EC 30: Environmental Economics and Policy
Talloires, France
Summer 2013

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Course Description:

The course will begin by developing the economic tools necessary for an analytical study of environmental problems and policies. Then we will get acquainted with the definitions of common property resources, externalities, and public goods, as well as the basics of cost-benefit analysis including the theory and an empirical application of non-market methods of valuation. Also, we will learn about the economics of non-renewable and renewable resources, as well as the topics in the economics of air and water pollution, waste disposal and recycling, climate change, land use, and the interactions between sustainable economic development and the environment. Importantly, we will compare the policy approaches in addressing environmental and natural resources problems in the EU and by the USA. We will also discuss the limitations of economic analysis to provide policy guidance on environmental issues and the importance of the interdisciplinary approach to the environmental policy-making.

Course objectives:

Upon completion of this course students will be able to:

1. Understand and analyze the role of government policy in environmental economics by applying the basic concepts of welfare economics and cost-benefit analysis.

2. Understand and discuss the underlying economic issues pertaining to the environment for producers, consumers, markets, and government.

3. Address environmental economic issues; such as the ecological goals of an economic policy, greening national accounts, and sustainable development; through the application of economic analytical methodologies such as cost-benefit analysis and basic dynamic intertemporal resource allocation models.

4. Discuss current environmental and news articles to be aware of local and global environmental economic issues.
These learning outcomes will be measured according to the following grading system:

**Grading:**

Grades for the course will be based on performance in two exams (one midterm and one final, 25% of the final grade each), a mandatory in-class power-point presentation of one of the readings from the reading list (10%), a group project (20%), three homework assignments (15%), and in-class participation (5%).

The exams will test your comprehension of the course lectures, the main textbook and the supplemental readings, which are listed below. The final will not be cumulative but the concepts from the first half of the course may be needed to score well on the final.

The in-class presentation will be based on the readings provided for the course. Students will be rewarded for concise, effective and relevant presentations. I recommend using power point software that will enable visual depiction of the concepts and help students to organize their thoughts for a 5-10 minute presentation.

Three homework assignments will be assigned during the course. The homework assignments will include selected questions and problem sets from the textbook as well as the exercise in non-market valuation.

A group project will be assigned during the course. Each group will give a presentation of approximately 15 minutes followed by an open discussion.

Class participation includes questions and comments during and outside of class meetings. These activities will be discussed in more detail at the beginning of the course.


All the other **readings** are either from the book “Economics of the Environment: Selected Readings” edited by Robert Stavins (6th edition, W.W. Norton & Company, 2012) or may be downloaded directly from the Internet according to the provided web-site links.
**Preliminary Course Schedule (subject to revision)**

The class will meet *three times per week*: one short meeting on Tuesdays and two longer meetings on Mondays and Thursdays. The longer classes will cover two sessions.

