

Public Affairs 866: Global Environmental Governance

Spring, 2012
University of Wisconsin
La Follette School of Public Affairs
EnvSt-866, PolSci-866, PubAff-866
3 credits

Seminar
Room: L159 Education
Tuesday: 3:30–5:25 PM
Webpage: Learn@UW

INSTRUCTOR

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COURSE DESCRIPTION AND OBJECTIVES

As the magnitudes of environmental problems have increased—and as globalization has integrated human activities—many of the most severe environmental problems have become truly global issues. Hundreds of international agreements have been signed, but their effectiveness has been inconsistent.

Heightened concern about environmental quality has increased demand analysts who can navigate the political, economic, scientific, and technological dimensions of these issues to inform critical policy decisions in a multinational context. This class is designed to introduce students to the main concepts, frameworks, and actors involved in addressing environmental problems of global scale. The perspective taken here is that of a policy maker confronting decisions about the formation of international environmental policy and the management of it. A central theme of the course involves the challenges of addressing global problems while accommodating cross-national differences in interpretations of scientific risk and uncertainty.

Students will become familiar with the breadth of environmental problems at stake and the history of attempts to solve them. After covering the basic frameworks, institutions and actors, the second half of the course will examine the details of policy design using case studies. We will spend four weeks studying a prominent contemporary international environmental issue, climate change. While no scientific background is needed for the class, each topic will include a review of the basic physical processes involved, taking the perspective that these characteristics affect the appropriateness of policy responses.

REQUIREMENTS

This class will be taught as a seminar. The reading load for this class is not intended to be heavy; students are expected to read the required texts before class and participate actively in class discussions. A typical class meeting will include a short lecture, with most of the time allotted for class discussion.

- A set of “thought questions” will be posted a week in advance of each class. For 4 classes of their choice, students will write a 300-500 word critique of that week’s readings to be turned in at the beginning of class. Each week, two students will be responsible for initiating the group discussion with a focus on highlighting important points from the readings and posing questions for discussion.
- A final paper can be written either as a research paper or as a policy memo, in groups of two students each. Each group will present a brief summary of their paper in the final class meeting. One-page proposals for the papers are due in class on March 13 and the final paper is due on May 11. Details will be distributed early in the semester.

Both exercises require proper acknowledgment of sources as detailed on course website. In summary:

1. If you use an author’s specific word or words, you must place those words within quotation marks and you must credit the source,
2. Even if you use your own words, if you obtained the information or ideas you are presenting from a source, you must document the source.

EVALUATION

15% Class participation.

40% Four critical review memos (300-500 words).

15% Discussion facilitation.

30% Final paper (2500 words/student) and brief presentation.

READINGS

There is one required book for this course, which is available at the UW Bookstore:

- Axelrod, R. S., D. L. Downie, et al. (2005). *The Global Environment: Institutions, Law, and Policy* (2nd edition). Washington, D.C., Congressional Quarterly Press.

All other readings listed in this syllabus will be available on the Learn@UW website.

INSTRUCTOR’S BIO

Gregory Nemet is an assistant professor at the University of Wisconsin in the La Follette School of Public Affairs and the Nelson Institute Center for Sustainability and the Global Environment (SAGE). His research and teaching focus on improving analysis of the environmental, social, economic, and technical dynamics of the global energy system. This work is motivated by a general interest in understanding how to expand access to energy services while reducing environmental impacts. He teaches courses in energy systems analysis, governance of global energy problems, and international environmental policy. His research analyzes the process of technological change in energy and its interactions with public policy. He is an author for the Intergovernmental Panel on Climate Change (IPCC) and the Global Energy Assessment (GEA). He received his doctorate in energy and resources from the University of California, Berkeley.

