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Sommario/riassunto

Analyzing the self-sufficient Danish island of Sams, this book explains sustainability through a bio-geophysical understanding of how to best use society's limited resources to achieve true sustainability. The method used derives from the thermodynamic function of exergy. By analyzing exergy flows and establishing a system for evaluating the energy and the materials used in a society, the author creates a platform for monitoring certain indicators of sustainability. These indicators inform readers about the actions that must be taken and the time frames for achieving sustainability goals. The exergy-based approach is an important tool for carrying out such an analysis because it Focuses on several key thermodynamic concepts and the usefulness of exergy analysis for evaluating sustainability Explains sustainability by implementing thermodynamic laws to societal consumption and the use of resources Discusses new methods that integrate energy and material fluxes and evaluates them against each other Provides direct indicators for finding the largest problems/obstacles and deciding where measures should be taken Includes instructions on how to establish an accounting system for evaluating the energy and the materials used in a society This book is aimed for professionals, researchers, and students working on nature conservation and environmental management projects related to sustainability.