

Environmental Economics, fall 2017

Welcome: Very welcome to this interesting, important and most urgent course in environmental economics. When writing this, Swedish political and economic leaders are meeting in the city of Visby for the annual political festival “Almedalsveckan”. Sustainable development and green economics is on top of their agenda. Earlier this year, global political and economic leaders were gathering in the Swiss ski resort Davos for the annual World Economic Forum. In their Global Risk Report (2017) World Economic Forum list global risks facing the world. Among the risks with the highest impact several are related to climate and the environment. These include: Extreme weather events (e.g. floods, storms, etc.); Failure of climate-change mitigation and adaptation; Major biodiversity loss and ecosystem collapse; Man-made environmental catastrophes (e.g. oil spill, radioactive contamination, etc.). Identifying and addressing these risks is dealt with within environmental economics. In December 2015 a very important climate agreement was signed in Paris and on 4 November 2016 the Paris Agreement entered into force. The same agreement that Donald Trump decided to leave. Exiting, to say the least. Over the years several economists studying environmental problems, or sustainable development in a broader sense, have been awarded with the Nobel Prize in Economics – Elinor Ostrom, Amartya Sen and Joseph Stiglitz to mention a few. Thus, the importance of applying economics to environmental or developmental issues could not be over estimated.

Contents: This course is about how economics can be applied to environmental and natural resources issues for analyzing scarcity problems and contribute to an improved husbandry of ecosystem services and other natural resources. It also puts environmental economics into a broader perspective by relating it to the field of ecological economics, sustainable development and economic growth. Through the course various *theories and methods* in environmental economics, as well as *applications* of environmental economics to various issues in Sweden or of high relevance for Sweden, are presented. These applications also give insights in Swedish environmental policies and how they relate to international policies such as EU directives. We will also do one or two study visits to organizations working in fields related to environmental economics. We plan to visit an influential Swedish think tank and the Swedish parliament. This course is typically given credit by Economics departments.

Learning outcomes: After the course, you should be able:

- To describe distinctive features of environmental and ecological economics in relation to other scientific fields.
- To formulate and evaluate what environmental economics can contribute with in shaping a sustainable development in society.
- To explain environmental economics issues when giving oral presentations.
- To generate ideas for topics for environmental economics papers and apply a scientific method for writing them.
- To employ instruments such as tables, graphs, etc., to model and/or communicate important contexts and issues related to environmental economics.

Pre-requisite: One course in Microeconomics.

Teachers:

- Main instructor: Dr. Markus Larsson, head of the Environment and Climate Program at the think tank Fores (www.fores.se). You reach me at marklars@kth.se or 0760-312501.
- Leif Bratt has a long experience in teaching environmental economics and has authored several textbook. He has a back-ground as a business leader and in politics. You reach Leif at leif.bratt@gmail.com.
- During the course you will meet guest lecturers and we will visit Swedish organizations working in the field of environmental, ecological or green economics.

Webpage: Readings, lecture notes, and other information about the course will be uploaded on a course webpage.

Seminars: There will be 12 three-hour seminars, see the schedule below. Most of the seminars include lectures, discussions and presentations of individual/two by two/groupwise work. The work to be presented can be homework to be done before class or work to be done as a part of the seminar. The seminars are held at the Stockholm School of Economics. At one or two occasions we will visit other organizations. I will also list seminars that are not mandatory but that could be of interest for you.

Readings: There are two required books for this course, as well as a number of articles and reports. The schedule below contains a preliminary list of articles and reports. The reading list will be updated and the articles will be distributed during the course. The required books are the following:

- Daly, Herman, Farley, Joshua. Ecological Economics: Principles and Applications. Island Press.
- Jackson, Tim., 2009. Prosperity without Growth: Economics for a Finite Planet. Earthscan, London. This book can be downloaded free of charge.

Grading: Your grade will be calculated according to the following breakdown:

- Attendance and participation: 15 %
- Written mid-term exam: 35 %
- In-class presentations: 15 %
- Final paper: 35 %

Attendance and participation: Your regular attendance and active participation is required. Every absence will lower your overall participation grade by one step (A becomes A-, etc.). You can avoid this reduction by doing an assignment for compensating for your absence. However, this compensation opportunity is only available for a maximum of three absences. If there are any readings that you are expected to complete before the class, please come to class prepared to engage fully with the materials.

Written mid-term exam: There will be a written exam. This exam will be about the various theories and methods that are brought up in the course.

In-class presentations: At most seminars, you will be required (either individually, two by two, or groupwise) to go through readings or other material and to present your findings in class.

