

Economics 370 – Fall 2005
Environmental and Natural Resource Economics
TTh 9:30-11:00

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Blackboard website

Office hours: Tuesday 11-12, Thursday 2-4

By appointment

Readings: *Economics of the Environment, Selected Readings*, edited by Robert Stavins, 4th

Edition (Norton)

Reading packet available in Economics Department office

Environmental Economics weblog: <http://www.env-econ.net/>

All required readings are marked by an asterisk; other readings are optional and for your information only. All required readings are in the textbook or in the readings packet.

Evaluation:	Problem sets (2)	20%
	Midterm exams (2)	30%
	Research group proposal and project	35%
	Class and discussion section attendance/participation	15%

Important dates:	Problem set 1 due	13 October
	Midterm exam 1	20 October
	Project proposal due	1 November
	Problem set 2 due	17 November
	Midterm exam 2	22 November (no exceptions)
	Research group project presentations	6 December 12-2 PM
	Research group project due	6 December 12 PM

Research project: This project will have three components: (1) proposal; (2) presentation in class; (3) research paper. You will work in groups of 4-5 (depending on class size) on a specific policy question in environmental economics. You will choose a specific question from a general list that I will provide, and analyze it and its policy implications thoroughly (more details later). Your work must have several components: a literature survey, an analysis of available data, a benefit-cost analysis/analytical component, and a hypothesis and potential design for an experiment to address the question in which you are interested.

I. Introduction to Environmental and Resource Economics

- *Tietenberg, Chaps. 1, 2 (reading packet)
- *Fullerton and Stavins, in Stavins, Chap. 1
- Anderson and Leal, *Free-Market Environmentalism*, Chap. 1
- Hahn, "The Impact of Economics on Environmental Policy" *Journal of Environmental Economics and Management* 1999, pp. 375-399

II. Property Rights, Externalities, and the Environment

- *Tietenberg Chap. 4 (reading packet)
- *Cropper and Oates, "Environmental Economics: A Survey," *Journal of Economic Literature* (1992), in Stavins, Chap. 4. NOTE: We will be reading portions of this article throughout the quarter; specific page #s will be announced
- *Yandle, "Coase, Pigou, and Environmental Rights," in *Who Owns the Environment?* Peter J. Hill and Roger E. Meiners, eds., 1998, pp. 119-152 (reading packet)
- *Coase, "The Theory of Social Cost," in Stavins, Chap. 3
- *Hayek, "The Use of Knowledge in Society" (reading packet)
- *Haddock, "Irrelevant Externality Angst" (reading packet)
- *Harrison, Hoffman, and Spitzer, experimental tests of Coasean bargaining, *Economic Journal* "Coasian Solutions to the Externality Problem in Experimental Markets" (reading packet)
- Cole, "Clearing the Air: Four Propositions about Property Rights and Environmental Protection," *Duke Environmental Law & Policy Forum* 10 (1999), pp. 103-30. Online: <http://www.law.duke.edu/journals/10DELPFCole>

III. Environmental Analysis (2 classes)

- *Field, Chaps. 6, 7, 8 (reading packet)
- *Porter and van der Linde, in Stavins, Chap. 7
- *Palmer, Oates and Portney, in Stavins, Chap. 8
- *Arrow *et. al.*, in Stavins, Chap. 13
- *Brennan, "Discounting the Future: Economics and Ethics," *RFF Reader*, pp. 35-41 (reading packet)
- *Cropper and Oates, "Environmental Economics: A Survey," *Journal of Economic Literature* (1992), pp. 79-116, in Stavins, Chap. 4
- Hanemann, in Stavins, Chap. 11
- Diamond and Hausman, in Stavins, Chap. 12
- Freeman and Portney, "Economics Clarifies Choices About Managing Risk," *RFF Reader*, pp. 15-20 (reading packet)
- Portney and Harrington, "Health-Based Environmental Standards: Balancing Costs with Benefits," *RFF Reader*, pp. 27-33
- Kneese, "The Faustian Bargain," *RFF Reader*, pp. 55-60
- Gardiner and Portney, "Does Economic Policy Conflict with Economic Growth?" *RFF Reader*, pp. 21-26

IV. Evaluating Environmental Policies: Decentralized, Command-and-Control, Incentive-Based (2 classes)

- *Field, Chaps. 9, 10, 11, 12 (reading packet)

- *Hahn, in Stavins, Chap. 18
- *Arora and Cason, “A Voluntary Approach to Environmental Regulation: The 33/50 Program,” RFF Reader, pp. 97-103 (reading packet)
- *Cason and Gangadharan, “Environmental Labeling and Incomplete Consumer Information in Laboratory Markets” *Journal of Environmental Economics and Management* 28 (1995): 27-86 (reading packet)
- Sandel (and replies to him), in Stavins, Chap. 19
- Oates, “Taxing Pollution: An Idea Whose Time Has Come?” RFF Reader, pp. 63-68
- Arora and Cason, “An Experiment in Voluntary Environmental Regulation: Participation in EPA’s 33/50 Program,” *Journal of Environmental Economics and Management* 43 (2002): 113-134

