

Environment and Development Economics
Applied Economics 5991
Spring 2005

Instructors:

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Overview

This course will examine environmental issues in developing countries from an economic perspective. Developing countries desire economic growth to overcome poverty and increase the standard of living of their citizens. Yet, economic activity can lead to pollution and environmental degradation, which if unchecked can cause a decline in the quality of life even as material standards of living increase. In the long run, development and economic growth may not be sustainable if adequate attention is not given to environmental and resource issues. In the course we will analyze specific environmental and resource issues (e.g., air and water pollution, climate change, overuse of common property resources) in the context of developing countries. We will look at both causes and consequences of environmental change and development and the links between the environment and development.

Prerequisites

Intermediate microeconomic theory or instructor consent.

Course Format

The course will meet once a week for two hours. The first hour will be primarily lecture on relevant theory, empirical results, and institutions for the issue of the week. The second hour will be primarily discussion of the issue.

Course Requirements

Each student is expected to be an active participant in weekly class discussions. We expect students to have read the readings for the week **prior to** coming to class. Each student will write a research paper (10 to 20 pages double-spaced) on an environment-development issue of his or her choice. The outline of the paper will be due March 11th (prior to spring break). The first draft will be due April 22nd. First drafts will be returned with comments. Students will then “revise and resubmit” their papers. Final drafts are due May 13th.

Grading

Class participation	40%
First draft of paper	20%
Final draft of paper	40%

Course Outline

Week 1 (January 21) State of the Environment and Human Welfare in Developing Countries – Paul Glewwe and Steve Polasky

Week 2 (January 28) Externalities, Public Goods and Common Property Resources – Steve Polasky

Hanley, N., J.F. Shogren and B. White. 1997. Market failure (Chapter 2) in *Environmental Economics in Theory and Practice*. Oxford University Press.

Hanley, N., J.F. Shogren and B. White. 1997. Economic incentives for environmental protection (Chapter 3) in *Environmental Economics in Theory and Practice*. Oxford University Press.

Dietz, T., E. Ostrom and P.C. Stern. 2003. The struggle to govern the commons. *Science* 302: 1907-1912. (<http://www.sciencemag.org>)

For in class discussion: case studies

Deforestation in Honduras (<http://www.american.edu/TED/honduras.htm>)

Deforestation in Madagascar

(<http://www.american.edu/TED/MADAGAS.HTM>)

Week 3 (February 4) Institutional Capacity in Developing Countries – Paul Glewwe

World Bank. 2003. *Sustainable Development in a Dynamic World: Transforming Institutions, Growth, and Quality of Life. World Development Report 2003*. Pages: 37-51.

Dasgupta, P. 2001. Economic institutions and the natural environment. In *Human Well-Being and the Natural Environment*. Oxford University Press.

Week 4 (February 11) Environment and Growth – Hamid Mohtadi

Copeland, B. and M. S. Taylor. March 2002. Trade, growth and the environment. *Journal of Economic Literature*: 7-71.

Hart, R. 2004. Growth, environment and innovation: a model with production vintages and environmentally oriented research. *Journal of Environmental Economics and Management* 48(3): 1078-1098.

Shafik, N. 1994. "Economic development and environmental quality: an econometric Analysis. *Oxford Economic Papers* 46: 757-773.

Mohtadi, H. 1996. Environment, growth and optimal policy design. *Journal of Public Economics* 63: 119-140.

Mohtadi, H. 1992. Environment, trade and strategic interdependence: a simple model with implications for NAFTA. *North American Journal of Economics and Finance* 3: 175-186.

Week 5 (February 18) Population – Deborah Levison

Dasgupta, P. 1995. The population problem: theory and evidence. *Journal of Economic Literature* 33(4)(December): 1879-1902.

Repetto, R. and T. Holmes. 1983. The role of population in resource depletion in developing countries. *Population and Development Review* 9: 609-632.

Week 6 (February 25) Environmental Kuznets Curve – Jay Coggins

Dasgupta, S., B. Laplante, H. Wang and D. Wheeler. 2002. Confronting the environmental Kuznets curve. *Journal of Economic Perspectives* 16(1): 147-168.

Brock, W.A. and M.S. Taylor. 2004. The green Solow model. NBER Working Paper 10557.