Class Schedule and Reading List

UNIT 1: GLOBAL ENVIRONMENTAL PROBLEMS AND FRAMEWORKS FOR ADDRESSING THEM

1. January 24:

Introduction to Global Environmental Problems

- Axelrod, Downie & Vig, Ch. 1 “Governing the International Environment.”
- Speth & Hass, Ch. 2, “Global-Scale Environmental Challenges.”
- Hardin, G. (1968). “Tragedy of the Commons.” *Science* 162(3859): 1243–48.

recommended:

- Vitousek, P. M., H. A. Mooney, et al. (1997). “Human domination of Earth’s ecosystems.” *Science* 277(5325): 494-499.

2. January 31:

Seeking International Governance, 1972–2002

- Axelrod, Downie & Vig, Ch. 2 “Global Institutions and the Environment.”
- Kraft, M. E. and N. J. Vig (2006). Environmental Policy from the 1970s to the Twenty-First Century. *Environmental Policy: New Directions for the 21st Century*. N. J. Vig and M. E. Kraft. Washington, D.C., Congressional Quarterly Press: 1–33.
- Mitchell, R. B. (2003). “International environmental agreements: A survey of their features, formation, and effects.” *Annual Review of Environment and Resources* 28: 429-461.

recommended:

- Young, O. R. (1989). “The Politics of International Regime Formation - Managing Natural-Resources and the Environment.” *International Organization* 43(3): 349-375.

3. February 7:

Treaties, Regimes, and Key Actors

- Axelrod, Downie & Vig, Ch. 3 “Environmental Protection in the 21st Century”
- Axelrod, Downie & Vig, Ch. 4 “Global Environmental Policy: Governance through Regimes.”
- Axelrod, Downie & Vig, Ch. 5 “The Role of Environmental NGOs in International Regimes.”
- Biermann, F. and P. Pattberg (2008). “Global Environmental Governance: Taking Stock, Moving Forward.” *Annual Review of Environment and Resources* 33(1): 277.

recommended:

- Speth & Hass, Ch. 5 “Key Actors, Expanding Roles.”
- Corell, E. and M. M. Betsill (2001). “A Comparative Look at NGO Influence in International Environmental Negotiations: Desertification and Climate Change.” *Global Environmental Politics* 1(4): 86-107.

UNIT 2: THE CONSEQUENCES OF DIVERSE PERSPECTIVES

4. February 14:**Trade and the Environment**

- Gallagher, K. P. (2009). "Economic Globalization and the Environment." *Annual Review of Environment and Resources* 34(1): 279-304.
- Axelrod, Downie & Vig, Ch. 8 "Economic Integration and Environmental Protection."
- Carson, R. T. (2009). "The Environmental Kuznets Curve: Seeking Empirical Regularity and Theoretical Structure." *Rev Environ Econ Policy*: rep021.
- Conca, K. (2000). "The WTO and the undermining of global environmental governance." *Review of International Political Economy* 7(3): 484-494.
- Vogel, D. (2002). "The Wrong Whipping Boy." *The American Prospect*.

5. February 21:**Interpretation of Uncertainty and Risk**

- Stavins, R. N. (2007). "Environmental Economics." *National Bureau of Economic Research Working Paper Series No. 13574*.
- Slovic, P. (1987). "Perception of Risk." *Science* 236(4799): 280-285.
- Chapter 4: Morgan, G. and M. Henrion (1990). *Uncertainty: A guide to dealing with uncertainty in quantitative risk and policy analysis*. Cambridge, Cambridge University Press.

recommended:

- Atkinson, G. and S. Mourato (2008). "Environmental Cost-Benefit Analysis." *Annual Review of Environment and Resources* 33(1): 317.
- Weitzman, M. L. (1974). "Prices vs. Quantities." *Review of Economic Studies* 41(4): 477-491. (*just read section I. Introduction*).

