

ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS

An Encyclopedia

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Tragedy of the Commons

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Sustainability

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Exhaustible Resources
Fisheries Management
Forestry
User Cost

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Energy Policy
Forecasting
Nuclear Power

Peak Oil
Renewable Energy

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Coastal Resources

Land Use
Groundwater
Tropical Rain Forests
Water Conservation
Water in Development
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Discounting
Green Jobs

Nonmarket Valuation
Pollution Abatement Costs
Risk and Uncertainty
Welfare
Welfare and Equity

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Contingent Behavior
Contingent Valuation
Experimental Methods and Valuation
Hedonic Price Method
Meta-Analysis
Travel Cost Method

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Ecosystem Services
Endangered Species
Outdoor Recreation
Passive Use Value
Value of Statistical Life

PREFACE

What can we do about climate change? How do we reduce pollution? Is reducing pollution worth it? What will we do when we run out of oil? Why haven't we switched to renewable energy yet? Does government involvement help or hinder solutions to these problems? How do we measure the costs and benefits of environmental projects? These and many other questions can be answered with a broad understanding of economics as applied to environmental and natural resources.

Economics is the study of stuff. Who has stuff? Who wants stuff? How is stuff made? How is stuff sold? Who buys stuff? Who sells stuff? Where does the stuff to make the stuff come from? How do we get the most out of our limited stuff? And, where does the leftover stuff go? Economics is the study of the decisions, the institutions, the rules, and the laws that result in how our stuff is made and consumed and ways to make people better off.

Critical to the study of economics is the simple fact that all stuff either comes from or is returned to the environment. Ignorance of this fact, and the blind pursuit of personal well-being, results in markets misallocating stuff and society being worse off than it can be, today and in the future. Failing to understand economics and the role the economy plays in creating and solving environmental problems leads to bad decisions and bad policies. Just as economics cannot exist without depending on environmental and natural resources, environmental and natural resource problems cannot be solved separate from the economy. To paraphrase Homer Simpson, the patriarch of the cartoon Simpson family, who once said, "Beer. The cause of, and solution to, all of life's problems," economics is the cause of, and solution to, all of our environmental and natural resource problems.

Environmental and Natural Resource Economics: An Encyclopedia offers the critical information needed to understand environmental and natural resource issues, presented in an objective and accessible manner. With entries written by the top thinkers in the field, this encyclopedia serves as a general reference on all aspects of environmental and natural resource economics. It focuses on the key concepts, movements, events, people, and organizations relevant to the study of environmental and natural resource economics.

This encyclopedia is a comprehensive reference of all aspects of environmental and natural resource economics, organized topically by the most common way the subject is taught at the college level: market failure, environmental policy, natural resource economics, and applied welfare economics. It is intended for advanced high school students, undergraduate students at two- and four-year institutions,

teachers of economics, non-specialist scholars, researchers in other disciplines (such as political science, geography, and history), practitioners, policy makers and general readers. The encyclopedia can enhance the basic economic literacy of anyone involved with environmental and resource issues; and that includes everyone.

We begin the encyclopedia with an introductory essay on environmental and natural resource economics. We encourage you to start with this overview as it will provide a context for many of the entries that follow. In choosing authors for each entry, we sought out those who not only know something about the topic, but are known as a thought-leader on that topic. Following the introduction are over 140 entries on topics ranging from critical historical events to current theories on environmental and natural resource issues. We believe that exploring these topics will provide you an entry into the vast field of environmental and resource economics. And we believe that after delving into *Environmental and Natural Resource Economics: An Encyclopedia*, you too will come to understand that economics is the cause of, and solution to, all of our environmental and natural resource problems.

Timothy C. Haab and John C. Whitehead

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