NATURAL RESOURCE ECONOMICS

Analysis, Theory, and Applications

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Natural Resource Economics

Mathematical analysis is key to the modeling and management of natural resources. By presenting required mathematical methods, classic dynamic models for nonrenewable and renewable resources, and by exploring several contemporary problems, this text provides a foundation for advanced research. Topics include seminal models in fishery, forestry and nonrenewable resource management, as well as an extensive collection of contemporary applications that include the optimal transition from fossil fuels to clean energy, the optimal timing of interventions to save endangered species, pest control, and the optimal management of antibiotic resistance. Deterministic and stochastic models in both discrete and continuous time are covered. The book encourages students to pursue a deeper understanding of the analytics of resource problems and to deploy numerical methods when analytical results prove intractable. The combination of analysis, theory and applications will launch the next generation of resource economists, while serving as a useful reference for established researchers.

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