

ECON4910 Environmental Economics

Spring 2017

Wednesday's 10:15 - 12:00
Aud 5, Eilert Sundts hus, UiO

Lecture plan in ECON4910

Note: this plan will be updated continuously, this version: March 22. 2017

Lecture number:

1. January 18th
Welfare theorems and market failures
Ch 4.8-4.13 on welfare economics, and Ch 5.1-5.9 on pollution targets in Perman et al. (2011)
Lecturer: Ingrid Hjort
2. January 25th
The choice of pollution targets and policy instruments
Ch 6 in Perman et al. (2011)
Lecturer: Ingrid Hjort
3. February 1st
Uncertainty, cost-benefit analysis and valuing the environment
Background: Ch 11 (Introduction + 11.2.2 -11.3.4), Ch 12 (Introduction - 12.3.3, 12.3.8 - 12.3.9, 12.4 - 12.4.1, 12.5 - 12.5.11, 12.6 - 12.6.4,) and Ch 13 (13.2 - 13.4), in Perman et al. (2011)
Lecturer: Ingrid Hjort
4. February 7th
The Coase theorem, Coasian solutions and markets in licenses
Coase (1960) and Montgomery (1972),
with background papers: Newell et al. (2013) and Schmalensee and Stavins (2013)
Lecturer: Prof Bård Harstad (NOTE: Tuesday 08:15)
5. February 15th
Valuation methods

Carlsen et al. (1993) and Strand et al. (2017)
Guest lecturer: Jon Strand

6. March 1st
Prices vs. Quantities
Weitzman (1974)
Lecturer: Prof Bård Harstad
7. March 8th
Pigou taxes and double dividends
Ch 5.13 in Perman et al. (2011), p. 165 with the backround papers: Pigou (1920) and Sandmo (1975)
Lecturer: Prof Bård Harstad
8. March 22th Deforestation and REDD contracts
Lecture note Harstad (2016b)
Lecturer: Prof Bård Harstad
9. March 29th
Deforestation and valuation
Strand (2017b) together with lecture note Strand (2017a)
Together with two web resources:
 - Amazon Ecoservices: Economic Valuation of Changes in the Amazon Forest Area
 - Research Group on Atmosphere-Biosphere Interaction

Guest lecturer: Prof Jon Strand
10. April 5th
The value of the future: Discounting
Ch 3 and ch 11 in Perman et al. (2011), together with Weitzman (1998) and Karp (2005)
Lecturer: Prof Bård Harstad
11. April 19th
International trade and the environment
Ch 10 in Perman et al. (2011), Oates and Schwab (1988)
Lecturer: Prof Bård Harstad
12. April 26th
International environmental problems: Repeated games and dynamic games
Ch 9 in Perman et al. (2011), Barrett (2005) and lecture notes Harstad (2016a) and Harstad (2016c)
Lecturer: Prof Bård Harstad

13. May 3rd
Supply-side vs. demand-side environmental policy
Harstad (2012), Hoel (1994) and Golombek et al. (1995)
Lecturer: Prof Bård Harstad

Notes to the syllabus:

- Main syllabus is the methods and models presented in the lectures and at the seminars, the articles and the book are meant as support.
- The book is very comprehensive, and is used as a book of reference. You are not expected to read page by page. Main focus will be on the chapters 4-7, and 9-11 and 13. There are useful summaries at the end of each chapter.
- Online appendices to the Perman book is available here:
<http://personal.strath.ac.uk/r.perman/appendices.htm>

References

- Barrett, S. (2005). The theory of international environmental agreements. *Handbook of Environmental Economics*, 3(05):1457–1516.
- Carlsen, A. J., Strand, J., and Wenstøp, F. (1993). Implicit Environmental Costs in Hydroelectric Development: An Analysis of the Norwegian Master Plan for Water Resources.
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- Harstad, B. (2012). Buy Coal! A Case for Supply-Side Environmental Policy. *Journal of Political Economy*, 120(1):77–115.
- Harstad, B. (2016a). Compliance Technology and Self-Enforcing Agreements. Lecture note, University of Oslo.
- Harstad, B. (2016b). Deforestation and REDD contracts. Lecture note, University of Oslo.
- Harstad, B. (2016c). Legally Binding Environmental Agreements. Lecture note, University of Oslo.
- Hoel, M. (1994). Efficient Climate Policy in the Presence of Free Riders. *Journal of Environmental Economics and Management*, 27(3):259–274.

- Karp, L. (2005). Global warming and hyperbolic discounting. *Journal of Public Economics*, 89(2-3):261–282.
- Montgomery, W. (1972). Markets in licenses and efficient pollution control programs. *Journal of Economic Theory*, 5(3):395–418.
- Newell, R. G., Pizer, W. A., and Raimi, D. (2013). Carbon Markets 15 Years after Kyoto: Lessons Learned, New Challenges. *Journal of Economic Perspectives*, 27(1):123–146.
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- Schmalensee, R. and Stavins, R. N. (2013). The SO₂ Allowance Trading System: The Ironic History of a Grand Policy Experiment. *Journal of Economic Perspectives*, 27(1):103–122.
- Strand, J. (2017a). How to value the Amazon rainforest. Lecture note, University of Oslo.
- Strand, J. (2017b). Modeling the marginal value of rainforest losses : A dynamic value function approach. *Ecological Economics*, 131:322–329.
- Strand, J., Carson, R. T., Navrud, S., Ortiz-Bobea, A., and Vincent, J. R. (2017). Using the Delphi method to value protection of the Amazon rainforest. *Ecological Economics*, 131:475–484.
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- Weitzman, M. L. (1998). Why the Far-Distant Future Should Be Discounted at Its Lowest Possible Rate. *Journal of Environmental Economics and Management*, 36(3):201–208.