Environmental Economics

M2EA: CY Cergy Paris Université & ESSEC

Lecturer:

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Course objective:

This course introduces students to how economic analysis can be used to understand current environmental issues. The general objective of this course is to present the main notions of environmental economics, together with the state of the art of this multidisciplinary field. Lectures include applications (applied theory and empirics) to economic development and environmental degradation/climate change, and the economics of biodiversity.

Plan of the course:

The course is divided in three parts. First (part 1), we will introduce to the students the main concepts and current issues of environmental economics. We then explore those current issues, focusing on specific applications. In part 2, we consider the interaction between economic development and the environment. We pay particular attention to poverty traps related to environmental degradation and climate change. The last part of the course is devoted to the economics of biodiversity. It specifically includes applications where we evaluate actual conservation policies such as the Endangered Species Act in the USA.

Outline of the course:

Part 1
Chapter 1: Introduction to environmental economics
- The environment and economics.
- What is environmental economics?
  - Main issues in environmental economics.

Part 2
Chapter 2: Economic development and the environment
- Interaction between life expectancy and environmental quality.
- Environmental poverty traps:
  - Low life expectancy / low environmental quality.

Part 3
Chapter 3: Economics of biodiversity
- How to measure and value biodiversity.
- Strategies and incentives to conserve biodiversity: current challenges.

Chapter 4 & 5: Protection of endangered species

- Endangered species: sea turtles
  - Light pollution.
  - Evaluation of public policies: captive rearing programs vs. legislation.

References:

1 - Books:

- Mas-Colell A., Whinston M. and Green J. (1995), Microeconomic Theory, Oxford Univ. Press, New York.
- De la Croix D. and P. Michel (2010), A Theory of Economic Growth: Dynamics and Policy in Overlapping Generations, Cambridge Univ. Press, UK.
- Perman R., Y. Ma, M. Common, D. Maddison and J. McGilvray (2011), Natural Resource and Environmental Economics, Pearson Education Limited, Essex, UK.
- Varian Hal R. (2014), Intermediate Microeconomics: A Modern Approach, W. W. Norton & Company, New York.

2 - Papers:

- Chapter 2:
  - Mariani F., A. Pérez-Barahona and N. Raffin (2010), "Life expectancy and the environment", Journal of Economic Dynamics and Control, 34 (4), 798-815.

- Chapter 3:
  - Dasgupta, P. (2021), The Economics of Biodiversity: The Dasgupta Review, London: HM Treasury.
  - Polasky S., C. Costello and A. Solow (2005), "The Economics of Biodiversity", in Handbook of Environmental Economics, Mäler K. and J. Vincent (Eds.), Elsevier B.V.

- Chapters 4&5:
  - Brei M., A. Pérez-Barahona and E. Strobl (2016), "Environmental Pollution and Biodiversity: Light Pollution and Sea Turtles in the Caribbean", Journal of Environmental Economics and Management, 77, 96-116.
  - Brei M., A. Pérez-Barahona and E. Strobl (2020), "The Effectiveness of Protecting Species Through Legislation: The Case of Sea Turtle Lighting Ordinances", American Journal of Agricultural Economics, 102 (1), 300- 328.

Course material:

- Lecture notes
- Slides
- Reading material

Prerequisites:

As the focus of the course is applied theory, an intermediate knowledge of microeconomics and macroeconomics would be required. For the empirical content, basic notions of econometrics are sufficient.

Grading:

0.5*CC + 0.5*CT:

- CC: written exam covering chapters 1 and 2.
- CT: short project related to chapters 3-5.

Course website:

https://sites.google.com/site/agustinperezbarahona/home