

Swedish Program

Environmental economics

Fall 2024

Syllabus

This course will give an introduction to, and overview of, how to think about, model and empirically evaluate the two-way interaction between the global economy and the environment that it is embedded in. The natural environment provides the basis for the economy. Changes in the surrounding environment have important consequences for the global economy and human wellbeing more generally. At the same time, economic activity is to a growing degree an important driver behind changes in the natural environment apparent in phenomena such as climate change, ocean acidification and loss of biodiversity. We will cover the basics of environmental economics and environmental economic policies. We will also discuss many topics such as climate change, growth, technology, ecosystem dynamics, international trade.

Teachers

Main teacher: Johan Gars, researcher at the Beijer Institute, Royal Swedish Academy of Sciences. Email: johan.gars@kva.se. Office hours by appointment by email or in connection to the lectures.

Guest lecturer: Elena Paltseva, Associate Professor at Stockholm Institute of Transition Economics (SITE) at the Stockholm School of Economics. Email: Elena.Paltseva@hhs.se.

Grading

The examination will consist of a combination of active attendance (10%), smaller test distributed during the course (20% in total), hand in assignments with presentation (30%), and a final exam (40%). Unless otherwise explicitly stated, the examination will be based solely on the material provided in lecture notes and slides. The additional readings provide additional depth and insights, but they are often technically advanced.

Literature (will be expanded)

Lecture notes and/or slides will be provided for the lectures. This is the main required literature.

Most of the theory is covered by most Microeconomic textbooks

Climate economics

Golosov, Mikhail, John Hassler, Per Krusell, and Aleh Tsyvinski. "Optimal taxes on fossil fuel in general equilibrium." *Econometrica* 82, no. 1 (2014): 41-88.

Stern, Nicholas. *The economics of climate change: the Stern review*. Cambridge University press, 2007.

Hassler, John and Krussell, Per (2013). The climate and the economy. *Mistra-SWECIA Report*.

Dell, Melissa, Benjamin F. Jones, and Benjamin A. Olken (2012). "Temperature shocks and economic growth: Evidence from the last half century." *American Economic Journal: Macroeconomics* 4, no. 3 (2012): 66-95

Growth and technology:

Acemoglu, Daron, Philippe Aghion, Leonardo Bursztyn, and David Hemous. "The environment and directed technical change." *American economic review* 102, no. 1 (2012): 131-66.

Copeland, Brian R., and M. Scott Taylor. "Trade, growth, and the environment." *Journal of Economic literature* 42, no. 1 (2004): 7-71.

Hassler, John, Per Krusell, and Conny Olovsson. "Directed technical change as a response to natural resource scarcity." *Journal of Political Economy* 129, no. 11 (2021): 3039-3072

International trade and the environment

Brander, James A., and M. Scott Taylor. "Open access renewable resources: Trade and trade policy in a two-country model." *Journal of International Economics* 44, no. 2 (1998): 181-209.a

Brander, James A., and M. Scott Taylor. "International trade between consumer and conservationist countries." *Resource and Energy Economics* 19, no. 4 (1997): 267-297.

Preliminary schedule

2024-09-02 13:15-16:15 Room A138: Introduction

2024-09-09 13:15-16:15 Room A320: Environmental economic theory and policy

2024-09-23 13:15-16:15 Room A138: Environmental economic theory and policy

2024-09-30 13:15-16:15 Room A138: Valuation of environmental goods

2024-10-01 15:15-18:15 Room A138: Dynamics and discounting

2024-10-07 13:15-16:15 Room A550: Climate economics

2024-10-14 13:15-16:15 Room A138: Climate economics

2024-10-21 13:15-16:15 Room A: Guest lecture by Elena Paltseva

2024-11-11 13:15-16:15 Room A133: Catch up

2024-11-18 13:15-16:15 Room A348: Growth and technology

2024-11-25 13:15-16:15 Room A342: International trade and environmental problems

2024-12-02 13:15-16:15 Room A348: Thresholds, tipping points and uncertainty