<table>
<thead>
<tr>
<th>Session</th>
<th>Topic</th>
<th>Readings</th>
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<tbody>
<tr>
<td>Tues., May 14</td>
<td>Introduction to environmental and ecological economics</td>
<td>None</td>
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<tr>
<td>Thurs., May 16</td>
<td>Overview of the central issues in environmental and ecological economics</td>
<td>Readings #1-5</td>
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<tr>
<td>Thurs., May 16</td>
<td>Basic concepts of welfare economics and their application to the environmental issues</td>
<td>Harris&amp;Roach, Appendix to Ch. 3</td>
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<tr>
<td>Mon., May 20</td>
<td>The theory of environmental externalities</td>
<td>Harris&amp;Roach, Ch. 3</td>
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<td>Harris&amp;Roach, Ch. 3</td>
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<td>Tues., May 21</td>
<td>Group projects: choosing the topics</td>
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<td>Thurs., May 23</td>
<td>Public Goods and Common Property Resources</td>
<td>Harris&amp;Roach, Ch. 4</td>
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<tr>
<td>Thurs., May 23</td>
<td>Public Goods and Common Property Resources</td>
<td>Reading #5</td>
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<tr>
<td>Mon., May 27</td>
<td>Cost-Benefit Analysis in Environmental Economics</td>
<td>Harris&amp;Roach, Ch. 6</td>
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<td>Mon., May 27</td>
<td>Cost-Benefit Analysis in Environmental Economics (continued)</td>
<td>Reading #6</td>
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<td>Tues., May 28</td>
<td>Midterm exam</td>
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<td>Thurs., May 30</td>
<td>Environmental valuation</td>
<td>Harris&amp;Roach, Ch. 6; Reading #7-11</td>
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<td>Thurs., May 30</td>
<td>Environmental valuation (continued)</td>
<td>Readings #12-14</td>
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<td>Mon., June 3</td>
<td>Nonrenewable resource scarcity</td>
<td>Harris&amp;Roach, Ch. 5</td>
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<tr>
<td>Mon., June 3</td>
<td>Nonrenewable resource scarcity (continued)</td>
<td>Harris&amp;Roach, Ch. 12; Readings #15-17</td>
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<td>Tues., June 4</td>
<td>Energy and the environment</td>
<td>Harris&amp;Roach, Ch. 13 Readings #18-20</td>
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<td>Thurs., June 6</td>
<td>Pollution analysis and policy</td>
<td>Harris&amp;Roach, Ch. 16</td>
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<td>Thurs., June 6</td>
<td>Environmental regulation</td>
<td>Reading #24</td>
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<td>Mon., June 10</td>
<td>Global climate change</td>
<td>Harris&amp;Roach, Ch. 18</td>
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<tr>
<td>Mon., June 10</td>
<td>Climate change policies</td>
<td>Readings #20-23</td>
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<td>Tues., June 11</td>
<td>Environmental policies &amp; Trade</td>
<td>Harris&amp;Roach, Ch. 19 Readings #41-42</td>
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<td>Thurs., June 13</td>
<td>CO$_2$ – Emissions Trading in the EU</td>
<td>Readings #24</td>
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<tr>
<td>Thurs., June 13</td>
<td>SO$_2$ – Emissions Trading in the US</td>
<td>Readings #25</td>
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Mon., June 17  | Land Use policies  | Readings #27-29
Mon., June 17  | Land Use policies (continued)  | Reading #30
Tues., June 18  | Presentations
Wed., June 19  | Field trip to Geneva (UNEP)
Thurs., June 20  | Geographical Information Systems in Environmental Economics  | Readings #31-33
Thurs., June 20  | Presentations
Mon., June 24  | Institutions for sustainable development  | Harris&Roach, Ch. 7&20
Mon., June 24  | Sustainable development  | Readings #34-42
Tues., June 25  | Review
Thurs., June 27  | Final exam
Thurs., June 27  | Presentations

**Course Contract**

All students are required to sign a contract indicating their responsibilities for the course. This contract lists the expectations of all students regarding preparedness, participation, and personal conduct. The contract also details my commitment towards the course on similar issues. Students are welcome to make changes to their contracts but please discuss any changes with me beforehand.

**Student Needs**

Any student with a disability or individual needs will be accommodated to every extent feasible. Please discuss any such issues with me as soon as possible.
Course Reading List

Overview of the central issues in environmental and ecological economics

4. UNEP Yearbook 2012: Emerging Issues in our Global Environment, United Nations Environment Programme (Executive Summary, p. vii; Year in Review, p. 1-13 (browse); Key Environmental Indicators, p. 51-63 (browse)).

Public Goods and Common Property Resources


Environmental Valuation

11. Kuik, Onno, et al. “Practical Use of Benefit Assessments in the Netherlands”, In Jean-Phillippe Barde and David W. Pearce (eds.) Valuing the Environment:


**Non-renewable Resource Scarcity and Energy**


**Climate Change Mitigation Policies**


Pollution Mitigation


Land Use Policies; Open Space Amenities and Preservation


Geographical Information Systems in Environmental Economics


Sustainable Development: Economic and Ecological Indicators


**Trade and the Environment**
