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Nota di contenuto	Improving Natural Resource Management: Ecological and Political Models; CONTENTS; Preface; List of Figures; List of Tables; Nomenclature; Part I: MANAGING A POLITICAL-ECOLOGICAL SYSTEM; 1 Introduction; 1.1 The problem to be addressed; 1.2 The book's running example: East African cheetah; 1.2.1 Background; 1.3 The EMT simulator; 1.3.1 Characteristics of an ideal simulator; 1.4 How to use the EMT to manage an ecosystem; 1.4.1 Ecosystem state goals; 1.4.2 No valuation of ecosystem services; 1.5 Chapter topics and order; 1.6 The book's accompanying web resources 2 Simulator architecture, operation, and example output 2.1 Introduction; 2.2 Theory for agent-based simulation; 2.2.1 Other agent-based social system simulators; 2.3 Action messages and IntIDs model operation; 2.3.1 Input-output nomenclature; 2.3.2 ID basics; 2.3.3 Example of a group ID simulating an ecosystem management

decision; 2.3.4 IntIDs model operation; 2.4 A plot for displaying an actions history; 2.4.1 Plot description; 2.4.2 Vertical axis labels; 2.4.3 Example: output from the East African cheetah EMTsimulator; 2.5 Conclusions; 2.6 Exercises; 3 Blue whale population management 3.1 Introduction 3.1.1 Blue whale facts; 3.1.2 Some terminology; 3.2 Current status of blue whales; 3.2.1 Blue whale prevalence over the past 500 years; 3.2.2 Ecosystems to which blue whales belong; 3.2.3 Current causes of blue whale mortality; 3.3 Groups that affect blue whale populations; 3.3.1 Anti-whaling complex of the USA; 3.3.2 Pro-whaling complex of Iceland; 3.3.3 Pro-whaling complex of Japan; 3.3.4 Pro-whaling complex of Norway; 3.3.5 IWC; 3.4 Blue whale ecosystem ID; 3.4.1 Models of whale population dynamics; 3.4.2 A continuous-time model; 3.4.3 ID; 3.5 Interactions between IDs 3.6 Data sets for the blue whale EMT 3.6.1 Group actions data; 3.6.2 Blue whale prevalence data; 3.7 Main points of this chapter's example; 3.8 Exercises; 4 Finding the most practical ecosystem management plan; 4.1 Introduction; 4.2 Some methods for developing ecosystem management plans; 4.2.1 Leadbeater's possum; 4.2.2 Ecological/economic modeling; 4.2.3 Adaptive management; 4.2.4 MPEMP compared to these methods; 4.3 Overview of the consistency analysis parameter estimator; 4.3.1 Agreement functions; 4.4 The MPEMP: definition and construction; 4.4.1 Definition 4.4.2 MPEMP construction procedure 4.5 The MPEMP for East African cheetah; 4.5.1 Setup and computation; 4.6 Conclusions; 4.7 Exercises; 5 An open, web-based ecosystem management tool; 5.1 Introduction; 5.2 Components of a politically realistic EMT; 5.2.1 User interface; 5.2.2 Data collection; 5.2.3 Actions history plots; 5.2.4 EMT website architecture; 5.3 id language and software system; 5.3.1 Language overview; 5.3.2 id language file example; 5.3.3 Descriptions of influence diagram and node; 5.3.4 Description of context; 5.3.5 Description of report; 5.3.6 Structure of id language file 5.3.7 Structure of a surface file

Sommario/riassunto

The decision to implement environmental protection options is a political one. These, and other political and social decisions affect the balance of the ecosystem and how the point of equilibrium desired is to be reached. This book develops a stochastic, temporal model of how political processes influence and are influenced by ecosystem processes and looks at how to find the most politically feasible plan for managing an at-risk ecosystem. Finding such a plan is accomplished by first fitting a mechanistic political and ecological model to a data set composed of observations on both political a
