Economics 100 Economics of Environmental Regulation   Prof. W. Gray
Fall 2002   Jonas Clark 223, x7693

        This course uses basic economic tools to consider a variety of environmental problems, including both a theoretical analysis of the optimal solution(s) to the problem and a practical analysis of how the problem is (or isn't) solved in different countries. Since no economics background is required, the course will begin with an introduction to economic tools such as supply-demand diagrams and benefit-cost analysis. These tools are then applied to a variety of environmental topics.

Textbook: Environmental Economics and Policy, Tom Tietenberg, 1994.

Intro Economics Text: The Economic Way of Thinking, Paul Heyne (on reserve).

Also look for economics in daily newspaper: Wall Street Journal, New York Times.

Office Hours: Monday 2:00-3:30, Tuesday 10:30-11:30, Thurs 1:30-2:15

Grading:
        20% each for two exams (on Oct. 8 in class; on Dec. 18 at 10:30-12:30)
        30% for research paper (outline-draft-final-presentation)
        20% for weekly quizzes (every Tuesday, at start of class)
        10% for class participation (presentation topics = * on list below)

Outline of Topics (n)=chapter in Tietenberg, [H:n]=chapter in Heyne

I. Introduction to Economics and the Environment (7 lectures)

A. Optimism and Pessimism (1). What are the differences in the assumptions and the conclusions of the optimistic and pessimistic models?

B. Supply and Demand (2) [H:1-4]. What factors influence the decisions of buyers and sellers, how does 'the market' work to provide goods, and how do different economic systems compare in their operations?

C. Benefit-Cost Analysis (3). How do economists measure benefits and costs, especially for environmental goods and bads? What are the hedonic estimation, travel-cost valuation, and contingent valuation methods?

D. Externalities and Sustainability (4-5), [H:13]. How does the existence of pollution (or some other externality) affect the 'optimality' of market allocations? Why are property rights more complicated in this case? How does the distribution of regulatory benefits and costs (across different regions of the country, between consumers and producers) influence the political support for regulation, and changes in regulation? What is sustainability (and why does it matter)?

*E. Population Economics and Policies (6). China vs. France (and perhaps Genome).

II. Economics of Natural Resources (5 lectures)

A. Economic Theory of Natural Resources (7). How should non-renewable resources be used (and valued) over time? How should renewable resources be managed to maintain stocks over time? How does theoretically optimum allocation compare with actual allocations, government interventions?

*B. Energy (8). U.S. vs Europe - gasoline taxes, U.S. oil price controls

*C. Water (9). Mideast vs. U.S. Southwest – conflicts, pricing policies.

*D. Agriculture (10). France vs U.S., collective vs private vs tribal

*E. Fisheries (12). U.S. vs Canada, New Zealand, whaling

III. Economics of Pollution Regulation (5 lectures)

A. Regulatory Methods (13). What sort of regulatory tools could be used to control pollution (regulatory standards, emission charges, marketable permits), and how do they compare with each other in theory? What tools are actually used in different countries to control pollution, and how well do they work in practice?

*B. Local Air Pollution (14). old (London) vs. new (Los Angeles, Mexico City)

*C. Regional/Global Air Pollution (15). Acid Rain (U.S., Europe), Global Warming

*D. Solid Waste and Recycling Policy (18). U.S. vs Germany, bottle bill

*E. Toxic Waste (19). Japan vs U.S. vs developing countries

IV. Macroeconomics, Development, Trade, and Sustainability (6 lectures)

A. Macroeconomics [H:15-16]. What are key macroeconomic variables (inflation, growth, unemployment), how are they measured, and why do they change over time (business cycles)?

*B. Poverty and Development (20). Should poor countries be less strict environmentally to get more growth?   How does growth compare for Asia, Africa, and Latin America? How and why does environmental quality change during the growth process?

*C. Trade and Environment (21) [H:6]. What is comparative advantage, and how does it determine trade flows? Does increased trade damage (or help) the environment (NAFTA)?

D. Sustainability, Wrap-up (22). Can economic growth continue? Why or why not?