

over livestock grazing or are associated with ill-conceived pastoral development programmes. Fortunately, Harris understands the importance of the rangeland ecosystems and provides a much-needed analysis of rangeland related issues in the final parts of this chapter.

China has a long history and thousands of years of interaction between its inhabitants and the natural environment. Harris, who speaks Chinese and has been working in China for over 20 years, is well positioned to discuss Chinese attitudes towards wildlife. Chapter 3 provides a valuable contribution to understanding of how Chinese culture influences Chinese peoples' attitudes and actions towards wildlife and the environment, information that is critical to developing conservation programmes that can have practical application in the context of China's culture.

Captive breeding of wildlife, which has a long history in China, is analysed in Chapter 4. Harris makes a strong argument that conservation of animals in the wild needs to focus on managing the animals in their habitat; a 'focus on the wild' as he terms it, not on the captive rearing of wild animals. China's laws and legal institutions for wildlife, little understood in the West, are scrutinized in Chapter 5. Harris reasons that existing wildlife laws often serve to alienate people from wildlife with which they live and provides few incentives for the nomads in China's west to protect wildlife. Chapter 6 provides a realistic assessment of China's system of nature reserves and why they are often so ineffective in accomplishing what they were established to do. For example, Harris points out that both the Qiangtang and Kekexili Nature Reserves actually increased the number of pastoralists and livestock in them since they were formally designated, further complicating efforts to protect the endangered Tibetan antelope and other wildlife species.

Chapter 7 is where, as Harris says, '... we finally get our boots muddy by digging into the conservation status of particular species in China's west.' Here 'stories' are told on eight species (or groups of species): musk deer, Przewalski's gazelle, argali, Tibetan antelope (*chiru*), pikas and zokors, wild yaks and wild camels, large carnivores (wolves, dholes and brown bears), and finally three species that appear to be doing well in China's west (Tibetan gazelle, Tibetan wild ass and blue sheep). This is the chapter where the author's long experience in western China and his skills as a field biologist conducting research on many of these animals is readily apparent. Harris presents information and interesting anecdotes that could only be obtained by someone who has gotten his boots muddy numerous times. Having conducted research on wild yaks on the Tibetan Plateau, I take slight umbrage at Harris's assertion on p. 155 that 'wild yaks - when it comes to confronting humans - are basically wimps,' but that is a very minor snub to an otherwise excellent chapter.

These days, hunting, especially trophy hunting is often not seen as very politically correct. In Chapter 8, Harris notes that trophy hunting grabs a large amount of the financial and personnel resources made available for wildlife in western China and, therefore, argues that it is important to look at the issue objectively and dispassionately. Harris contends that the way China manages international hunting has meant that they have lost the opportunity to develop a functioning, locally operated and self-funding conservation system that could protect wildlife in certain areas. For it to happen, would mean giving more control to local people, Tibetan, Mongol and Kazak nomads, and changing the attitudes towards the nomads of most Han Chinese officials who control the trophy hunting programme.

Harris is a good scientist (prolific list of scientific papers in the References) and in Chapter 9 he precisely dissects the problems related to Chinese wildlife science. Harris adeptly concludes that too much of the wildlife research in China is centred on identifying simple differences among habitats, populations, groups or

individuals instead of focused on revealing functional relationships. Furthermore, he goes on to posit that what Chinese scientists often lack is the ability to answer the question as to why differences exist and how patterns they do notice relate to ecological, evolutionary or wildlife management issues. Harris presents a clear case that good science is vital for wildlife conservation in western China and Chinese authorities and scientists would be wise to listen to his counsel.

In Chapter 10, Harris presents a good analysis of conservation policy suggestions and thoughtful prescriptions about future actions that could be taken to improve the conservation of wildlife and the environment. Dialogue on many fronts is essential to advance conservation in western China and Harris provides a well-researched basis of ideas to move forward.

Wildlife Conservation in China should be required reading for anyone interested in conservation of biodiversity and natural resource management in western China. The book should also appeal to those concerned about broader development issues in China. For that matter, anyone who thinks they are a 'China Hand' should find the book valuable.

Harris has done a spectacular job assembling data on wildlife and their habitats and in analysing the issues related to wildlife conservation. The material is suitably organized and accurate. He not only presents vast amounts of information on wildlife, but on the places where they are found and the cultural roots underlying many of the existing problems. Harris's arguments are precise and rational and his conclusions sound. In the process, he makes a significant and thought-provoking contribution to understanding of a little-known yet important part of the world.

The book is well designed with easily readable typeface and makes judicious use of maps, figures and tables, and is accompanied by 33 colour photographs of wildlife habitats and numerous species, including a remarkable photograph of a Tibetan brown bear. There is an Appendix listing animal and plant species mentioned in the text that could have been improved with Chinese names provided in *pinyin* for readers that do not read Chinese. An exhaustive notes section is provided from the numerous footnotes listed in each chapter that provides readers with much more detailed information. Numerous references in both English and Chinese are provided and the index is useful.

Wildlife Conservation in Western China offers a rich multidimensional analysis of biodiversity conservation issues and provides stimulating and thought-provoking arguments for changing the course of wildlife conservation efforts in China's Wild West. Harris should be commended for this ground-breaking work.

