

THE UNIVERSITY OF BRITISH COLUMBIA  
Vancouver School of Economics

Brian Copeland

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ECONOMICS 371

ECONOMICS OF THE ENVIRONMENT

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**T.A. :** Anderson Frey

**Scope of the Course:**

This course focuses on linkages between the economy and the environment, and on the analysis of policies to deal with environmental problems. The main emphasis will be on pollution, although issues such as fisheries, waste disposal, climate change, and sustainable development will also be discussed.

Related courses offered by the School of Economics include Economics 370 (Cost Benefit Analysis), 374 (Land Economics), 471 (Non-renewable Resources) and 472 (Renewable Resources).

**Prerequisite:**

Economics 101/102. I will assume that all students are familiar with the basic concepts of microeconomics which are taught in Economics 101/102. Calculus will not be used in the course.

**Requirements:**

Midterm Exam (30%)    October 21.

Final Exam (50%)        Scheduled by Registrar's Office

Assignments (20%)        Will be posted on the Connect page for this course when available

**Textbook:**

Nathaniel O. Keohane and Sheila M. Olmstead, [\*Markets and the Environment\*](#).

**Important Note:** I will not always follow the textbook in this course: material will be drawn from various sources. However, students will be expected to read and study most of the above book.

## Preliminary Course Outline and Reading List

Some additional readings may be suggested throughout the course. **Some of the readings below are optional.** Required readings are indicated with an asterisk (\*); changes may be announced in class.

### 1. Introduction

- \*Keohane and Olmstead, Ch. 1
- Foot, David K., "[Easter Island: A Case Study in Non-sustainability](#)," *Greener Management International*, Winter 2004/2005, Issue 48, p11-20.
- Diamond, "Easter Island Revisited," *Science*, Vol. 317, Sept. 21, 2007, p. 1692-4.
- Fullerton, Don and Robert S. Stavins. (1998). "[How Economists See the Environment](#)." *Nature* Vol. 395, Oct. 1, 1998: 433-34.

### 2. Measuring Environmental Costs and Benefits

- \*Keohane and Olmstead, Ch. 2,3
- Joshua Graff Zivin and Matthew Neidell, "Environment, Health, and Human Capital," *Journal of Economic Literature* 51 (2013): 689-730
- Viscusi, K., "[The value of life in legal contexts: Survey and Critique](#)," *American Law and Economics Review* 2 (2000): 195-222.
- W. Nordhaus, "[A Review of the Stern Review on the Economics of Climate Change](#)," *Journal of Economic Literature* 2007: 686-702
- \*P. Dasgupta, "[Commentary: The Stern Review's Economics of Climate Change](#)", *National Institute Economic Review*, 199, 4-7, January 2007.
- [Note that the Stern Review Report on the Economics of Climate Change is available [here](#).]

### 3. Externalities, Public Goods and Market Failures

- \*Hardin, G. "[The Tragedy of the Commons](#)" *Science*, New Series, Vol. 162, No. 3859 (Dec. 13, 1968), pp. 1243-1248
- \*Keohane and Olmstead, Ch. 4,5
- \*Keohane and Olmstead, Ch. 7; pp. 110 - 124.

### 4. Pollution Regulation

#### Property Rights

- \*Keohane and Olmstead, Ch. 8; pp. 125-129
- \*Coase, R.H., "[The problem of social cost](#)," *Journal of Law and Economics*, 3 (1960): 1-69.
- Deweese, D.N., "[The role of tort law in controlling environmental pollution](#)" *Canadian Public Policy* XVIII (1992): 425-42.
- \*Peter S. Menell, "[The Limitations of Legal Institutions for Addressing Environmental Risks](#)," *The Journal of Economic Perspectives*, Vol. 5, No. 3 (Summer, 1991), pp. 93-113
- Mark Cohen, "[Deterring Oil Spills: Who Should Pay and How Much?](#)" *Resources for the Future*, May 2010.

\*Nathan Richardson, "[Deepwater Horizon and the Patchwork of Oil Spill Liability Law](#)"  
Resources for the Future, May 2010.

