

Environmental Economics

Analytical Foundations and Experimental Evidence

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SYNOPSIS

From deforestation and toxic pollution to global warming, economic drivers are at the heart of virtually all environmental problems. But economics is also an indispensable ingredient to their solution.

This course is divided in two parts. Part I develops the economic mindset towards environmental problems using well-established from public economics. After reviewing core concepts such as externality, public goods, and common property resources, we proceed to the analytical foundations and empirical methods of valuing environmental goods. Finally, we review the theoretical underpinnings of environmental regulation.

Part II introduces the approach of experimental economics to key questions raised in part I of the course. There are at least three reasons for using experiments. One is that we want to test theories of environmental economics, in particular in those circumstances in which suitable empirical evidence is hard to come by. Another is that in a complex world, theory can often provide only partial guidance on the ultimate impacts of regulatory interventions, and experiments can provide important information in this area. Finally, we are interested experiments for eliciting preferences that may be important in order to arrive at welfare statements about regulatory alternatives.

STRUCTURE

Date	Content	Readings
March 21 9.00 – 12.30	Introduction and analytical core concepts	Kolstad, chapters 1 - 6
March 22 9.00 – 12.30	Valuing environmental goods	Kolstad, chapters 7 – 10
March 23 9.00 – 12.30	Regulating for environmental quality	Kolstad, chapters 11-13
March 28 9.00 – 12.30	The experimental approach – basics	Greenstone and Gayer (2009) Sturm and Weimann (2006)
March 29 9.00 – 12.30	Experiments I: Theory testing in environmental economics	Assigned papers
March 30 9.00 – 12.30	ExperimentsII: Test-bedding and valuation of environmental goods	Assigned papers

LITERATURE

The core textbook for Part I of this course is:

Kolstad, C.D.: *Intermediate Environmental Economics*. Oxford University Press, 2011.

The readings to accompany Part II come in two batches.

Batch 1: This is material that you **should** look into

- ▶ Greenstone, M., & Gayer, T. (2009). Quasi-experimental and experimental approaches to environmental economics. *Journal of Environmental Economics and Management*, 57(1), 21-44.
- ▶ Sturm, Bodo, und Joachim Weimann. 2006. „Experiments in environmental economics and some close relatives“. *Journal of Economic Surveys* 20 (3): 419–57.

Batch 2: This is material you **can** dip into to learn more about the specific paper. I will put some special emphasis on the following papers that represent, at least in my mind, a sample of the current frontier in three areas mentioned.

- ▶ Allcott, Hunt, und Dmitry Taubinsky. 2015. „Evaluating Behaviorally-Motivated Policy: Experimental Evidence from the Lightbulb Market.“ *American Economic Review* 105(8), 2501-38.
- ▶ Ambec, Stefan, Alexis Garapin, Laurent Muller, Arnaud Reynaud, und Carine Sebi. 2014. „Comparing regulations to protect the commons: an experimental investigation“. *Environmental and Resource Economics* 58 (2): 219–44.
- ▶ Diederich, J. and T. Goeschl. 2013. To Give or Not to Give: The Price of Contributing and the Provision of Public Goods. *NBER Working Paper* No.19332, August 2013.
- ▶ Duflo, Esther, Michael Greenstone, Rohini Pande, und Nicholas Ryan. 2013. „Truth-telling by third-party auditors and the response of polluting firms: Experimental Evidence from India“. *The Quarterly Journal of Economics* 1499 (1545): 1499.
- ▶ Ferraro, Paul J., und Michael K. Price. 2013. „Using nonpecuniary strategies to influence behavior: evidence from a large-scale field experiment“. *Review of Economics and Statistics* 95 (1): 64–73.
- ▶ Hainmueller, J., Hiscox, M. J., & Sequeira, S. (2015). Consumer demand for fair trade: Evidence from a multistore field experiment. *Review of Economics and Statistics*, 97(2), 242-256.
- ▶ Kallbekken, Steffen, Stephan Kroll, und Todd L. Cherry. 2011. „Do you not like Pigou, or do you not understand him? Tax aversion and revenue recycling in the lab“. *Journal of Environmental Economics and Management* 62 (1): 53–64.
- ▶ Telle, Kjetil. 2013. „Monitoring and enforcement of environmental regulations: Lessons from a natural field experiment in Norway“. *Journal of Public Economics* 99 (0): 24–34.