Topics in Economic Theory III: Environmental Economics

2017-2018 Academic Year
Master of Research in Economics, Finance and Management

1. Description of the subject

- Topics in Economic Theory III
- Total credits: 3 ECTS
- Code: 32076
- Workload: 75 hours
- Term: 2nd
- Type of subject: Optative
- Department of Economics and Business
- Teaching team: Antony Miller (LSE)
2. Teaching guide

Introduction

Environmental economics is concerned with the interaction between natural and economic systems: how does nature affect human activities, how do our activities affect nature, and what can be done to manage this interaction? A common feature of all environmental problems is that private actors do not face the full social costs of their actions; there are externalities. Much of environmental economics is concerned with pricing these externalities, and studying policy instruments (e.g. taxes) and institutional arrangements (e.g. international treaties) for correcting them. This sounds simple enough, but as we will see, sometimes requires pushing the tools of economic analysis to their limits. This course aims to introduce you to some of the core questions, methods, and current research themes in environmental economics (with an emphasis on theory). It is an inherently interdisciplinary subject, and we will dip into welfare economics, decision theory, macro, and political economy along the way, in addition to learning a little about the science underlying environmental problems.

Contents

We will cover a selection of the following topics. The reading list below is extensive, but is meant to serve as a reference, and will help you when doing the class assignments. You will not be expected to read everything! Articles that may be emphasized in the course, or provide especially good coverage of our topics, are marked with an asterisk (*).

1 Background reading

Good non-technical texts on environmental economics, science, politics, and ethics include:


• David JC MacKay. Sustainable Energy - Without the Hot Air. UIT Cambridge Ltd., Cambridge, 2009


2 Time and Sustainability

Social time preferences


• *Simone Galperti and Bruno Strulovici. A Theory of Intergenerational Altruism. Econometrica (forthcoming), 2017


• Antony Millner and Geoffrey Heal. Time consistency and time invariance in collective intertemporal choice. Working paper, 2017

Discounting


**Sustainability**


3 Uncertainty and environmental policy

Learning and irreversibility


Ambiguity


• Johannes Gierlinger and Christian Gollier. Do interest rates decline when there is ambiguity about growth? Working Paper, 2017

• Anastasios Xepapadeas. Ambiguity and Robustness in International Pollution Control. In Robert W. Hahn and Alistair Ulph, editors, Climate Change and Common Sense: Essays in Honour of Tom Schelling. Oxford University Press, January 2012

4 Climate Change


• Reyer Gerlagh and Matti Liski. Carbon Prices for the Next Hundred Years. The Economic Journal


• *Larry Karp. Provision of a Public Good with Multiple Dynasties. The Economic Journal, 2017

• Derek Lemoine and Ivan Rudik. Steering the climate system: using inertia to lower the cost of policy. American Economic Review, Forthcoming


• Daron Acemoglu and Will Rafey. Mirage on the horizon: Geoengineering and carbon taxation without commitment. Working paper, 2017


5 Biodiversity, renewables, and conservation

• Stephen Polasky, Christopher Costello, and Andrew Solow. Chapter 29 The Economics of Biodiversity. Handbook of Environmental Economics, 3:1517–1560, 2005


• David Tilman, Stephen Polasky, and Clarence Lehman. Diversity, productivity and
temporal stability in the economies of humans and nature. Journal of Environmental
Economics and Management, 49(3):405–426, 2005

• Amy Ando, Jeffrey Camm, Stephen Polasky, and Andrew Solow. Species
Distributions, Land Values, and Efficient Conservation. Science, 279(5359): 2126–128,
1998

• *Michael Kremer and Charles Morcom. Elephants. The American Economic Review,
90(1):212–234, 2000


• Paul A. Samuelson. Economics of Forestry in an Evolving Society. Economic Inquiry,
14(4):466–492, December 1976

• Rajiv Sethi and E. Somanathan. The Evolution of Social Norms in Common Property

• Ling Huang and Martin D. Smith. The Dynamic Efficiency Costs of CommonPool

• Brian R. Copeland and M. Scott Taylor. Trade, Tragedy, and the Commons.

• M. Scott Taylor. Buffalo Hunt: International Trade and the Virtual Extinction of the

• *B’ard Harstad. The market for conservation and other hostages. Journal of

• Bard Harstad and Torben Mideksa. Conservation contracts and political regimes.
Review of Economic Studies, Forthcoming

6 International Environmental Agreements

• *Scott Barrett. SelfEnforcing international environmental agreements. Oxford


• *Scott Barrett. The theory of international environmental agreements. Handbook of
Environmental Economics, 3:1457–1516, 2005

• *B’ard Harstad. Buy Coal! A Case for Supply-Side Environmental Policy. Journal of

• Bard Harstad. Climate Contracts: A Game of Emissions, Investments, Negotiations,

• *Marco Battaglini and B’ard Harstad. Participation and Duration of Environmental


Assessment

Students will select papers from the reading list to be presented in class. Each student presentation should last for around 25 minutes. The number of presentations will depend on the number of students who take the class. In addition, students will write a short paper based on one of the topics above. This should include a critical evaluation of relevant literature, and an idea for extending it in a new direction (this need not be fully developed, but should show good progress towards making a contribution). Class participation is also an important component of the course, and is highly valued.

Grading system

0-10:

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