6. February 28:**Science and Governance**

- Norgaard, R. B. (2004). "Learning and knowing collectively." *Ecological Economics* 49(2): 231-241.
- Haas, P. M. (1992). "Epistemic Communities and International-Policy Coordination—Introduction." *International Organization* 46(1): 1-35.
- Sarewitz, D. and J. R. A. Pielke (2007). "The neglected heart of science policy: reconciling supply of and demand for science." *Environmental Science & Policy* 10(1): 5-16.
- Jasanoff, S. (2007). "Technologies of humility." *Nature* 450(7166): 33-33.
- Stermann, J. D. (2008). "Risk Communication on Climate: Mental Models and Mass Balance." *Science* 322(5901): 532-533.

recommended:

- Cicerone, R. J. (2012). "Ensuring Integrity in Science." *Science* 327(5966): 624.
- Jasanoff, S. (1996). "The dilemma of environmental democracy." *Issues in Science and Technology* 13(1): 63-70.
- Pulver, S. and S. D. VanDeveer (2009). "Thinking About Tomorrows: Scenarios, Global Environmental Politics, and Social Science Scholarship." *Global Environmental Politics* 9(2): 1-13.

7. March 6:

Taking National Perspectives into Account

- Axelrod, Downie & Vig, Ch. 10 "Understanding United States Unilateralism"
- Axelrod, Downie & Vig, Ch. 11 "The E.U. as an Environmental Governance System."
- Vogel, D. (2003). "The hare and the tortoise revisited: The new politics of consumer and environmental regulation in Europe." *British Journal of Political Science* 33: 557-580.

recommended:

- EC (2007). REACH in Brief, Environment Directorate General, European Commission.
- Hartung, T. and C. Rovida (2009). "Chemical regulators have overreached" *Nature* 460(7259): 1080-1081.
- Scruggs, L. A. (1999). "Institutions and environmental performance in seventeen western democracies." *British Journal of Political Science* 29: 1-31.

8. March 13: (proposals due)

The View from the South

- Axelrod, Downie & Vig, Ch. 12 "Developing Countries in Global Environmental Politics."
- Tobin, R. J. (2006). Environment, Population, and the Developing World. *Environmental Policy: New Directions for the 21st Century*. N. J. Vig and M. E. Kraft. Washington, D.C., Congressional Quarterly Press: 333-353.
- Wheeler, D. (2001). "Racing to the Bottom? Foreign Investment and Air Pollution in Developing Countries." *The Journal of Environment Development* 10(3): 225-245.
- Baer, P., J. Harte, et al. (2000). "Equity and Greenhouse Gas Responsibility." *Science*: 2287.

recommended:

- Najam, A. (1996). "A developing countries' perspective on population, environment, and development." *Population Research and Policy Review* 15(1): 1-19.

UNIT 3: THE MOST GLOBAL OF ALL: CLIMATE CHANGE

9. March 20:**Climate change I: Science and Policy History**

- Axelrod, Downie & Vig, Ch. 6 “Global Climate Change Policy”
- IPCC (2007). Summary for Policymakers. *Climate Change 2007: Synthesis Report for the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Bernstein, L., P. Bosch et al. Cambridge, United Kingdom and New York, NY, USA, Cambridge University Press.
- Steffen, W., M. O. Andreae, et al. (2004). “Abrupt changes: The Achilles’ heels of the Earth System.” *Environment* 46(3): 8-20.
- Oppenheimer, M., B. C. O’Neill, et al. (2007). “The Limits of Consensus.” *Science* 317(5844): 1505-1506.

recommended:

- Stephen Schneider’s webpage:
http://stephenschneider.stanford.edu/Climate/Climate_Science/CliSciFrameset.html
- Lenton, T. M., H. Held, et al. (2008). “Tipping elements in the Earth’s climate system.” *Proceedings of the National Academy of Sciences* 105(6): 1786-1793.
- Bohringer, C. (2003). “The Kyoto Protocol: A review and perspectives.” *Oxford Review of Economic Policy* 19(3): 451-466.

