EIB E246: Natural Resource and Environmental Economics

Fletcher School of Law and Diplomacy, Summer 2009
Tues, Thurs 3:30-6:30

Instructor: Jonathan Harris jonathan.harris@tufts.edu
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Course Objectives: This course provides an introduction to economic perspectives on modern environmental issues. We will study economic theories related to natural resources and the environment, and their application to environmental policy. The first part of the course will focus on concepts and theory, and the second part will deal with applications including population and food supply, renewable and non-renewable resources, pollution control policy, global climate change, international trade, and environmental policy.

Course Prerequisites: The prerequisite for E246 is EIB E 201 (Introduction to Economic Theory), or equivalent with consent of instructor.

Course Materials: The primary text for the course is:

Environmental and Natural Resource Economics: A Contemporary Approach, 2nd edition, by Jonathan M. Harris (Houghton-Mifflin 2006).

Supplementary readings will be available on Blackboard at http://blackboard.tufts.edu Both the text and the readings are required for all students. Additional readings may be added during the semester.

Grading: Work for the course includes two take-home assignments including problems and essays, and a final take-home exam consisting of problems and a short paper (10-12 pages). Grades will be based on:

Two Assignments	25% each
Final Take-Home (problems & short paper)	40%
Class participation	10%

Course Schedule:

Date	Topic	Readings
May 19	Introduction, Overview of environmental and ecological economics	None
May 21	Overview of environmental issues	Texts, Ch. 1; Readings #1- Text, Ch. 2; Readings #4-6
May 26	Environmental externalities and pollution policies	Text, Ch. 3, Readings #7-8
May 28	Common property and public goods Resource allocation over time	Text, Ch. 4 Text, Ch. 5
June 2	Environmental valuation ASSIGNMENT #1 DUE	Text, Ch. 6; Reading #9 Additional readings TBA
June 4	Concepts of ecological economics National income and environmental accounting	Text, Ch. 7, 9; Readings #10-11 Text, Ch. 8; Readings #12-14
June 9	Population and environment Agriculture and environment	Text, Ch. 10; Readings #15-16 Text, Ch. 11; Reading 17
June 11	Non-renewable resources and Energy policy ASSIGNMENT#2 DUE	Text, Ch. 12 Text, Ch. 13 Reading 18, additional readings TBA
June 16	Managing renewable resources	Text, Chs. 14, 15; Readings #19-20
June 18	Pollution analysis and policy Industrial ecology	Text, Ch. 16 Text, Ch. 17, Reading #21
June 23	Global climate change	Text, Ch. 18 Readings #22-26, additional readings TBA
June 25	Trade and Environment Sustainable Development FINAL ASSIGNMENT/PAPER DUE	Text, Ch.19; Readings # 28-33 Text, Ch. 20 Reading #34

Supplementary Readings (additional readings may be assigned):

1. "How Economists See the Environment," Don Fullerton and Robert Stavins, Chapter 1 of Economics of the Environment: Selected Readings, edited by Robert Stavins (pp. 3-8).

2. "Environmental Economics, Ecological Economics, and the Concept of Sustainable Development," Guiseppe Munda, Environmental Values 6 (1997), (pp. 213-233), summarized in Harris et al., A Survey of Sustainable Development.

3. "Sustainability: An Economist's Perspective," Robert Solow, Chapter 5 of Economics of the Environment: Selected Readings, edited by Robert Stavins (pp. 131-138).

4. "Global Overview," and "Putting the Pieces Together: Using Markets and Finance to Fight Climate Change"", UNEP Yearbook 2008, United Nations Environment Programme

5. Stern Review: The Economics of Climate Change, Short Executive Summary

6. "Seeding the Sustainable Economy," Gary Gardner and Thomas Prugh, Chapter 1 in State of the World 2008.

7. "Environmental Protection: Is It Bad for the Economy?" Frank Arnold, Paper prepared under EPA Cooperative Agreement CR822795-01.

8. "No Economy-Wide Trade-Off," Eban Goodstein, Chapter 2 of The Trade-Off Myth (pp. 17-40).

