will write a critical review of STS. The review should discuss the strength and weaknesses of STS analysis as a means for understanding scientific investigation and science and politics interplay in theory and practice. Instructions will be handed out during class #4 (February 11th) and the critical review is due at the beginning of class #5 (February 25th).

### POLICY MEMORANDUM (30 points)

Students will write a policy memorandum to the President of the United States on the U.S. role in global climate change politics and policy-making. Instructions will be handed out during class #6 (February 25th) and the policy memorandum is due at the beginning of class #7 (March 4th).

### OP-ED (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. Instructions will be handed out during class #11 (April 8th) and the Op-Ed is due at the beginning of class #12 (April 15th).

### RESEARCH PAPER (70 points)

Students will write a research paper (8 pages for undergraduates and 10 pages for graduate students, single spaced) that is due by beginning of class #13 on April 29th. The research paper should analyze a particular aspect of climate change politics, policy-making, management, or assessment. It should be properly referenced and footnoted and written in proper academic style. Additional information about the research paper will be given in class and each student is required to present a paper topic in class #9 (March 25th).

## **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 encouraged, but plagiarizing resources is not allowed. Cheating of any sort, submitting the same work for more than one course, deliberately impeding the 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: <http://www.bu.edu/academics/policies/academic-conduct-code/>.

## **Readings**

There are three required books for the course:

- SERGIO SISMONDO. 2010. *An Introduction to Science and Technology Studies*. Oxford: Blackwell Publishing. 2nd edition.
- SPENCER R. WEART. 2008. *The Discovery of Global Warming*. Cambridge: Harvard University Press. 2nd edition.
- KERRY EMANUEL. 2012. *What We Know About Climate Change*. Cambridge: Boston Review/MIT Press. 2nd edition.

The three books are available for purchase at Barnes and Noble at Boston University Bookstore and various web based book sellers. The course uses Blackboard Learn and all additional readings are posted on the Blackboard Learn website under Course Documents (<https://learn.bu.edu>). To ensure meaningful class discussion, it is very important that students have read the assigned readings before each class!

# Course Organization

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## Class #1

### Course Introduction Introduction to Science and Technology Studies I

- **KSG PROGRAM ON SCIENCE, TECHNOLOGY & SOCIETY:** <http://sts.hks.harvard.edu>
  - **REAL CLIMATE:** <http://www.realclimate.org>
  - **CLIMATE ARK:** <http://www.climateark.org>
  - **DOT EARTH:** <http://dotearth.blogs.nytimes.com>
  - **IISD:** [http://www.iisd.ca/process/climate\\_atm.htm](http://www.iisd.ca/process/climate_atm.htm)
  - **SERGIO SISMONDO.** 2010. *An Introduction to Science and Technology Studies*. Oxford: Blackwell Publishing. Chapters 1-3, p.p. 1-35.
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## Class #2

### Introduction to Science and Technology Studies II Discovering Climate Change I

- **SERGIO SISMONDO.** 2010. *An Introduction to Science and Technology Studies*. Oxford: Blackwell Publishing. Chapters 4-10, p.p. 36-119.
  - **SPENCER R. WEART.** 2008. *The Discovery of Global Warming*. Cambridge: Harvard University Press. Chapters 1-2, p.p. 1-37.
  - **SPENCER R. WEART:** <http://www.aip.org/history/climate/index.htm>
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## Class #3

### Introduction to Science and Technology Studies III Discovering Climate Change II

- **SERGIO SISMONDO.** 2010. *An Introduction to Science and Technology Studies*. Oxford: Blackwell Publishing. Chapters 11-14, p.p. 128-167.
  - **WILL STEFFEN, PAUL J. CRUTZEN AND JOHN R. MCNEILL.** 2007. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?" *Ambio* 36(8): 614-621 (Blackboard).
  - **SPENCER R. WEART.** 2008. *The Discovery of Global Warming*. Cambridge: Harvard University Press. Chapters 3-5, p.p. 38-113.
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## Class #4

### Analyzing Science and Policy Interactions Discovering Climate Change III

- **SERGIO SISMONDO.** 2010. *An Introduction to Science and Technology Studies*. Oxford: Blackwell Publishing. Chapters 15-17, p.p. 168-204.
  - **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 (Blackboard).
  - **KERRY EMANUEL.** 2012. *What We Know About Climate Change*. Cambridge: Boston Review/MIT Press.
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- **SPENCER R. WEART.** 2008. *The Discovery of Global Warming*. Cambridge: Harvard University Press. Chapters 6-9 and Reflections, p.p. 114-204.
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## Class #5