10. March 27:**Climate change II: Mitigation Costs and Technologies**

- Nordhaus, W. D. (1992). “An Optimal Path for Controlling Greenhouse Gases.” *Science* 258: 1315-1319.
- Stern, N. (2006). *Stern Review on the economics of climate change*. Cambridge, UK, Cambridge University Press, (Executive Summary).
- Barker, T. and P. Ekins (2004). “The costs of Kyoto for the US economy.” *Energy Journal* 25(3): 53-71.
- IPCC (2007). *Climate change 2007: Mitigation. Contribution of Working group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, United Kingdom and New York, NY, USA, Cambridge University Press.

recommended:

- Nordhaus, W. (2007). “Critical Assumptions in the Stern Review on Climate Change.” *Science* 317(5835): 201-202.
- Hoffert, M. I., K. Caldeira, et al. (2002). “Advanced technology paths to global climate stability: Energy for a greenhouse planet.” *Science* 298(5595): 981-987.
- O’Neill, B., A. Grübler, et al. (2003). “Letters to the Editor: Planning for Future Energy Resources.” *Science* 300: 581.

- Pacala, S. and R. Socolow (2004). “Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies.” *Science* 305: 968-972.

April 3: SPRING BREAK.

11. April 10:

Climate change III: Beyond Mitigation: Adaptation and Geoengineering

- Pielke, R., G. Prins, et al. (2007). “Climate change 2007: Lifting the taboo on adaptation.” *Nature* 445(7128): 597-598.
- Keith, D. W. (2001). “Geoengineering.” *Nature* 409(6818): 420.
- Robock, A. (2008). “20 reasons why geoengineering may be a bad idea.” *Bulletin of the Atomic Scientists* 64(2): 14-+.
- Victor, D. G., M. G. Morgan, et al. (2012). “The Geoengineering Option: A Last Resort Against Global Warming?” *Foreign Affairs*.
- Shepherd, J., K. Caldeira, et al. (2009). *Geoengineering the climate: Science, governance and uncertainty*. London, U.K. Royal Society. (Executive summary)

recommended:

- Virgoe, J. (2009). “International governance of a possible geoengineering intervention to combat climate change.” *Climatic Change* 95(1): 103-119.
- Pielke, R. A. (2012). “An Idealized Assessment of the Economics of Air Capture of Carbon Dioxide in Mitigation Policy.” *Environmental Science & Policy*.
- IPCC (2007). *Climate change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, United Kingdom and New York, NY, USA, Cambridge University Press.

12. April 17:

Climate change IV: Designing Future Regimes

- Victor, D. G., J. C. House, et al. (2005). “A Madisonian Approach to Climate Policy.” *Science* 309(5742): 1820-1821.
- Prins, G. and S. Rayner (2007). “Time to ditch Kyoto.” *Nature* 449(7165): 973-975.
- Schellnhuber, J. (2007). “Kyoto: no time to rearrange deckchairs on the Titanic.” *Nature* 450(7168): 346-346.
- Galiana, I. and C. Green (2009). “Let the global technology race begin.” *Nature* 462(7273): 570-571.
- *TBD: Interpretation of Post-Copenhagen situation*

recommended:

- Bell, R. G. (2006). “The Kyoto Placebo.” *Issues in Science and Technology* 22(2).
- Verweij, M., M. Douglas, et al. (2006). “Clumsy solutions for a complex world: The case of climate change.” *Public Administration* 84(4): 817-843.
- Nordhaus, W. D. (2007). “To Tax or Not to Tax: Alternative Approaches to Slowing Global Warming.” *Rev Environ Econ Policy* 1(1): 26-44.
- Nordhaus, T. and M. Shellenberger (2012). *The Emerging Climate Consensus: Global Warming Policy in a Post-Environmental World*, The Breakthrough Institute.

UNIT 4: LESSONS TO LEARN?

