and hydrology as 'ecohydrology' – a sub-discipline of hydrology dealing with ecological aspects of the water cycle.

The first chapter explains the background to ecohydrology and the structure of the book: Chapters 2–7 deal with hydrological and chemical drivers of aquatic systems; Chapters 8–10 concern ecological impacts of natural and modified flows; Chapters 11–14 present integrated ecohydrological analyses of catchments and river basins; and Chapters 14–16 address past, present and future challenges.

The 30 authors illustrate their chapters with conceptual diagrams, maps, figures and tables. Chapters are interspersed with models, which are also the subject of a chapter specifically addressing the risks and benefits of ecohydrological models. A 62-page compilation of up-to-date references completes the book.

On the whole the quality of the chapters is high; the chapter on ecohydrology driving a tropical savanna ecosystem merits special mention as a clear and succinct analysis of the interactions of hydrology and ecology in a defined area – the Serengeti National Park.

This book is a valuable resource for researchers in the fields of both hydrology and ecology and will play a key role in the evolution of inter-disciplinary approaches to water resource issues. Given the widespread human impacts on aquatic ecology and water flows, the next logical step should be the more explicit integration of human ecology into the disciplinary mix.

Eric T. Craswell

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Environmental Impact of Pasture-based Farming. Edited by R. W. McDowell. Wallingford, UK: CABI International (2008), pp. 200, £75.00.ISBN 978-1-84593-411-8.

This is a topical publication. For long, livestock have been associated with degradation of natural grazing land under extensive management, which is noted but is not the subject of this book. Nowadays intensively managed pastures and grasslands have increasingly negative environmental effects in the form of greenhouse gas emissions, land pollution and water pollution. The book has two sections: the first discusses environmental quality; the second describes the impact of different pastoral sectors on the environment. Environmental issues are dealt with under four headings: grazing livestock and greenhouse gases; impact of grazing management on soil quality; grazing and the aquatic environment; and socio-economic issues. The six groups of systems discussed mainly involve dairy and beef cattle, with one involving sheep; other species of grazing livestock are mentioned in passing. The systems discussed are all large-scale and commercial. Many single disciplines study environmental subjects. The book stresses the importance of interactions between the factors in grazed ecosystems and its 16 authors have brought the various disciplines together in a concise and readable form. Chapters have detailed bibliographies. The stated readership is researchers, students and policy makers interested in the environmental aspects of agriculture; it is of interest to all who are involved in large-scale livestock-based farming and the management of grazing lands. Some parts, especially those concerned with dung and manure, are applicable to monogastric production systems. This book should be in the library of all research and teaching institutions interested in rural planning and farming as well as farmers and graziers.

J. M. Suttie

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Integrated Pest Management. Concepts, Tactics, Strategies and Case Studies. Edited by E. B. Radcliffe, W. D. Hutchison and R. E. Cancelada. Cambridge: Cambridge University Press (2009), pp. 529, £35.00(paperback). ISBN 978-0-521-69931-0.

Overall the book is clearly set out. Individual chapters cover the concepts and paradigms of integrated pest management (IPM), economic impacts of implementation, and the most important ecological considerations of theory and practice regarding sampling and multi-species interactions. Most of the 40 chapters are broad ranging but often rather brief. As a result they often give a superficial introduction to grouped topics under

chapter headings rather than an in-depth analysis. The book is, however, up-to-date in terms of topic information and example data sets. However, most of these refer to IPM as practiced in the USA. This is a pity, because IPM is widely practiced globally, albeit on smaller scales than in the USA, for example, in many developing countries where pesticides and advanced technologies are often too expensive for farmers. Regarding specific chapters, I was particularly impressed with coverage of the use of biocontrol agents, breeding for pest or disease resistance, and the use of pheromones and plant derived semiochemicals. Chapters covering IPM case studies for cotton and field vegetables were also well presented and informative. In summary, the book is a good introduction to the many facets of IPM for university graduates but is perhaps less useful to researchers and crop protection advisors, who would probably want more in-depth information on specific topics.

Nick Birch

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Sustainable Farmland Management. Transdisciplinary Approaches. Edited by R. Fish, S. Seymour, C. Watkins and M. Steven. Wallingford, UK: CABI (2008), pp. 263, £75.00. ISBN 978-1-84593-351-7.

This book examines the concept of sustainability in farming from a range of viewpoints, and in doing so, undertakes a thorough analysis of one of the most serious challenges facing today's food production systems. There are four sections which progress in a logical sequence from a group of 'Scene Setting' chapters, followed by a section on 'Communities of Information and Knowledge', and a thought-provoking section on 'Ethical Production and Protection' and ending with a section on 'Ethical and Policy Frameworks'. The interdisciplinary nature of the contributions enable authors to explore the issue of sustainability in a comprehensive manner, with chapters covering the underlying philosophical approach to sustainability, issues relating to the practical management of farmlands and a consideration of developing political and policy frameworks. The authors are drawn from a wide range of disciplines including the natural sciences, social sciences, the farming community, economics and policy analysts. The message is that sustainable farmland management is a complex issue, where different stakeholders subscribe to radically different views. However, the underpinning science is enabling us to improve our ability to develop more robust definitions of sustainability (or lack of it), which in turn will help deliver more appropriate policy responses. This is a thoroughly readable book and through a sequence of well-developed chapters; it provides a genuinely valuable insight into the sustainability concept. The book correctly identifies a range of views regarding the sustainability debate and will inevitably stimulate further debate. It will be invaluable to all of those engaged in the development of sustainable farming systems and should be essential reading for students, researchers and policy makers.

Robert Rees

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Traditional Food Production and Rural Sustainable Development: A European Challenge. By T. de Noronha Vaz, P. Nijkamp and J-L. Rastoin. Farnham, Surrey, England: Ashgate Publishing Ltd (2009), pp. 282, £65.00. ISBN 978-0-7546-7462-7

The scope of the topic suggested by this book's title is both broad and highly relevant. Its focus is on sustainable alternatives to globalized agri-food chains, particularly the future prospects for traditional 'place-bound' agricultural food systems. The authors provide important insights into how small-scale local enterprises, based on traditional know-how and embodying cultural and social values, can survive in the face of market competition and quality requirements. Consistent with this focus, the book does not specifically address sustainability relating to agricultural production.

Part 1 introduces concepts and trends in food systems, considering different dimensions of sustainability and their interlinkages. Part 2 (Traditional Markets and Globalization) examines European markets for butter and for fresh and processed organic tomatoes, and adaptation of traditional food products to market changes.