### Global Climate Change Science and Policy I

- **SHEILA JASANOFF.** 2001. "Image and Imagination: The Formation of Global Environmental Consciousness" in Clark A. Miller and Paul N. Edwards (Eds.) *Changing the Atmosphere: Expert Knowledge and Environmental Governance*. Cambridge: MIT Press (Blackboard).
  - **HENRIK SELIN AND STACY D. VANDEVEER.** Forthcoming. "Global Climate Change Governance: The Long Road To Paris" in N. J. Vig and M. E. Kraft (eds.) *Environmental Policy: New Directions for the Twenty-First Century*, 9th edition. Washington DC: CQ Press (Blackboard).
  - **CLARK A. MILLER.** 2001. "Challenges in the Application of Science to Global Affairs: Contingency, Trust and Moral Order" in Clark A. Miller and Paul N. Edwards (Eds.) *Changing the Atmosphere: Expert Knowledge and Environmental Governance*. Cambridge: MIT Press (Blackboard).
  - **THE UNFCCC TEXT** (Blackboard).
  - **THE KYOTO PROTOCOL TEXT** (Blackboard).
  - **INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE:** <http://www.ipcc.ch>
  - **CAIT2 Global and National GHG Emissions:** <http://cait2.wri.org/wri/>
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## Class #6

### Global Climate Change Science and Policy II

- **RADOSLAV DIMITROV.** 2010. "Inside UN Climate Change Negotiations: The Copenhagen Conference" *Review of Policy Research* 27(6): 795-821 (Blackboard).
  - **THE COPENHAGEN ACCORD TEXT** (Blackboard).
  - **EARTH NEGOTIATIONS BULLETIN.** 2013. *Summary of the Lima Climate Change Conference: 1-14 December 2014* (Blackboard).
  - **IISD COP20:** <http://www.iisd.ca/climate/cop20/>
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## Class #7

### Global Climate Change Justice and Security

- **DARRELL MOELLENDORF.** 2012. "Climate Change and Global Justice" *Wiley Interdisciplinary Reviews: Climate Change* 3(2): 131-143 (Blackboard).
  - **W. NEIL ADGER, JOUNI PAAVOLA AND SALEEMUL HUQ.** 2006. "Toward Justice in Adaptation to Climate Change" in W. Neil Adger, Jouni Paavola, Saleemul Huq and M. J. Mace (Eds.) *Fairness in Adaptation to Climate Change*. Cambridge: MIT Press (Blackboard).
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## Class #8

### European Climate Change Policy

- **HENRIK SELIN AND STACY D. VANDEVEER.** 2015. EU Environmental Politics, Policies and Results. *Annual Review of Environment and Resources* (Blackboard).
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- **JØRGEN WETTESTAD ET AL.** 2012. "EU Climate and Energy Policy: A Hesitant Supranational Turn?" *Global Environmental Politics* 12(2): 67-86 (Blackboard).
- **EUROPEAN COMMISSION.** 2013. *The EU Emissions Trading System (EU ETS)*. Brussels: European Commission (Blackboard).
- **JOHN R. SCHMIDT.** 2008. "Why Europe Leads on Climate Change" *Survival* 50(4): 83-96 (Blackboard).
- **EUROPEAN UNION:** [http://ec.europa.eu/clima/index\\_en.htm](http://ec.europa.eu/clima/index_en.htm)
- **EUROPEAN ENVIRONMENT AGENCY:** <http://www.eea.europa.eu/themes/climate>

## Class #9

### Arctic and North American Climate Change Action

- **BRANDON LUEDTKE AND ADRIAN HOWKINS.** 2012. "Polarized Climates: The Distinctive Histories of Climate Change and Politics in the Arctic and Antarctica since the Beginning of the Cold War" *Wiley Interdisciplinary Reviews: Climate Change* 3(2): 145-159 (Blackboard).
- **SCOTT G. BORGERSON.** 2008. "Arctic Meltdown: The Economic and Security Implications of Global Warming" *Foreign Affairs* 87(2): 63-77 (Blackboard).
- **JAMES D. FORD ET AL.** 2010. "Climate Change Policy Responses for Canada's Inuit Population: The Importance Of and Opportunities For Adaptation" *Global Environmental Change* 20(1): 177-191 (Blackboard).
- **PETER J. STOETT.** 2009. "Looking for Leadership: Canada and Climate Change Policy" in Henrik Selin and Stacy D. VanDeveer (Eds.) *Changing Climates in North American Politics: Institutions, Policymaking and Multilevel Governance*. Cambridge: MIT Press (Blackboard).

### Student Research Paper Discussion

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

## Class #10

### U.S. Climate Change Politics

- **HENRIK SELIN AND STACY D. VANDEVEER.** 2012. "U.S. Climate Change Politics: Federalism and Complexity" in Sheldon Kamieniecki and Michael E. Kraft (eds.) *Oxford Handbook on U.S. Environmental Politics*. Oxford: Oxford University Press (Blackboard).
- **BARRY G. RABE.** 2009. "Second Generation Climate Policy in the States: Proliferation, Diffusion and Regionalization" in Henrik Selin and Stacy D. VanDeveer (Eds.) *Changing Climates in North American Politics: Institutions, Policymaking and Multilevel Governance*. Cambridge: MIT Press (Blackboard).
- **CHRISTOPHER GORE AND PAMELA ROBINSON.** 2009. "Local Government Response to Climate Change: Our Last, Best Hope?" in Henrik Selin and Stacy D. VanDeveer (Eds.) *Changing Climates in North American Politics: Institutions, Policymaking and Multilevel Governance*. Cambridge: MIT Press (Blackboard).
- **U.S. EPA CLIMATE CHANGE:** <http://epa.gov/climatechange/index.html>
- **CENTER FOR CLIMATE AND ENERGY SOLUTIONS:** <http://www.c2es.org>
- **REGIONAL GREENHOUSE GAS INITIATIVE:** <http://www.rggi.org>.
- **CAIT2 US State GHG Emissions:** <http://cait2.wri.org/wri/>