13. April 24:

Transboundary Air Pollution and Acid Rain

- Hordijk, L. (1991). “Use of the Rains Model in Acid-Rain Negotiations in Europe.” *Environmental Science & Technology* 25(4): 596-603.
- Levy, M. A. (1993). *European Acid Rain: The power of tote-board diplomacy. Institutions for the Earth: Sources of Effective International Environmental Protection.* P. M. Haas and R. O. Keohane. Cambridge, MA, MIT Press.
- Holloway, T., A. Fiore, et al. (2003). “Intercontinental Transport of air pollution: Will emerging science lead to a new hemispheric treaty?” *Environmental Science & Technology* 37(20): 4535-4542.

recommended:

- Selin, H. and S. Vandever (2003). “Mapping Institutional Linkages in European Air Pollution Politics.” *Global Environmental Politics* 3(3): 14-46.
- Helm, C. (1998). “International Cooperation Behind the Veil of Uncertainty The Case of Transboundary Acidification.” *Environmental and Resource Economics* 12(2): 185-201.
- Allison, J. E. (1999). “Fortuitous consequence: The domestic politics of the 1991 Canada-United States agreement on air quality.” *Policy Studies Journal* 27(2): 347-359.

14. May 1:

Chlorofluorocarbons, Ozone Depletion, and the Montreal Protocol

- Fahey, D. W. (2002). *Twenty Questions and Answers about the Ozone Layer. Global Ozone Research and Monitoring Project—Report No. 47, Scientific Assessment of Ozone Depletion*, World Meteorological Society.
- Morrisette, P. M. (1989). “The Evolution of Policy Responses to Stratospheric Ozone Depletion.” *Natural Resources Journal* 29(3): 793-820.
- Haas, P. M. (1992). “Banning Chlorofluorocarbons - Epistemic Community Efforts to Protect Stratospheric Ozone.” *International Organization* 46(1): 187-224.

- Revkin, A. (2007). The New York Times: From Ozone Success, a Potential Climate Model. The New York Times. New York. September 18.

15. May 8:

Presentations of Policy Memos and Research Papers

7–10 minute presentations each.

May 11:

Papers due at 5pm at La Follette School, room 209.

For further reading

Books

- Cohen, S. (2006). *Understanding Environmental Policy*. New York, Columbia University Press.
- Kraft, M. E. and N. J. Vig (2002). *Environmental Policy: New Directions for the Twenty-First Century*, 5th edition. Washington, DC, CQ Press.
- Roger Pielke, J. (2010). *The Climate Fix: What Scientists and Politicians Won't Tell You About Global Warming*, Basic Books.
- Speth, J. G. and P. M. Haas (2006). *Global Environmental Governance*. Washington DC, Island Press.
- Victor, D. G. (2011). *Global Warming Gridlock: Creating More Effective Strategies for Protecting the Planet*. Cambridge UK, Cambridge University Press.

Journals

Climatic Change, Climate Policy, Ecological Economics, Energy Policy, Environmental Science & Technology, Foreign Affairs, Global Environmental Change, Global Environmental Politics, International Organization, Nature, Policy Studies Journal, Science.

Websites

Convention on Transboundary Air Pollution <http://www.unece.org/env/lrtap/>
U.N. Ozone Secretariat <http://www.unece.org/env/lrtap/>
Intergovernmental Panel on Climate Change (IPCC): <http://www.ipcc.ch>
U.N. Framework Convention on Climate Change (UNFCCC): <http://unfccc.int>
Pew Center for Global Climate Change: <http://www.pewclimate.org>
U.S. Climate Change Science Program: <http://www.climatechange.gov>
EU Emissions Trading Scheme:
<http://ec.europa.eu/environment/climat/emission.htm>

Useful blogs

Climate Feedback: <http://blogs.nature.com/climatefeedback/>
Climate Policy: <http://www.climatepolicy.org>
Dot Earth <http://dotearth.blogs.nytimes.com>
Real Climate: <http://realclimate.org>
Science policy: <http://rogerpielkejr.blogspot.com/>