

ENVIRONMENTAL AND RESOURCE ECONOMICS

AREc 534

Spring Term 2007

Instructor: Dr. William Jaeger
Department of Agricultural and Resource Economics
226A Ballard Extension Hall
Ph: 7-1419, Email: wjaeger@oregonstate.edu

Course Description: This course examines economic perspectives on the use of natural resources and the management of environmental quality. The course is designed for masters-level students working toward degrees in non-economics fields but wanting some exposure to the application of economics to environmental and natural resource issues, especially with a view toward policy and solutions to environmental problems. The course begins with a brief review of economic concepts to be used in class. An emphasis is placed on concepts such as tradeoffs, efficiency, and opportunity cost. We then consider market failures—failure of a market to achieve efficiency—that can arise with externalities, public goods and common property resources. We consider policies designed to address externality problems in the context of air and water pollution and conclude with an examination of non-market valuation techniques and their use in policy development and evaluation. We consider static and dynamic models of natural resources, including the class of well-known models used to study fisheries and forests. The models examined in this class provide a framework for examining policies designed to achieve socially optimal outcomes. We examine the advantages or disadvantages of differing institutions (private property, markets, regulations and public policy) to solve environmental and natural resource problems. The moral and other underpinnings of these policies will be considered, as well as the goal of sustainability.

In addition to considering the theoretical basis for policy design, we will evaluate some existing and proposed policies in several case studies (e.g., climate change, the Endangered Species Act, salmon management, protected areas and Clean Air Act regulations).

Prerequisites: AREC 311 or its equivalent, or permission of the instructor.

Credits: 3

Readings: The main textbook for this course is Jaeger, W.K. 2005. Environmental Economics for Tree Huggers and Other Skeptics, Island Press. There will be a significant number of supplemental readings from journals and other sources that will also be assigned and made available.

Grading: Your grade will be based on a mid-term exam (30%), a comprehensive final exam (40%), and a group presentation (30%). Exams will cover material presented in class, assigned readings, and homework assignments.

Class Meetings: TTh, 9:30 – 10:50 pm, Ballard 118.

Office Hours: MW 3:00 – 5:00 pm, or by appointment.

Class Schedule

<u>Date</u>	<u>Topic</u>	<u>Reading</u>
4-3	Introduction	Jaeger, Preface & Ch. 1
4-5	Tradeoffs, Efficiency, Demand	Jaeger, Ch. 2
4-10	Production, Profit, and Supply	Jaeger, Ch. 3
4-12	Market Failures	Jaeger, Ch. 5
4-17	Property Rights	Jaeger, Ch. 9
4-9	Pollution Control Policies	Jaeger, Ch. 10
4-24	Time and Sustainability	Jaeger, Chs 4, 6
4-26	Land and Forests	Jaeger, Ch. 11
5-1	Fisheries	Jaeger, Ch. 12
5-3	Policy failure	Jaeger, Ch. 13
5-8	Midterm exam	
5-10	Project and policy evaluation	Jaeger, Ch 15
5-15	Economic growth and development	Jaeger, Ch. 7
5-17	International trade	Jaeger, Ch. 8
5-22	Valuation	Jaeger, Ch. 14
5-24	Economics and morality	Jaeger, Ch. 16, 17
5-29	Climate change, other topic	TBA
5-31	Group presentation	
6-5	Group presentation	
6-7	Group presentation	

Final examination (Monday, June 12, 2 pm)

List of Supplemental Readings – April 23, 2007

Ostrom, Elinor, J. Burger, C. Field, R. Norgaard, D. Policansky, 1999. Revisiting the Commons: Local Lessons, Global Challenges. *Science*, Vol. 284: 278-82.

Stavins, Robert N., 2005. Lessons Learned from SO₂ Allowance Trading. *Choices*, 20(1): 53-57.

Krutilla, John. 1967. Conservation Reconsidered. *The American Economic Review*, Vol. 57, No. 4. (Sep., 1967), pp 777-786.

Simpson, R. David, 1997. Biodiversity Prospecting: Shopping the Wilds Is Not the Key to Conservation. *Resources*. Resources for the Future, Washington DC.

Jaeger, William K., 1997. Saving Salmon with Fishwheels: A Bioeconomic Analysis. *Natural Resources Journal*, Vol. 37: 785-808.

IISD & UNEP, 2005. *Environment and Trade: A Handbook*. Second Edition. (accessed at <http://www.iisd.org/trade/handbook/>)

Kiel, Katherine A., 2001. Measuring the Impact of the Discovery and Cleanup of Identified Hazardous Waste Sites on House Values. *Land Economics*, Vol. 71(4): 428-35.

Pfaff, Alexander, 1999. What Drives Deforestation in the Brazilian Amazon? *Journal of Environmental Economics and Management*, Vol. 37(1): 26-43.

Goulder, Lawrence H. and W. A. Pizer, 2006. The Economics of Climate Change. RFF Discussion Paper 06-06. Washington, DC: Resources for the Future.

Heal, Geoffrey, 2007. A Celebration of Environmental and Resource Economics. Review of Environmental Economics and Policy, Winter.

Pindyck, Robert. Uncertainty in Environmental Economics. Review of Environmental Economics and Policy, Winter.

McCauley, Douglas J. 2006. Commentary: Selling Out On Nature. *Nature*, Vol. 443(7): 27-28.