9. "The Contingent Valuation Debate: Why Economists Should Care," Paul Portney, Chapter 10 of Economics of the Environment: Selected Readings, edited by Robert Stavins (pp. 253-267).

10. "On the Problem of Achieving Efficiency and Equity, Intergenerationally," Talbot Page, Land Economics 73 (4), 1997 (pp. 580-96.), summarized in Harris et al., A Survey of Sustainable Development.

11. "Economics and "Sustainability: Balancing Trade-offs and Imperatives," Michael A. Toman, Land Economics 70(4), 1994 (pp. 399-413), summarized in Harris et al., A Survey of Sustainable Development.

12. "Green Accounting and Economic Policy," Salah El-Serafy. Ecological Economics, Vol. 21, 1997 (pp. 217-229), summarized in Harris et al., A Survey of Sustainable Development.

13. "Are We Saving Enough for the Future?' Kirk Hamilton and Michael Clemens, Chapter 2 in Expanding the Measure of Wealth: Indicators of Environmentally Sustainable Development, The World Bank, 1997 (pp. 7-18), summarized in Harris et al., A Survey of Sustainable Development.

14. "A New Bottom Line for Progress," John Talberth, Chapter 2 in State of the World 2008.

15. "An Ecologist View of the Malthusian Conflict," C.S. Holling, summarized in Harris et al., A Survey of Sustainable Development.

16. "Government, Population, and Poverty; A Win-Win Tale," Nancy Birdsall, summarized in Harris et al., A Survey of Sustainable Development.

17. "Meat and Seafood: The Most Costly Ingredients in the Global Diet," Brian Halweil and Danielle Nierenberg, Chapter 5 in State of the World 2008.

18. "Building a Low-Carbon Economy," Christopher Flavin, Chapter 6 in State of the World 2008.

19. "Water in a Sustainable Economy," Ger Bergkamp and Claudia Sadoff, Chapter 8 in State of the World 2008.

20. "Banking on Biodiversity," Ricardo Bayon, Chapter 9 in State of the World 2008.

21. "Rethinking Production," L. Hunter Lovins, Chapter 3 in State of the World 2008.

22. "The Economics of Global Climate Change," Harris and Roach, available at http://www.ase.tufts.edu/gdae/education_materials/modules.html

23. "Getting Serious about Global Warming," Harris text supplement #3, available at http://www.ase.tufts.edu/gdae/publications/textbooks/ENREupdate.html

24. Stern Review: The Economics of Climate Change, Long Executive Summary

25. "Improving Carbon Markets," Zoë Chafe and Hilary French, Chapter 7 in State of the World 2008.

26. "Cap and Rebate: How to Curb Global Warming while Protecting the Income of American Families," James Boyce and Matthew Riddle, from Harris and Goodwin eds., Twenty-First Century Macroeconomics: Responding to the Climate Challenge (forthcoming).

27. “The Case for Free Trade,” Jagdish Bhagwati, Scientific American 269, 1993 (pp. 42-49), summarized in Harris et al., A Survey of Ecological Economics (Island Press, 1995).

28. “From Adjustment to Sustainable Development: The Obstacle of Free Trade,” Herman Daly, summarized in Harris et al., A Survey of Sustainable Development.

29. “Ecological Distribution, Agricultural Trade Liberalization, and In Situ Genetic Diversity,” James K. Boyce, Journal of Income Distribution 6, 1996, pp. 265-286, summarized in Harris et al., A Survey of Sustainable Development.

30. "Progress on the Environmental Kuznets Curve?" David Stern, Environment and Development Economics 3, 1998 (pp. 173-196). Summarized in A Survey of Sustainable Development, Harris et al. (editors), p. 42-45.

31. "Foreign Investment, Globalisation and Environment" Daniel C. Esty and Bradford S. Gentry, in Globalisation and Environment, 1997. Summarized in A Survey of Sustainable Development, Harris et al. (editors), p. 243-247.

32. “New Approaches to Trade Governance,” Mark Halle, Chapter 14 in State of the World 2008.

33. “China, India, and the New World Order,” Christopher Flavin and Gary Gardner, Chapter 1 in State of the World 2006 (pp. 3-23).