Tomasz Zylicz

INTERNATIONAL ENVIRONMENTAL COOPERATION

Lecture offered in Spring Semester 2024/2025
Tuesday 9:45-11:20, Auditorium A002

Contemporary environmental problems call for a global approach and cooperation. There have already been a number of regional, continental or global agreements to manage environmental assets. Negotiating such agreements and, later on, reviewing their performance often refers to economic analyses. The usefulness of economic theory concepts and methods has been demonstrated in several problem areas. Studying, for instance, how societies manage their common resources – such as the Baltic Sea or the global climate – refers to the analysis of so-called public goods. Looking at transboundary pollution transfers downstream international rivers – such as the Danube and Rhine rivers – quite naturally leads to the concept of external costs. Likewise, preparing the Biodiversity Convention was backed by institutional economics studies focusing on property right analyses. The research methodologies applied range from economic-historical analyses, to econometric modelling of general equilibria, to mathematical models of game theory. They also vary with respect to their integration with natural sciences. Some applications do not go beyond simple exercises involving traditional economics language. However, there are also attempts to enrich that language by combining it with ecological concepts. Some analyses aim at purely practical issues arising in contemporary international economic activities, especially money transfers (North-South and, to a lesser extent, West-East) for environmental protection.

The purpose of the lecture is to review contemporary literature addressing the problem of international environmental cooperation and to discuss several controversial issues arising in this context. Emphasis will be placed on cooperation, conflicts and convergence of interest in those agreements which Poland is a party to. Completing the course requires passing a final multiple choice test.

Meetings

18.02 Introduction to the lecture I. Examples of international environmental cooperation. [EIEC, pp.1-22]; [Swanson and Johnston 1999, pp.69-82], [Finus 2003]

25.02 Introduction to the lecture II. International rivers [EIEC, pp.1-22]; [Swanson and Johnston 1999, pp.69-82], [Finus 2003]

04.03 Eutrophication of the Baltic Sea. Economic roots of the problem. The so-called limiting factor. Methods to achieve cost-effectiveness. [EIEC, pp.36-52]; [Markowska and Zylicz 1999]

11.03 International initiatives to solve the problem. Models of an international optimum of the Baltic Sea clean-up: cost and benefit budgets. [EIEC, pp.36-52]; [Markowska and Zylicz 1999]

18.03 The "acid rain" in Europe. Economic roots of the problem. International transfers of sulphur dioxide and nitrogen oxides emissions. A model of environmental-economic linkages. International initiatives to solve the problem. [EIEC, pp.23-36]; [Zylicz 1991]

25.03 Protecting the ozone layer. Economic instruments at work. A "competition" between the developing countries and economies in transition. [EIEC, pp. 53-64]; [Swanson and Johnston 1999, pp.202-263]

1.04 Global climate as a public good. A greenhouse effect risk. Economic consequences of limiting the energy demand. Approaches to an equitable cost-sharing in climate protection activities. [EIEC, pp.65-73]; [Swanson and Johnston 1999, pp.202-263]

8.04 Climate protection: Berlin Mandate [EIEC pp. 73-79]; [R. Stavins' blog at https://www.robertstavinsblog.org] – January 2025 or later

15.04 Climate protection: the Kyoto Protocol and ETS. [EIEC, pp. 79-86]; [Aldy and Stavins 2007], [Finus 2003], [Kiuila et al. 2014]

29.04 Biodiversity protection as an international problem. Cost-benefit analyses of conserving biodiversity. [EIEC, pp.86-94]; [Polasky 2005]

6.05 Conventions and other documents adopted at Rio (1992). The conference as a milestone in maturing the *sustainable development* concept. [Daly 1990], [Buchholz 1997]

13.05 International environmental assistance. The North-South conflict. The concept of "incrementaility" in environmental assistance. Eastern Europe as a target for interest groups from the OECD countries. [EIEC, pp. 95-99]; [OECD 2024]

20.05 Debt-for-environment swaps. Path-breaking agreements from the 1980s. A critique of early debt-for-environment models. The Polish debt-for-environment swap of 1991. Operations of the EcoFund in Poland. [EIEC, pp. 99-121]; [Zylicz 2014]; [Zylicz 2000, pp. 150-173]
27.05 International trade and the environment. A modern critique of the comparative advantage theory. Environmental consequences of the contemporary international trade. [EIEC, pp.130-136]; [*Ecological Economics* 1994]
3.06 Environmental policy in the European Union. Lisbon Strategy – a compromise with economic development objectives? [EIEC, pp. 123-130]; [*Community* 2006]
12.06 Final exam – multiple choice test

