

Tomasz Zylicz

Environmental and Resource Economics

Lecture offered in Fall semester 2025/2026

Tuesday 9:45-11:20, auditorium A307

The aim of the course is to outline main issues of environmental economics and policy. Particular emphasis is placed on discussing the role of markets, as well as questions of economic efficiency in using the natural environment and its resources. The lecture is recommended for both Polish and international (Erasmus) students interested in environmental issues. Basic text: H. Folmer and H. L. Gabel (eds.), *Principles of Environmental and Resource Economics. A Guide for Students and Decision-Makers*. Second Edition, Edward Elgar Publishing 2000; pages indicated refer to this text. As an additional reference students may use any environmental economics textbook, e.g. W. Buchholz, C. Reif, D. Rübelke, *Foundations of Environmental Economics: An Introduction to the Economic Analysis of National and International Environmental Challenges*, Springer 2024

The syllabus covers 15 topics to be addressed in 13 lectures. There will be only 13 meetings this term. The following list provides a schedule of topics assigned to specific meeting dates.

Topics:

- 7.10 Review of contemporary environmental problems and their economic contexts. Basic concepts of a market economy. Efficiency of competitive markets; pp.xxi-xxxii; Market failures accompanying external effects and public goods. Correcting for externalities. Generalized Pareto optimum; pp.3-33.
- 14.10 Coase theorem, Pigouvian taxes, marketable permits; pp.3-33.
- 21.10 Public goods. Public policies. Democracy and environmental protection; pp.363-395.
- 28.10 Decision making under uncertainty; pp.396-419
- 4.11 Intertemporal choice. Discounting; pp.104-129.
- 14.11* Economics of exhaustible resources. Hotelling rule. Maximum Sustainable Yield concept; pp.665-699.
- 18.11 Economics of renewable resources. Immobile resources; pp.665-699.
- 25.11 Economics of renewable resources. Mobile resources; pp.665-699.
- 2.12 Welfare indices and the environmental resource base. Environmental damages and national product. Economic role of environmental resources; pp.564-601.
- 9.12 Valuing the environment and valuation methods; pp.34-103.
- 16.12 Environmental policy: goals, principles and constraints. Typical policy failures Environmental policy instruments I; pp.130-201.
- 13.01 Environmental policy instruments II (applied marketable permits); pp.157-201.
- 20.01 "Eco-taxation" issues; pp.529-563.

Final exam is planned for January 27 (Tuesday), 2026, at 9:45 in auditorium A307. Students are encouraged to discuss both the sample multiple choice questions and sample exercises (included in my overheads) either in the class or during my office hours.

Grading will take into account test results (72%), class attendance (14%), and class performance (14%).

*November 11 is a public holiday in Poland. The Student Dean decided, that on November 14, 2025 (Friday), all economic classes will be carried out according to the Tuesday schedule.

The aim of the lecture is to introduce students into economics of environmental protection and resource conservation. Particular emphasis will be put on determining the role of markets in an efficient use of these resources. The knowledge of elementary economic concepts is necessary, but the class is self-contained and thus accessible for non-economic students as well. The lecture includes such theoretical economic topics as efficiency of competitive markets, market failure in the presence of externalities and public goods, discounting and Coase theorem. It also covers a number of issues related to environmental policy such as: policy instruments, especially Pigouvian taxes and transferable permits, natural resource management (both exhaustible and renewable ones) and the Hotelling rule. In addition, environmental valuation problems will be addressed in the class.