## Class #11

## Communicating Climate Change Science and Policy

- **SUSANNE C. MOSER AND LISA DILLING.** 2011. "Communicating Climate Change: Closing the Science-Action Gap" in John S. Dryzek, Richard B. Norgaard and David Schlosberg (Eds.) *The Oxford Handbook of Climate Change and Society*. Oxford: Oxford University Press (Blackboard).
  - **ERICK LACHAPPELLE, CHRISTOPHER P. BORICK AND BARRY G. RABE.** 2012. "Public Attitudes Toward Climate Science and Climate Policy in Federal Systems: Canada and the United States Compared" *Review of Policy Research* 29(3): 334-357 (Blackboard).
  - **PETER J. JACQUES, RILEY E. DUNLAP AND MARK FREEMAN.** 2008. "The Organisation of Denial: Conservative Think Tanks and Environmental Skepticism" *Environmental Politics* 17(3): 349-385 (Blackboard).
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### Class #12

#### Business, NGOs, Universities and Climate Change

- **CHARLES A. JONES AND DAVID L. LEVY.** 2009. "Business Strategies and Climate Change" in Henrik Selin and Stacy D. VanDeveer (Eds.) *Changing Climates in North American Politics: Institutions, Policymaking and Multilevel Governance*. Cambridge: MIT Press (Blackboard).
  - **JON BIRGER SKJEARSETH AND TORA SKODVIN.** 2001. "Climate Change and the Oil Industry: Common Problems, Different Strategies" *Global Environmental Politics* 1(4): 43-64 (Blackboard).
  - **MICHAEL SHELLENBERGER AND TED NORDHAUS.** 2004. *The Death of Environmentalism: Global Warming Politics in a Post-Environmental World* (Blackboard).
  - **BRAD ALLENBY.** 2006. "The Real Death of Environmentalism" *Environmental Quality Management* 16(1): 1-9 (Blackboard).
  - **DOVEV LEVINE.** 2009. "Campus Climate Action" in Henrik Selin and Stacy D. VanDeveer (Eds.) *Changing Climates in North American Politics: Institutions, Policymaking and Multilevel Governance*. Cambridge: MIT Press (Blackboard).
  - **WORLD RESOURCES INSTITUTE:** <http://www.wri.org/our-work/topics/climate>
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### Class #13

#### The Future of Climate Change Science and Policy

- **CONCLUDING DISCUSSION BASED ON STUDENT RESEARCH PAPERS.**

## Summary Outline of Class Schedule

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<b>Class #1</b>	January 21	<ul style="list-style-type: none"><li>• Course Introduction</li><li>• Introduction to Science and Technology Studies I</li></ul>
<b>Class #2</b>	January 28	<ul style="list-style-type: none"><li>• Introduction to Science and Technology Studies II</li><li>• Discovering Climate Change I</li></ul>
<b>Class #3</b>	February 4	<ul style="list-style-type: none"><li>• Introduction to Science and Technology Studies III</li><li>• Discovering Climate Change II</li></ul>
<b>Class #4</b>	February 11	<ul style="list-style-type: none"><li>• Analyzing Science and Policy Interactions</li><li>• Discovering Climate Change III</li></ul>
<b>Class #5</b>	February 18	<ul style="list-style-type: none"><li>• Global Climate Change Science and Policy I</li></ul>
<b>Class #6</b>	February 25	<ul style="list-style-type: none"><li>• Global Climate Change Science and Policy II</li></ul>
<b>Class #7</b>	March 4	<ul style="list-style-type: none"><li>• Global Climate Change Justice and Security</li></ul>
<b>Class #8</b>	March 18	<ul style="list-style-type: none"><li>• European Climate Change Policy</li></ul>
<b>Class #9</b>	March 25	<ul style="list-style-type: none"><li>• Arctic and North American Climate Change Action</li><li>• Student Research Paper Discussion</li></ul>
<b>Class #10</b>	April 1	<ul style="list-style-type: none"><li>• U.S. Climate Change Politics</li></ul>
<b>Class #11</b>	April 8	<ul style="list-style-type: none"><li>• Communicating Climate Change Science and Policy</li></ul>
<b>Class #12</b>	April 15	<ul style="list-style-type: none"><li>• Business, NGOs, Universities and Climate Change</li></ul>
<b>Class #13</b>	April 29	<ul style="list-style-type: none"><li>• The Future of Climate Change Science and Policy</li></ul>