

SYLLABUS
APEC/ECON 810 – NATURAL RESOURCES MANAGEMENT AND POLICY

FALL 2005

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Office Hours: 9:30 - 11:30 MW, 1:30 – 3:30 T or by appointment
Class Meetings: 1:15 MWF, Room 215, Lowry Hall

Course Description: The course will be taught in an interdisciplinary fashion addressing the institutional, economic, and legal issues related to natural resource allocation. The course will begin with a conceptual overview of key issues and trace the evolution of natural resource policy development. The primary focus will be on the U.S. experience followed by an examination of global resource issues and policy development. Particular attention will be given to options and tools for affecting resource allocation and environmental quality. Specific policy issues addressed will include water resources, air pollution, waste management, energy and climate change. These issues will be discussed, and policy prescriptions to deal with these issues will be examined. Students will select an individual topic area and prepare a background paper. That paper will examine the relevant issues and current policy and provide a policy framework and viable policy recommendations.

Required Texts: Paul R. Portney and Robert N. Stavins. eds. *Public Policies for Environmental Protection*. Washington, DC: Resources for the Future, 2000.

Thomas Sterner. *Policy Instruments for Environmental and Natural Resource Management*. Washington, DC: Resources for the Future, 2003.

Vaclav Smil. *Energy at the Crossroads*. Cambridge: MIT Press, 2003.

Stephen H. Schneider, et al. eds. *Climate Change Policy: A Survey*. Washington, D.C.: Island Press, 2002.

Course Pack available from Campus Copy Shop.

Supplementary Texts: William J. Baumol & Wallace E. Oates. *The Theory of Environmental Policy*. Cambridge, UK: Cambridge University Press, 1988.

David W. Pearce and R. Kerry Turner. *Economics of Natural Resources and the Environment*. Baltimore: The Johns Hopkins University Press, 1990.

Tom Tietenberg. *Environmental Economics and Policy*. New York: Harper Collins College Publishers, 1994.

Thomas Prugh. *Natural Capital and Human Economic Survival*.
Solomans. MD: International Society for Ecological Economics, 1995.

Zachary A. Smith. *The Environmental Policy Paradox*. Upper Saddle
River, NJ: Prentice-Hall, Inc., 2000.

Course Schedule:

<u>Week of . . .</u>	<u>Week's Discussion Topic/Reading Assignment</u>
August 22	Introduction Garrett Hardin, "Tragedy of the Commons." Kenneth Boulding, "The Economics of the Coming Spaceship Earth."
August 29	Historical Perspective/The Use of Science Timothy O'Riordan, <i>Environmentalism</i> , Chapter 2. Zachary A. Smith, "The Public and Environmental Awareness," in <i>The Environmental Policy Paradox</i> . James Wilson and JW Anderson. "What the Science Says: How We Use It and Abuse It to Make Health and Environmental Policy." Robert W. Fri. "Using Science Soundly: The Yucca Mountain Standard." Thomas Sterner, <i>Policy Instruments for Environmental and Natural Resource Management</i> , Chapter 1.
September 5	The Role of Government in Natural Resource Allocation Milton Friedman, "The Role of Government in a Free Society." Tietenburg, "Rights, Rents, and Remedies," in <i>Environmental Economics and Policy</i> . Thomas Sterner, <i>Policy Instruments for Environmental and Natural Resource Management</i> , Chapters 2-3. William Baumol & Wallace Oates, "Externalities." in <i>The Theory of Environmental Policy</i> .
September 12	Natural Capital David Pearce, et al., "The Sustainable Economy." in <i>Economics of Natural Resources and the Environment</i> . Thomas Sterner, <i>Policy Instruments for Environmental and Natural Resource Management</i> , Chapters 4-5. Thomas Prugh, "What Natural Capital Is and Does" in <i>Natural Capital and Human Economic Survival</i> .
September 19	Valuing Natural Resources David Pearce, et al., "The Optimal Level of Pollution." Myrick Freeman, "Measuring Values, Benefits, and Costs," in <i>The Measurement of Environmental and Resource Values</i> . Tom Tietenburg, "Valuing the Environment." Thomas Prugh, "Depletion and Valuation." Myrick Freeman and Raymond Kopp. "Assessing Damages from the Valdez Oil Spill." Abstracts due September 21.

