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Review: Sustainability or Collapse: An Integrated History and Future of People on Earth

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Costanza, Robert, Graumlich, Lisa J. and Steffen, W. (eds.) *Sustainability or Collapse? An Integrated History and Future of People on Earth*. Cambridge, Massachusetts: The MIT Press, 2007. 495pp. ISBN 13: 978-0-262-03366-4. \$US 38 Hardcover, Alkaline paper.

The now widespread acceptance that global warming is a reality has reinvigorated the debate about sustainable development which, in turn, recognizes the necessity of balancing the needs of people with the resources of their environment in order to ensure a future for both. Such a noble objective is not easily achieved without the co-operation of all the stakeholders: scientists, politicians, industry, agriculture and not least the general public. Failure to recognize this fundamental link between people and environment in the past is one reason why the unsustainability of resource exploitation, notably of carbon-based fossil fuels, poses the current risk of "collapse," however this may be interpreted in terms of scale, intensity etc.

Held in May 2003, a Dahlem workshop addressed the issue of human history and environment in order to bring together hitherto disparate narratives and to highlight the value of interdisciplinary approaches to evaluating people-environment relationships over various time scales. *Sustainability or Collapse?* is the published outcome comprising five sections and 22 chapters.

The introductory section urges a reconsideration of human history in relation to environmental change, highlights the importance of past people-environment interactions, and considers how data relating to such different conditions can be constructed and employed. Section II comprises six chapters which present case studies relating to the ancient Maya, the Roman Empire, the record of human presence in Australia, and hegemonic regimes on the basis of millennial timescales. Section III deals with the last 1000 years, e.g. the social impact of the little ice age and the increasing dominance of Europe on the world stage. The former is one historical period which has been analyzed in depth in relation to climatic change and socio-economic conditions. The focus of Section IV is change over decadal timescales in the twentieth century, a time frame for which abundant but not necessarily compatible data are available. A discussion of change in natural systems (e.g. climate, hydrology and ecosystems) is followed by an examination of the socio-economic and political drivers of change and a chapter on land degradation in drylands to illustrate how data from different sources can be integrated. The final section considers the methodology, notably models and global scenarios, which use data from the past or present to determine trends and assist in prediction for future planning. The 1972 classic *The Limits to Growth* is reconsidered in the light of one critique and is followed by suggestions for integrated global models.

This book benefits from 34 contributors and a commentary at the end of each section assesses lines of evidence and provides suggestions for further work. References are provided at the end of each chapter which facilitates the following up of literature rather than when they are placed at the end of the book. At \$US38 this book is good value, thought provoking and highlights the need for reciprocation between the environmental and social sciences.

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