THE FIRST MIDTERM WILL COVER ALL REQUIRED MATERIAL UP TO THIS POINT – BOOK, READINGS, NOTES, PROBLEMS

V. Common Pool Resources and Sustainability (6 classes)

A. Overview

- *Ostrom, *Governing the Commons*, pp. 1-28 (reading packet)
- *Hardin, “The Tragedy of the Commons,” *Science* (December 1968): 1243-1248, in Stavins, Chap. 2
- *Casari and Plott, “Decentralized Management of Common Property Resources: Experiments With a Centuries-Old Institution” *Journal of Economic Behavior and Organization* (reading packet)
- Solow, “The Economics of Resources or the Resources of Economics,” *American Economic Review* 64(2) (1974), pp. 1-14
- Gordon, “Economics and the Conservation Question,” *Journal of Law and Economics* 1 (1958): 110-121
- Mason and Phillips, “Mitigating the Tragedy of the Commons through Cooperation: An Experimental Evaluation,” *Journal of Environmental Economics and Management* 1997, pp. 148-172

B. Case Study: Air Pollution

- *Tietenberg, *Environmental and Natural Resource Economics*, Chapter 16 (reading packet)
- *Schmalensee *et. al.*, in Stavins, Chap. 20
- *Stavins, in Stavins, Chap. 21
- *Joskow and Schmalensee, in Stavins, Chap. 28
- *Cason and Plott, “EPA’s New Emissions Trading Mechanism: A Laboratory Evaluation” (reading packet)
- Burtraw, “Trading Emissions to Clean the Air: Exchanges Few but Savings Many,” RFF Reader, pp. 75-80
- Parry, “Reducing Carbon Emissions: Interactions with the Tax System Raise the Cost,” *RFF Reader*, pp. 111-115
- Schennach, “The Economics of Pollution Permit Banking in the Context of Title IV of the 1990 Clean Air Act Amendments” *Journal of Environmental Economics and Management* 1999, pp. 189-210

-Stranlund and Dhanda, "Endogenous Monitoring and Enforcement of a Transferable Emissions Permit System," *Journal of Environmental Economics and Management* 1999, pp. 267-282

C. Case Study: Fisheries

*Gordon, "The Economic Theory of a Common Property Resource: The Fishery," *Journal of Political Economy* 62 (1953): 124-142 (reading packet)

*Tietenberg, chap. 13 (reading packet)

*Cropper and Oates, "Environmental Economics: A Survey," *Journal of Economic Literature* (1992), in Stavins, Chap. 4 (portions relating to fisheries)

*Fujita, Hopkins, and Willey, "Creating Incentives to Curb Overfishing" *Forum for Applied Research and Public Policy* 11 (1996): 29–35. Online:

http://www.environmentaldefense.org/documents/540_Oceans_Creating%20Incentives.htm

-Anderson and Leal, *Free-Market Environmentalism*, Chap. 9 (reading packet)

THE SECOND MIDTERM WILL COVER ALL MATERIAL SINCE THE FIRST MIDTERM

VI. Final presentations

Schedule:

Date	Topic	Reading
T 9-20	I. Introduction	
Th 9-22	I. Experiment: Paper River	Tietenberg 1, 2, Fullerton and Stavins
T 9-27	II. Pigou, externalities, and public goods	Tietenberg 4, Cropper and Oates, Yandle (to p. 132)
Th 9-29	II. Experiment: ranchers and farmers Coase, property rights	Yandle, Coase, Hayek
T 10-4	II. Relevant and irrelevant externalities; experimental Coase results	Haddock, Harrison <i>et. al.</i>
Th 10-6	III. Environmental analysis: discounting, benefit-cost analysis	Field 6, Freeman and Portney, Brennan, Cropper and Oates
T 10-11	III. Discussion of benefit-cost analysis	Field 7,8,9, Porter and van der Linde, Arrow <i>et. al.</i> , Palmer, Oates and Portney
Th 10-13	IV. Evaluating environmental policy PS 1 due	Field 10, Arora and Cason, Cason and Gangadharan
T 10-18	IV. Evaluating environmental policy	Field 11, 12, Hahn
Th 10-20	MIDTERM 1	
T 10-25	V. Common pool resources overview	Ostrom, Hardin
Th 10-27	V. Institutional diversity	Casari and Plott
T 11-1	V. Experiment: pollution rights trading Air overview Project proposal due	Tietenberg chap. 16
Th 11-3	V. Air: CAA, CAAA, SO2	Schmalensee <i>et. al.</i> , Stavins, Joskow and Schmalensee
T 11-8	V. Experiment: EPA style trading Transaction costs and institutions	Cason and Plott
Th 11-10	V. Experiment: the fishery	Tietenberg chap. 13
T 11-15	V. Fishery theory and policy options	Gordon, Cropper and Oates, Fujita, Hopkins and Willey
Th 11-17	Problem set and midterm review PS 2 due	
T 11-22	MIDTERM 2	Covers all material since 20 Oct
T 12-7	Project presentations, project due date	