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Harnessing Farms and Forests in the Low-Carbon Economy. How to Create, Measure, and Verify Greenhouse Gas Offsets

EDITED BY ZAC WILLEY AND BILL CHAMEIDES

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This volume provides a comprehensive description of principles and methods for creating greenhouse gas offsets in the agriculture

and forestry sectors. Each step in the process is detailed, from scoping the costs and benefits of a project to verifying and registering offsets. Economic concepts such as levelized costs and discount rates are covered, as well as technical information on carbon inventory methods for forest and agricultural systems. The intended readership is wide and includes landowners, project developers, aggregators and verifiers, indeed any individual who might be interested in developing or marketing land-based carbon offsets. The language is clear and very readable, and should be accessible to audiences of varying backgrounds.

Willey and Chameides have done an excellent job of covering the core concepts related to carbon offsets, such as baselines, verification, validation, greenhouse warming potential, upstream/downstream emissions and risk assessment; the discussion of leakage is particularly thorough. Since carbon offsets are still evolving in the USA and there is no formal system or standard, what this volume provides is a recommended approach for interested parties to follow, one that should work with the many existing registry systems and provide the rigour required by the marketplace. While many of the suggested methods and approaches are commonly practised, the idea of proportional baselines is not widely employed and could be burdensome to implement. Some of the forest inventory recommendations, such as seedling and shrub inventories, are not generally practised and would likely add considerable time and expense for little return. However, most practitioners should find the roadmap presented for creating offsets to be workable and easily adapted to fit their particular situation.

Overall, this volume should be quite useful to anyone who needs to understand the emerging market for carbon offsets. A large number of examples and appendices are included; nearly half of the pages comprise appendices that provide additional detail on a variety of topics from quantifying inadvertent emissions to developing new biomass equations. Readers with a natural resources background will find the discussion of the policy and economic aspects of carbon offset projects instructive, and those with a business or policy background will gain a good understanding of the technical aspects of quantifying the various carbon pools. For policymakers, this book is an excellent overview of a complex and growing topic. *Harnessing Farms and Forests in the Low-Carbon Economy: How to Create, Measure, and Verify Greenhouse Gas Offsets* is a thorough well-written treatment of an important topic, and is a useful reference for those in agriculture, business, forestry and policy.

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Old Fields. Dynamics and Restoration of Abandoned Farmland

EDITED BY VIKI A. CRAMER AND RICHARD J. HOBBS

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The sub-title of this volume (number 12 in the series *The Science and Practice of Ecological Restoration*), *Dynamics and Restoration of Abandoned Farmland* brings to mind the proverbial glass of water; half empty or half full? Is land abandonment a threat, resulting in

loss of important semi-natural habitat and biodiversity? Or is it an opportunity for the re-establishment of old (or new) patterns of biodiversity and/or positive options for controlling soil erosion or generating carbon sinks? The answer lies in the eyes of the beholder (restoration ecologist, geographer, conservationist, economist or rural anthropologist), the geographical location of the abandoned land and the origin and nature of the abandonment process itself. As this volume details, land abandonment is a multi-faceted concept. Indeed one of the main strengths of this volume is the diversity of case studies encompassing, of course, the home of old field ecology, the USA; with chapters from New Jersey and Michigan, but including a wide range of case studies and reviews from Puerto Rico, Brazilian Amazonia, the Neotropics, Australia, South Africa, Central Europe, Southern France, Southeastern Spain and Greece. Although the editors' intention was not to provide exhaustive coverage, and I can cope without a contribution from the UK where the abundant literature on old fields ('set aside') is readily available (for example Firbank *et al.* 2003), I did miss contributions from India, Africa (other than South Africa), the Russian Federation and China amongst others, where land abandonment is a critical element of environmental and socioeconomic change (see Jiao *et al.* 2007).

In my own recent project on land abandonment in mountain areas of Europe (Mitchley *et al.* 2006), we focused on trajectories of change following land abandonment, scenarios of what might happen to abandoned land in ecological terms (opportunities and threats) but also what different stakeholders might seek from abandoned land, for example whether this might be back to traditional forms of conservation management or forward to new forms of wilderness on previously tamed agricultural land? I was keen to learn about the restoration objectives for abandoned land in the different case study regions. The editor's stated rationale is to 'make the book relevant to both scientists and restoration practitioners' and 'each chapter therefore addresses not only the dynamics of community development in old fields but also how this knowledge can better help practitioners in the active restoration of old fields'. However, this laudable aim is patchily met. Some chapters are very good at this and show clearly how the discussion of ecological dynamics within the case study can lead to development of practical restoration objectives. In others, the applied practical element is less obvious and this uneven treatment of practical restoration goals will make the volume less valuable to practitioners.

The case studies provide the focus (and main interest) of the book, but the editors provide three early chapters on the rationale for the book and relevant ecological concepts (succession of course, but also assembly rules and complex systems analysis). Case studies are an obvious way to deal with this complex topic and each chapter relates a story of land abandonment causes and consequences always with a valuable introduction to the associated literature. Common themes emerge; the roles of facilitation and competition, the important role of plant-animal interactions (pollination but also dispersal and herbivory) and the importance of proximity of abandoned land to intact habitat and passive restoration for optimizing biodiversity gain. But eventually some formal synthesis is called for, and here the Editors take charge in the concluding chapter aiming to draw some general conclusions on the environmental, biological and human factors affecting old fields. And herein lies a missed opportunity. Because not all the authors responded to the editors' instructions and thought about restoration outcomes for abandoned land, the synthesis lacks the strong practical message it might otherwise have had. Practical restoration scenarios for abandoned land are diverse, the restoration cup may be half full or half empty, but it is a cup