Week 7 (March 4) Environment and Trade –Ford Runge

Esty, D. 2001. Bridging the trade-environment divide. *Journal of Economic Perspectives* 15(3): 113-130.

Bhagwati, J. 2000. On thinking clearly about the linkage between trade and the environment. *Environment and Development Economics* 5(4): 485-496

Comments on Bhagwati by various authors. *Environment and Development Economics* 5(4): 497-529.

Week 8 (March 11) Pollution havens – Paul Glewwe

Eskeland, Gunner, and Anne Harrison. 2003. Moving to greener pastures? Multinationals and the pollution haven hypothesis. *Journal of Development Economics* 70(1): 1-24.

Busse, M. 2004. Trade, environmental regulations and the World Trade Organization: new empirical evidence. World Bank Policy Research Working Paper 3361.

Week 9 (March 25) Water scarcity – Bill Easter

Gregersen, H.M. and K.W. Easter. 2002. Meeting future water requirements for water: an integrated water management perspective. *Quarterly Journal of International Agriculture* 41: 7-22.

Easter, K.W., N. Becker and Y. Tsur. 1996. Economic mechanisms for managing water resources: pricing, permits and markets. In *Water Resources: Environmental Planning, Management and Development*, A.K. Biswas (ed.).

Dosi, C. and K.W. Easter. 2000. Water scarcity: economic approaches to improving management. Center for International Food and Agricultural Policy, University of Minnesota. Working Paper WP00-2.

Week 10 (April 1) Agricultural R&D and the environment – Phil Pardey

Ruttan, V. 2002. Productivity growth in world agriculture: sources and constraints. *Journal of Economic Perspectives* 16(4): 161-184.

Pardey, P.G. and B.D. Wright. 2003. Agricultural R&D, productivity and global food prospects. In *Plants, Genes, and Crop Biotechnology*, 2nd ed., M.J. Chrispeels and D.E. Sadava (eds.). Sudbury: Jones and Bartlett.

Week 11 (April 8) Agriculture, Food Security and the Environment

World Bank. 2003. *Sustainable Development in a Dynamic World: Transforming Institutions, Growth, and Quality of Life. World Development Report 2003*. Pages: 59-106.

Barrett, C.B. 2004. Rural poverty dynamics: development policy implications. In *Reshaping Agriculture's Contributions to Society. Proceedings of the Twenty-Fifth International Conference of Agricultural Economists* (held at Durban, South Africa, August 16-22, 2003). Colman, David and Nick Vink, eds., 2005. Blackwell Publishing.

Week 12 (April 15) Environment and Health – Kirk Hamilton (World Bank)

TBA

Week 13 (April 22) Air pollution – David Wheeler (World Bank)

Dasgupta, S., H. Wang and D. Wheeler. 1997. Surviving Success: Policy Reform and the Future of Industrial Pollution in China. World Bank Policy Research Department Working Paper. (http://econ.worldbank.org/working_papers/287/)

Buys, P., S. Dasgupta, C. Meisner, K. Pandey, D. Wheeler, K. Bolt, K. Hamilton and L. Wang. 2003. Measuring Up: New Directions for Environmental Programs at the World Bank. World Bank Policy Research Working Paper 3097. (http://econ.worldbank.org/working_papers/28405/)

Week 14 (April 29) Minnesota International Economic Development Conference

Week 15 (May 6): Land use/habitat conservation/deforestation – Steve Polasky

Barrett, C.B., K. Brandon, C. Gibson and H. Gjertsen. 2001. Conserving tropical biodiversity amid weak institutions. *Bioscience* 51(6): 497-502.

Balmford, A. et al. 2002. Economic reasons for saving wild nature. *Science* 297: 950-953. (<http://www.sciencemag.org/cgi/reprint/297/5583/950/pdf>)

Ferraro, P.J. and A. Kiss. 2002. Direct payments to conserve biodiversity. *Science* 298: 1718-1719. (<http://www.sciencemag.org/cgi/reprint/298/5599/1718.pdf>)

Adams, W.H., R. Aveling, D. Brockington, B. Dickson, J. Elliot, J. Hutton, D. Roe, B. Vira and W. Wolmer. 2004. Biodiversity conservation and the eradication of poverty. *Science* 306: 1146-1149. (<http://www.sciencemag.org/cgi/reprint/306/5699/1146.pdf>)