variety of cases, he shows that those investing in (or promoting, or governing) science, technology development and the diffusion of technology often get it wrong. ('Wrong' is defined in terms of creating greater inequities or divides, not achieving intended economic impacts or posing risks to environmental sustainability.) He highlights *inter alia*: unwarranted assumptions about the universality of scientific techniques (the Green Revolution), questionable motives (supporting one group in favour of another, SR-52), poor analysis (DDT, telecentres in Tanzania), simplistic political objectives (biofuels) and unbridled competitive interests (GMOs). While he makes clear the fascination and challenge of 'understanding the real, integral role science and technology can play in development', one cannot but help catch a feeling of pessimism about the probability that development professionals, policymakers, private investors and even scientists will ever get it 'right'.

Emmy B. Simmons

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Sustainable Agroecosystem Management: Integrating Ecology, Economics and Society. Edited by P. J. Bohlen and G. House. Boca Raton, Fl, USA: CRC Press/Taylor and Francis Group (2009), pp. 301, £48.79. ISBN 978-1-4200-5214-5.

This book is dedicated to the memory of Ben Stinner, an early advocate for a more integrated approach to the study of agroecosystems. An example is the 'Sugar Creek Method', described in Chapter 3, with its emphasis on interaction between researchers and farmers and the benefits of the learning process engendered by this interaction. Chapter 4 takes us back to first principles where it is suggested that 'economic relationships that are extractive of nature or exploitative of people are simply not sustainable'. A provocative statement: is it possible, in a free society, for it to be otherwise? Chapters 5, 6 and 8 put forward alternative paradigms: the idea of the postmodern farm, perennial polyculture and 'holons' ('farms persist in a world of constant change') respectively, while Chapter 7 provides an interesting account of energy use and human population growth.

Section III covers the 'ecological foundations of agroecosystem management'. The theme of new paradigms continues and if I have a concern with the book it is the ease with which conventional agriculture is dismissed in favour of – presumably – a substantial increase in an idealised, alternative agriculture. A more general critique of this thought process can be found in the works of John Gray.[1]

Nonetheless, this is a fascinating overview of how Utopia might be achieved and the scholarship continues to be impressive: Moses, Aristotle and Virgil are all name-checked in Chapter 10. Further chapters offer a rich mix of case studies and conceptual ideas. The book is true to its title and despite some inevitable overlaps, forms a satisfying whole.

S. J. Ramsden

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Nature's Matrix. Linking agriculture, conservation and food sovereignty. By I. Perfecto, J. Vandermeer and A. Wright. London: Earthscan (2009), pp. 242, £24.95. ISBN 9-0781844-0777823.

This book is about landscapes and how humans manage them. Building on observations in relation to the loss of bio-diversity, the food crisis and the growing political unrest in rural areas the authors propose a new paradigm linking arguments from ecology, agro-ecology and grass-root movements. These linkages between the major challenges of our time do not come unexpected to those who work with the many models of alternative agriculture that are referred to, but such readers might relate to the well-presented history of agricultural development. New is the way in which the book draws on recent advances in ecological theory to show that the area between fragmented habitats is probably more important for biodiversity conservation than the habitats themselves. This matrix is to a large extent occupied by agriculture, and the way this land is farmed matters not

[1] Black Mass: Apocalyptic Religion and the Death of Utopia. By J. Gray. London: Allen Lane (2007).

only to food production and rural livelihoods but also to conservation. The book is therefore an important read for conservationists who are invited to adopt a landscape matrix perspective and aim for better understanding of the socio-economic and political forces that influence land use. The paradigm proposed also challenges the industrial model of intensified agriculture that is once more being widely advocated as the best way to meet the food crisis. It is therefore also a valuable read for students and teachers of agriculture who are encouraged to show solidarity with the small farmers around the world in their struggle for food sovereignty.

Susanne Padel

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River Basin Trajectories: Societies, Environments and Development. Edited by F. Molle and P. Wester. Wallingford, UK: CABI (2009), pp. 311, £ 85.00. ISBN 978-1-84593-538-2.

Interdisciplinary studies at the river basin scale are now widely recognized as an invaluable tool in efforts to advance understanding of the complex interplay between human management of water and its repercussions for the environment and society. This book presents 11 comprehensive case studies focusing on governance and management issues in river basins as diverse as the Yellow River in China and Wadi Merguellil in Tunisia. The case studies cover rivers in five continents, with Europe a conspicuous standout, and it is surprising that most of the rivers selected are not international trans-boundary basins such as the much-studied Rhine, Danube, Nile and Mekong. Nevertheless, those from the USA, China, Mexico, India and Australia consider the complex governance interplay between the central and state or provincial arms of government.

An opening chapter by the editors effectively draws together the various threads, highlighting the effects of overinvestment in dams and diversions, over-allocation of water, the consequential environmental impacts and ultimately the risk of basin closure. While the book uncovers no easy fixes, the case studies review a wide range of governance and political models from which river basin organizations could draw in their efforts to cope with the 'wicked' [sic] water problems confronting them.

The book is generally well written and presented, although several of the figures would have benefited from colour printing. However, as volume 8 in the Series Comprehensive Assessment of Water Management in Agriculture, it maintains the high standard of scholarship set by the International Water Management Institute.

Eric T. Craswell

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Climate Change: the Science, Impacts and Solutions. By A. B. Pittock. London: Earthscan (2009), pp. 350, £19.99 (paperback). ISBN 978-1-84407-648-2.

This book updates a 2005 volume by this Australian author (*Climate Change: Turning up the Heat*), so it covers the 2007 Intergovernmental Panel on Climate Change (IPPC) Reports, the Stern Review (2008), recent shifts in the 'greenhouse' policies of the USA, Australia and China, and the global economic downtown (2008–10). In one volume, the author presents a comprehensive and readable analysis of most aspects of climate change.

The first section presents evidence for recent accelerated global warming and its possible causes. The author, a major contributor to all four IPPC reports, has clear views on climate change, but he still addresses the doubts and scepticism of 'contrarians'. The text then turns to forecasting future greenhouse gas (GHG) concentrations, temperature and sea-level rises, with an assessment of likely impacts this century. Most climate models show wide ranges in their predicted outcomes, but the text includes a useful discussion of risks, uncertainty and the 'precautionary principle'. The author concludes that action is needed urgently to limit the damaging effects of climate change, whilst recognizing the long time lags before GHG concentrations stabilize or even fall. The final chapters cover the political aspects of mitigation measures in terms of equity, both within and between countries, and the book ends with the author's statement of the targets, policies and actions needed to reduce emissions to 'safe' levels.