Recommended readings:
The main textbook is T.Z. 2015, *The economics of international environmental cooperation*, Peter Lang, Frankfurt [EIEC]. In addition, students may wish to read other sources as well. I suggest for example:

- Joseph E. Aldy and Robert N. Stavins (eds.), Architectures for Agreement. Addressing Global Climate Change in the Post-Kyoto World, Cambridge University Press 2007, pp. 1-27
- Wolfgang Buchholz 1997, "Intergenerational Equity", in: T. Zylicz (ed.) *Ecological Economics. Markets, Prices and budgets in a sustainable society*, Uppsala University, Uppsala, pp. 19-22
- *Community Lisbon Programme. Technical Implementation Report 2006*, European Commission, Brussels 2006 (SEC(2006) 1379)
- Daly, Herman E. 1990, "Sustainable Development: from Concept and Theory to Operational Principles", in: K. Davis and M. S. Bernatam (eds.), *Resources, Environment and Population*, New York: Population Council and Oxford University Press, pp.25-43
- *Ecological Economics* 1994, Vol. 9, No. 1, Special Issue "Trade and Environment"
- Michael Finus 2003, "Stability and design of international environmental agreements: the case of transboundary pollution", in: H. Folmer and T. Tietenberg (eds.), *The International Yearbook of Environmental and Resource Economics 2003/2004*, Edward Elgar, Cheltenham, pp. 82-158
- Olga Kiuila, Krzysztof Wojtowicz, Tomasz Zylicz, Leszek Kasek 2014, "Economic and environmental effects of unilateral climate actions", *Mitig Adapt Strateg Glob Change* (DOI 10.1007/s11027–014–9597–9)
- Agnieszka Markowska, Tomasz Zylicz 1999, "Costing an international public good: The case of the Baltic Sea", *Ecological Economics*, 1999, vol. 30, pp. 301-316
- OECD 2024, "Official Development Assistance", https://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/official-development-assistance.htm
- Stephen Polasky 2005, "Strategies to conserve biodiversity", in: H. Folmer and T. Tietenberg (eds.), *The International Yearbook of Environmental and Resource Economics 2005-2006*, Edward Elgar Publishing 2005, pp. 157-184
- Jim Skea 1999, "Flexibility, emissions trading and the Kyoto Protocol", in: S. Sorrell and J, Skea (eds.), *Pollution for Sale. Emissions Trading and Joint Implementation*, Edward Elgar, Cheltenham 1999, pp. 354-379
- Timothy Swanson and Sam Johnson, *Global Environmental Problems and International Environmental Agreements. The Economics of Institution Building*, Edward Elgar, Cheltenham 1999.
- Richard S. J. Tol 2014, *Climate Economics. Economic Analysis of Climate, Climate Change and Climate Policy*, Edward Elgar
- Tomasz Zylicz 1991, "The Role for Economic Incentives in International Allocation of Abatement Effort", in: R. Costanza (ed.), *Ecological Economics: The Science of Management of Sustainability*, Columbia University Press, New York, pp. 384-399
- Tomasz Zylicz 2000, *Costing Nature in a Transition Economy*, Edward Elgar, Cheltenham
- Tomasz Zylicz 2014, "Poland as a global development partner. Lessons of experience from the Polish transition: Environmental protection", World Bank, Warsaw

The purpose of the lecture is to review contemporary literature addressing the problem of international environmental cooperation and to discuss several controversial issues arising in this context. Emphasis will be placed on cooperation, conflicts and convergence of interest in those agreements which Poland is (or plans to be) a party to. Contemporary environmental problems call for a global approach and cooperation. There have already been a number of regional, continental or global agreements to manage environmental assets. Negotiating such agreements and, later on, reviewing their performance often refers to economic analyses. The usefulness of economic theory concepts and methods has been demonstrated in several problem areas. Studying, for instance, how societies manage their common resources -- such as the Baltic Sea or the global climate -- refers to the analysis of so-called public goods. Looking at transboundary pollution transfers downstream international rivers -- such as the Danube and Rhine rivers -- quite naturally leads to the concept of external costs. Likewise, preparing the Biodiversity Convention was backed by institutional economics studies focusing on property rights analyses. Research methodologies applied range from economic-historical analyses, to econometric modelling of general equilibria, to mathematical models of game theory. The course will demonstrate how these methods can explain the design and development of several international environmental agreements.