Final paper: At the end of the course, you are required to hand in a paper and to present your findings. Depending on the number of students taking the course, the paper is to be written by a single author or by two or three co-authors. The subject of the paper is to be some environmental economics issue with Swedish relevance. The paper should be based on a scientific approach, including a clear methodology and criticism of your sources. Maximum length of the paper: 6000 words. You will receive more instructions, including some suggestions about potential subjects for the papers. There are four hand-ins for your work with the paper:

- Hand-in of ideas about the subject of your paper: In this hand-in, you should suggest and briefly describe ideas for the subject you would like to write about.
- Hand-in of synopsis of your paper: Here you give an overview of your planned paper, preferably as a table of contents in which you have included descriptions of what you will include in each section.
- Hand-in of preliminary version of your paper. This is the version of your paper that you present in class at seminar 12 and which will be discussed in class.
- Hand-in of final version of your paper. After the presentation and the discussion in class at seminar 12, you have a few days for taking comments into account and prepare the final version of your paper.

Schedule (preliminary):

In italics I list seminars, lectures and other activities related to, but not mandatory to, the course. Through out the course I will add external activities to the schedule as they come to my knowledge.

Readings, below, within brackets or in italics are preliminary. ML=Markus Larsson, LB=Leif Bratt. All seminars are in room A975a and run from 13:00 until 16:00.

- Seminar 1: Thursday 31 August. ML
 - Welcome to the course!
 - Theories and methods: Environmental economics, micro economics, ecological economics and sustainable development.
 - Readings:
 - Daly and Farley, Ch. 1-2, (3) + 8-9 (+13, p. 233-244).
 - *Costanza, R. 1989.*
- Seminar 2: Thursday 7 September. LB
 - Theories and methods: Ecological economics. Introducing the final paper.
 - Readings:
 - Daly and Farely, Ch. (1-2), 3-4, (5-7)
 - Spash, C. L., 2013. The shallow or the deep ecological economics movement? *Ecological Economics* 93, 351-362.
- Seminar 3: Thursday 14 September. LB
 - Theories and methods: Economic growth and the environment.
 - Readings:
 - Daly and Farley, Ch. 14 (16)
 - Jackson, the whole book

- Seminar 4: Thursday 21 September. ML
 - Theories and methods: The economist's explanations to environmental problems.
 - Readings:
 - Daly and Farley, Ch. 10 (11-12)

- Seminar 5: Thursday 28 September. ML
 - Theories and methods: The economist's solutions to environmental problems I.
 - Readings:
 - Daly and Farley, Ch. (21), 22, (24)

- *Non mandatory: Seminar on "climate refugees". Launch of new report at Fores, Kungsbroplan 2.*

- Seminar 6: Thursday 5 October. LB
 - Theories and methods: The economist's solutions to environmental problems II.
 - Readings:
 - Daly and Farley, Ch. 24
 - more to be announced.

- Seminar 7: Thursday 12 October. ML
 - Theories and methods: Sustainable development and statistics. Gapminder – exercise and presentation.
 - Readings:
 - Daly and Farley, Ch. 14, 16
 - Moran, D. et al., 2008. *Measuring sustainable development — Nation by nation. Ecological Economics 64 (2008) 470 – 474*
 - Kubiszewski, I. et al., (2013): *Beyond GDP: Measuring and achieving global genuine progress. Ecological Economics 93 (2013) 57–68*
 - Antal, M. and van den Bergh, J., (2014): *Evaluating Alternatives to GDP as Measures of Social Welfare/Progress. Working paper 56, www.foreurope.eu*

- Seminar 8: Thursday 19 October. ML
 - Mid-term exam: Written exam covering “theories and methods”

After the written exam, the written paper will be introduced.

- Seminar 9: Thursday 26 October (preliminary). ML
 - Applications: Towards a low carbon economy – policy and research. Study visit at the “green, liberal” think tank Fores – Forum for Reforms, Entrepreneurship and Sustainability. We discuss climate negotiations and other pressing issues with Fores CEO Mattias Goldmann – elected the most influential person in the field of sustainability issues in Sweden 2016 – and others at Fores. See fores.se.

- Readings:
 - Daly and Farley
 - more to be announced

Fall break week 44-45

- Seminar 10: Thursday 16 November. ML
 - Applications: Mandatory presentation and supervision of written paper.
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- Seminar 11: Thursday 23 November (preliminary). ML
 - Applications: Green economics – a political perspective: Study visit at the Swedish Parliament where we discuss green economic issues with a former member of the European Parliament and present member of the Swedish Parliament.
 - Readings:
 - Jackson, the whole book
 - more to be announced
- Seminar 12: Thursday 30 November. ML
 - Presentations and discussions of preliminary versions of your papers.
- Optional: 7 December, if needed. ML
- Hand in of final version of written paper: Thursday 7 December