- September 26 **Policy Instruments I**
Paul R. Portney and Robert N. Stavins, *Public Policies for Environmental Protection*, Chapter 3.
Thomas Sterner, *Policy Instruments for Environmental and Natural Resource Management*, Chapters 6-10.
- October 3 **Policy Instruments II**
Thomas Sterner, *Policy Instruments for Environmental and Natural Resource Management*, Chapters 11-18.
- October 10 **Evolution of Natural Resource and Environmental Policy/
The Eco-Economy**
Paul R. Portney and Robert N. Stavins, *Public Policies for Environmental Protection*, Chapter 1-2.
Lester R. Brown, "The Shape of the Eco-Economy," in *Eco-Economy*.
- October 17 **Air/Industrial Pollution**
Paul R. Portney and Robert N. Stavins, *Public Policies for Environmental Protection*, Chapter 4.
Thomas Sterner, *Policy Instruments for Environmental and Natural Resource Management*, Chapter 24.
Walter Spofford. "Chongqing: A Case of Environmental Management During a Period of Rapid Industrial Development."
- October 24 **Water Resources**
Paul R. Portney and Robert N. Stavins, *Public Policies for Environmental Protection*, Chapter 6.
Thomas Sterner, *Policy Instruments for Environmental and Natural Resource Management*, Chapter 25.
Test October 28.
- October 31 **Waste Management and Energy I**
Thomas Sterner, *Policy Instruments for Environmental and Natural Resource Management*, Chapter 26.
Paul R. Portney and Robert N. Stavins, *Public Policies for Environmental Protection*, Chapter 8.
Nicholas Georgescu-Roegen, "Entropy, Value, and Development," in *Entropy Law and the Economic Process*.
- November 7 **Energy II**
Vaclav Smil. *Energy at the Crossroads*. selected pages.
- November 15 **Energy III**
Vaclav Smil. *Energy at the Crossroads*. selected pages.
- November 21 **Climate Change I**
Paul R. Portney and Robert N. Stavins, *Public Policies for Environmental Protection*, Chapter 5
Stephen H. Schneider, et al. eds. *Climate Change Policy*. Chapter 1.
Thanksgiving Break, November 23-25.
- November 28 **Student Project Presentations and Climate Change II.**
Student Project Presentations, November 28 & 30.

Evening Session on November 30 to finish presentations.
Stephen H. Schneider, et al. eds. *Climate Change Policy*. Chapter 2.

November 29

Climate Change III and Dénouement.

Stephen H. Schneider, et al. eds. *Climate Change Policy*. Chapters 4, 5, 7, and 14.

James B. London, "Planning for Climate Change: Experience in the Caribbean," *Journal of Environmental Planning and Management*. July 2004.

Individual Project: Students will select a natural resource/environmental issue of particular interest to them. Through background research, the policy issues are to be bracketed, policy alternatives are to be identified, implications of these alternatives are to be discussed, and a viable policy framework is to be prepared. Project abstracts are to be submitted by September 21st. Reports will be presented to the class during the week of November 28th with written reports due on the 28th. Some variability in format is allowed, but for term paper oriented projects, a 15-18 page paper is appropriate.

Presentations: Students will be responsible for leading 2 discussions from course readings during the course of the semester. A 1-2 page outline and presentation will be prepared.

Course Evaluation: The course will be conducted as a seminar. As such, student input and participation in class discussions, group activities, and on-campus lectures will be expected.

Mid-Term Test	35%
Individual Project	35%
Class Presentations	15%
Class Participation	<u>15%</u>
	100%