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Book reviews

Ecosystem Services in Agricultural and Urban Landscapes, edited by Steve Wratten, Harpinder Sandhu, Ross Cullen, and Robert Costanza. Published by Wiley-Blackwell, Queensland, Australia, 2013, pp. 200, ISBN: 978-1-4051-7008-6, AU$ 124.95 (hardcover), AU$99.99 (E-book).

Ecosystem services (ES) underpin life on earth, provide major inputs to many sectors of the economy, and support our lifestyles. They are described in this book as 'the benefits people obtain from ecosystems', which follows the definition from the Millennium Ecosystem Assessment (2005). ES are typically grouped into four basic services based on their functional characteristics: regulating, provisioning, cultural and supporting. They include processes such as biological control of pests, weeds and diseases, pollination of crops, flood and erosion control, supply of food and fibre, climate and water regulation and contribution to cultural and spiritual values.

This book explores the role that ES play in two areas where humans have actively modified – and will continue to modify – ecological systems: agricultural and urban landscapes. The core idea behind this is that applying methodologies that quantify and evaluate ES can help to ensure sustainable food security and conservation of urban landscapes in a world that continues to experience rapid population growth. As the global population is projected to reach 9 billion people by the middle of this century, we will continue to see pressures on land use and ecosystems. In this book, a series of loosely linked chapters highlight how the ES approach that integrates the ecological, social and economic dimensions of natural resource management can help facilitate the robust and 'sustainable' use of managed landscapes.

The book is split into four parts that each contains several chapters from 27 contributors. Part A introduces the concept of ES in managed landscapes, and includes chapters on the importance of ES, links between ecosystem function and economic benefits, and methods to value ES. Part B presents detailed findings of ES in three different managed systems: viticulture, aquaculture and urban areas. Part C focuses on the complexity of measuring and monitoring ES at different spatial and temporal scales. Part D discusses the design of ecological systems for the delivery of ES through various policy mechanisms, and includes chapters on multifunctional agriculture, supply chain management and market-based instruments. Almost every chapter includes at least one, and often several, case study examples. These case studies are instrumental in illustrating the complex components of defining, measuring and managing ES.

This book is a useful contribution to the ES literature for the several reasons. First, it provides a diverse set of well-presented case studies to illustrate application of methodologies to define, measure and evaluate ES.

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Some case studies are more detailed than others, but all enhanced the value of the book. Second, it uses a consistent set of definitions of ES and frameworks based on the MEA (2005) and TEEB (2010), while acknowledging that there is still not a fully agreed upon 'standard' for defining, measuring and managing ES. The reference to the same set of definitions and frameworks across chapters provides a solid consistency that can often be missing in a book of this nature that is written by a large number of contributors. Third, many chapters acknowledge that ES assessment is often about understanding and quantifying trade-offs between provisioning services such as agricultural production with regulating, social and cultural services. Although it provided several suggestions for improved ecosystem management, particularly through the introduction of multifunctional agricultural landscapes, it also stated that there is rarely a scenario where all ES and stakeholders are better off. This is a refreshing approach that makes the contributors appear relatively unbiased and thus giving more credibility to the material presented.

The typical AJARE reader would probably find this book relatively easy to read and could probably skip about half of the chapters that have minimal economics. Chapter 3 gives a good primer on using common economic approaches for quantifying and valuing ES (e.g. revealed and stated preferences) without getting into too much detail about any particular method. It also provides a clear but concise set of examples of 22 ecosystem services and how they may be valued. Economic approaches are not discussed in detail again until the later chapters of the book (8–11), of which I found the chapter on market-based instruments (MBIs) to be the most interesting (Ch 11). The authors of this chapter do a nice job introducing a wide set of MBIs ranging from price- (e.g. user charges) and quantity (e.g. cap and trade)-based to market friction (e.g. insurance, labelling), followed by a wide range of empirical applications that provide some great context in a relatively short space. I would highly recommend chapters 3 and 11 as solid primer on the economics of ES.

Perhaps the greatest shortcoming that I found was the lack of substantial content on ES in an urban context. Although the title of the book implies that there is an emphasis on both agricultural and urban landscapes, more than 80% of the book is focused on agricultural ES. Instead, most references to the 'urban' topic was the ongoing increase in population and related demand for provisioning services (e.g. food, fibre, water), as well as some of the regulating (e.g. climate) and social services (e.g. recreation). The key exception was chapter 6, which investigated the role of cities in maintaining biodiversity for functional ecosystems and highlighted that recreation and climate moderation are highly valued ES. However, I found this chapter to be less focused than some of the agriculture-centric chapters, as it included a mix of definitions, generic examples, a detailed case study of a German city, and other issues that cities face across the globe. To be fair, this could be a result of the authors trying to fit 'all things urban' into a single chapter of the book

as opposed to the other contributors having the ability to be more focused on a particular aspect of agricultural ES.

In summary, I think that this book is a useful addition to the literature. Although the concept of defining, measuring and managing ES in agricultural and urban landscapes is not new, the wide range of case studies provide some empirical grounding to this topic, including some from Oceania. Although comprehensive in coverage of the key aspects of ES, the chapters are written in a way that is accessible to a wide range of readers and disciplines. Thus, I would recommend this book to economists, policy makers, land managers and students wanting to get a relatively clear and concise overview on the key aspects of ES.

ADAM DAIGNEAULT
Landcare Research, Auckland New Zealand
Email: daigneaulta@landcareresearch.co.nz

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Emissions Trading Design – A Critical Overview, edited by Stefan E. Weishaar. Published by Edward Elgar, UK, 2014, pp. 249, ISBN: 978 1 78195 221 4, AUD$114.00 (hardcover).

This book contributes more than its title suggests. While the emphasis is on emissions trading schemes, it also provides a useful overview of other emission reduction instruments. The book presents a clear and concise summary of abundant good information and research available on this interesting and important topic.

Much of what we read on emissions reduction schemes of all types is clouded by political and other bias. This book enables the reader to understand the pros and cons of emissions trading schemes, command and control, economic incentives, taxes and other instruments, without the overriding opinion we find in most public forums. These are the major instruments used by public policy makers to mitigate climate change, in my view one of the most important issues of our time.

Of particular interest to me are chapters 5 through to 8 which provide explanations of the implementation issues around emissions trading schemes. There has been a great deal of research on the first issue discussed: the initial allocation of emission rights. Therefore, I felt I was coming into this chapter