

**DEPARTMENT OF ECONOMICS  
DELHI SCHOOL OF ECONOMICS  
UNIVERSITY OF DELHI**

**Minutes of Meeting**

**Subject:** B.A. (Hons) Economics – Sixth Semester (2021)  
**Course:** (xii) Environmental Economics, CBCS  
**Date:** December 18, 2021  
**Time:** 2.30 pm IST  
**Venue:** Online mode  
**Chair:** Prof. Surender Kumar

Attended by:

1. Sneha Sri Venkateswara College
2. Vandana Tulsyan Dyal Singh College
3. Vibha Iyer Zakir Husain College
4. Shruti Goyal Shivaji College
5. Pradip Kumar Biswas College of Vocational Studies
6. Pooja Sharma Daulat Ram College
7. Abhinav Parashar Sri Aurobindo College Evening
8. Saumya Verma Lady Sri Ram College

**Readings:**

Charles Kolstad. [\*Intermediate Environmental Economics\*](#), Oxford University Press, **2nd edition** (2012). [[Indian reprint available.](#)]

Roger Perman, Yue Ma, James McGilvray and Michael Common. *Natural Resource and Environmental Economics*, Pearson Education/Addison Wesley, **4th edition** (2011).

Robert N. Stavins (ed.). *Economics of the Environment: Selected Readings*, W.W. Norton, 6th edition (2012).

## TOPIC WISE READINGS

- All chapters below refer to Kolstad (2012). Entire chapter has to be covered except where sections to be skipped are specifically mentioned.
- The number of lectures suggested against each topic has been revised
- Please note some readings are new and some have been dropped.
- In addition to the prescribed readings, it was suggested to share the links that update the students with the ongoing present issues related to Climate change, Emission Trading System (ETS), debates related to COP 26 Summit Glasgow, etc. These present challenges and issues could be presented as case studies by students for internal assessment.

**1. Introduction (approx. 7 lectures):** What is environmental economics; review of microeconomics and welfare economics.

Don Fullerton and Robert Stavins (1998). "[How Economists See the Environment](#)." *Nature*, Vol. 395, Oct 1, 1998, pp. 433-434.  
[Reprinted as Chapter 1 in Stavins (2012).]

Chapter 1: Skip Section III.

Chapter 2

Chapter 3: Do Sections I, II, III (skip section III.B pp. 47-52) and IV.

Chapter 4

Supplementary Reading:

Perman et al. (2011). Chapters 3 and 4.

### **Overview of environmental problems in India [required]**

[Three Year Action Agenda](#) (NITI Aayog, April 2017): Chapter 23 (Environment and Forests)

[Economic Survey 2017-18 Volume 2, Chapter 5 p. 77-78](#) (Air Pollution in Delhi).

*State of Environment Report: India 2009* (Ministry of Environment and Forests, Government of India, 2009): [Chapter 2 \(State and Trends of the Environment\): Land, Air, Water, Biodiversity \(p. 9 to 71\)](#).

Useful source of environmental statistics:

<http://www.indiaenvironmentportal.org.in/content/453907/envistats-india-2018/>

<http://www.indiaenvironmentportal.org.in/content/462580/envistats-india-2019-voli-environment-statistics/>

**2. The Theory of Externalities (approx. 7 lectures):** Pareto optimality and market failure in the presence of externalities; property rights and the Coase theorem.

Chapter 5: Skip Section V (Pricing Public Goods and Bads)

Chapter 13: Do Section I only (Coase and the Assignment of Property Rights)

Supplementary Reading:

Ronald Coase “The Problem of Social Cost” [Abridged version] Reprinted as Chapter 2 in Stavins (2012).

**3. The Design and Implementation of Environmental Policy (approx. 17 lectures):**

Overview; Pigouvian taxes and effluent fees; tradable permits; choice between taxes and quotas under uncertainty; implementation of environmental policy.

Chapter 11: Skip Sections II and VI

Chapter 12: Do all sections

Chapter 13: Do Sections II.A and II.B

Chapter 14

Chapter 15: Do Sections I and II (two typos on p. 303 – check with instructor)

Schmalensee, Richard and Robert N. Stavins (2017). “The design of environmental markets: What have we learned from experience with cap and trade?” *Oxford Review of Economic Policy*, Vol. 33, No. 4, pp. 572-588.

Blackman, Allen, Li, Z., and Liu, A. A. (2018). “Efficacy of command-and-control and market-based environmental regulation in developing countries,” *Annual Review of Resource Economics*, Vol. 10, pp. 381-404.

Supplementary Readings:

1. Perman et al. (2011). Chapter 6.
2. Michael Sandel (and replies to Sandel) “It’s Immoral to Buy the Rights to Pollute” [Reprinted as Chapter 18 in Stavins (2012).]

**4. International Environmental Problems (approx. 8 lectures):** Trans-boundary environmental problems; economics of climate change; trade and environment.

Jonathan Harris and Brian Roach (2018). *Environmental and Natural Resource Economics: A Contemporary Approach*, Routledge. Chapters 12, 13.

Supplementary Readings:

1. Nordhaus, William D. (2013). *Climate Casino: Risk, Uncertainty, and Economics for a Warming World*, Yale University Press.
2. Richard Newell, William Pizer and Daniel Raimi (2013). “Carbon markets 15 years after Kyoto: Lessons learned, new challenges,” *Journal of Economic Perspectives*, Vol. 27, No. 1, pp. 123-46.

**5. Measuring the Benefits of Environmental Improvements (approx. 14 lectures):** Non-market values and measurement methods; risk assessment and perception.

Chapter 7: Skip Section VI (Discrete Choice). Do all other sections.

Chapter 8: Do p. 147 and Section IV (skip section IV.E).

Chapter 10.

## **6. Sustainable Development (3 lecture):** Concepts; measurement.

Geoffrey Heal (2012). “Reflections—Defining and Measuring Sustainability” *Review of Environmental Economics and Policy* Vol. 6, No. 1 (winter 2012), p. 147–163.

Supplementary Readings:

1. Robert Solow (1992). “[An Almost Practical Step towards Sustainability](#),” Resources for the Future (RFF) 40<sup>th</sup> anniversary lecture.
2. Robert Solow (1992). “[Sustainability: An Economist’s Perspective](#)” [Re-printed as Chapter 28 in *Economics of the Environment: Selected Readings* (2012).]
3. Perman et al. (2011): Chapters 2 and 19.
4. *Economic Survey 2018-19 Volume 2, Chapter 5* Sustainable Development and Climate Change.

### **Assessment:**

1. Internal evaluation will comprise one class tests (10 marks) and (5 marks) for attendance. Remaining (10 marks) evaluation may be done by case study submitted and presented by students in class in form of real examples as case study applications of the theory taught in the course, as suggested by the members present in the meeting.
2. The end-semester exam (75 marks) will comprise numerical and other questions.