### **Taxes, Subsidies, Standards, Permits and other forms of Regulation**

\*Keohane and Olmstead, Ch. 8, 9, 10

\*Don Fullerton, Andrew Leicester, and Stephen Smith. "[Environmental Taxes](#)" Dimensions of Tax Design, Institute for Fiscal Studies (IFS). Oxford: Oxford University Press, 2010. See especially p. 447 - 454. Available at: [http://works.bepress.com/don\\_fullerton/37](http://works.bepress.com/don_fullerton/37)

\*Goulder and Parry, "[Instrument Choice in Environmental Policy](#)," *Review of Environmental Economics and Policy* 2008: pp152-174. Reprinted in Stavins, *Selected Readings*; Ch. 16.

\*Fullerton and Kinnaman, "[Household responses to pricing garbage by the bag](#)," *American Economic Review*, Sept. 1996, 971-984.

Tatiana Homonoff, "Can Small Incentives Have Large Effects? The Impact of Taxes versus Bonuses on Disposable Bag Use," Princeton University Industrial Relations Section Working Paper #575, March 2013.

\*Chris Costello, Steven Gaines and John Lynham, "[Can Catch Shares Prevent Fisheries Collapse?](#)" *Science*, Sept 19, 2008

Stavins, R.N., "[What Can We Learn from the Grand Policy Experiment? Lessons from SO2 Allowance Trading](#)". *The Journal of Economic Perspectives*, Vol. 12, No. 3 (Summer, 1998), pp. 69-88. Reprinted in Stavins, *Selected Readings*; Ch. 17.

Tietenberg, T., "[Tradable permits for pollution control when emission location matters: What have we learned?](#)" *Environmental and Resource Economics* 5(1995): 95-113.

Grafton, Q., "[Individual transferable quotas: theory and practice](#)," *Reviews in Fish Biology and Fisheries* 6 (1996): 5-20.

Ian Parry, "[Should we abandon Cap and Trade in favor of a CO2 Tax?](#)," *Resources*, Summer 2007.

\*William D. Nordhaus, 2007, "[To Tax or Not to Tax: Alternative Approaches to Slowing Global Warming](#)," *Review of Environmental Economics and Policy* 1: 26-44

### **5. Economic Growth and the Environment**

\*Keohane and Olmstead, Ch. 11

Gene Grossman and Alan Krueger "[Environmental Impacts of the North American Free Trade Agreement](#)" NBER Working paper 3914

\*Arrow, K.J. et al., "[Are We Consuming Too Much?](#)" *The Journal of Economic Perspectives*, Vol. 18, No. 3 (Summer, 2004), pp. 147-172

### **6. International Trade and the Environment**

\*Copeland, Brian R. , "How does trade affect the environment?" in G. Heal, [Is Economic Growth Sustainable?](#) Palgrave MacMillan 2010.

\*Frankel, J.A. "[The Environment and Globalization](#)," in M.M. Weinstein, ed., *Globalization: What's New?* Columbia University Press, 2005. Also available online as NBER Working Paper 10090, 2003. Reprinted in Stavins, *Selected Readings*; Ch. 31.

Porter, M.E. and C. van der Linde, "Toward a new conception of the environment-competitiveness relationship," *Journal of Economic Perspectives* 9, 1995: 97-118. Reprinted in Stavins, *Selected Readings*; Ch. 5.

Palmer, K., W.E. Oates, and P.R. Portney, "Tightening environmental standards: The benefit-cost or no-cost paradigm?", *Journal of Economic Perspectives* 9, 1995: 119-132.

## 7. Global Environmental Problems

Barrett, S., [\*Why Cooperate?: The Incentive to Supply Global Public Goods\*](#), Oxford University Press 2010.

Aldy, J.E., A.J. Krupnick, R.G. Newell, I. Parry, and W.A. Pizer, "Designing climate mitigation policy," *Resources for the Future Discussion Paper* 08-16, May 2009.

Gillingham, Kenneth, Matthew Kotchen, David Rapson, and Gernot Wagner. 2013. "The Rebound Effect is Over-played," *Nature* 493:475-476

Aghion, P., D. Hemous and R. Veugelers (2009), "No green growth without innovation", *Bruegel Policy Brief*, 2009/07, Bruegel Brussels.

R. Schmalensee, "Evaluating Policies to Increase Electricity Generation from Renewable Energy" *Review of Environmental Economics and Policy* (Winter 2012) 6 (1): 45-64