

Publications

Effective Conservation Science: Data Not Dogma edited by Peter Kareiva, Michelle Marvier and Brian Silliman (2017), 208 pp., Oxford University Press, Oxford, UK. ISBN 9780198808978 (hbk), GBP 70.00; ISBN 9780198808985 (ppk), GBP 34.99.

The editors of this volume are concerned that a stifling conservation orthodoxy is limiting the ability of practitioners to learn from evidence. The purpose of their book is to 'expose the confirmation bias and weak evidence for some of conservation's most treasured tenets'. As such, this volume falls in line with the growing emphasis on generating and using evidence in many disciplines. It also can be considered part of the line of argument laid out in Bjorn Lomborg's more ambitious 2001 book *The Skeptical Environmentalist: Measuring the Real State of the World*.

Effective Conservation Science has three main sections: Challenges to foundational premises in conservation (eight chapters), Iconic conservation tales: sorting truth from fiction (eight chapters), and Questioning accepted strategies and interventions (nine chapters). Chapters cover a wide gamut of topics, from ecosystem services and introduced species to global agricultural expansion, fishing and the role of corporations. All authors lay out what they consider to be a misunderstood aspect of conservation, with some more successful than others in outlining how this misunderstanding came about and what the reader is supposed to think after completing the chapter.

There is no uniformity in the way chapters are written, with some presenting original research (fishing webs), others rehashing previously published work (GM crops), some reviewing debates in the literature (fisheries data), some provocative think pieces (sustainable fishing) and yet others deconstructing media coverage of issues (Yellowstone wolves). The chapters are short, so it is possible to learn about a large number of topics without the usual turgid quality of book chapters.

The challenge promised by the editors of critically examining our 'most treasured tenets' is only partially met because there is no clear mechanism laid out for identifying those tenets and then systematically addressing them. There is a lack of coherence to the topics chosen, with overlap in a number (e.g. fisheries data) and others absent (e.g. social value of protected areas, disease-biodiversity relationships, the role of evidence in policy development). The promise of the approach advocated by the editors is apparent through one excellent chapter, by Lenore Fahrig, on

habitat fragmentation vs loss. If a systematic process had identified the right set of issues and each one had been addressed, as Fahrig did, this would have been a more impactful book.

Instead, the book is an idiosyncratic set of topics written largely by people within the apparent circles of the editors: 96% from North America and Australia and 83% from just North America. Twenty-four of the 47 authors are from the University of California, Duke, University of Washington or The Nature Conservancy, the last of which is represented by 10 authors. Europe, Africa, and Asia are not represented either by authors, or, with a couple of exceptions, by major tenets that should have been identified and challenged in chapters.

With these criticisms in mind this book does perform a valuable service in reminding us to always be on guard to the fact that we in conservation science live inside echo chambers just as much as our fellow citizens. We must question data, conclusions and, above all, accepted wisdom. For many of us who have been in the field for decades this will mean making active room for younger professionals with new ideas, penetrating suggestions, and uncomfortable critiques, to ensure a future for biodiversity.

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Exploiting the Wilderness: An Analysis of Wildlife Crime by Greg L. Warchol (2017), xvi + 188 pp., Temple University Press, Philadelphia, USA. ISBN 9781439913673 (pbk), USD 28.95; ISBN 9781439913666 (hbk), USD 92.50.

This slim volume on wildlife crime is written not by a biologist or activist but, more unusually, by a criminologist. Easy to read, the book is based on the author's and others' field research over 14 years, mainly in southern and eastern Africa. Designed as an introduction to the illegal wildlife trade, it primarily focuses on wildlife crime in the regions of Africa with which the author is most familiar, occasionally touching on aspects of wildlife crimes in Asia, Europe and the USA.

Chapter 1 describes the illegal wildlife trade, some of the key species traded, and the structure of the markets. Although illuminating, here, and at other points in the

book, the author conflates subsistence hunting with criminally-organized international wildlife trafficking. Even though the former might be illegal in many cases, it is very different in almost all ways to the latter, including ethical ones and how it should be addressed.

Chapter 2 looks at national and international efforts to tackle the trade, including national laws, international treaties, and the role of NGOs. Chapter 3 examines who the offenders are, covering poachers, traffickers and consumers. The picture it paints is laudably broad but in doing so, it glosses over some of the complexities, maybe inevitable in a short volume, but does make for a somewhat simplistic impression. Again, the chapter conflates issues, in this case trophy hunting with commercial trade. Very appropriately, it focuses significant attention on the role of corruption, although it would have been helpful to recognize that the picture is not uniform across Africa, with Botswana being the obvious outlier. Chapter 4 explores the reasons that wildlife crime occurs, including applying criminological theory and its relatively new field of green criminology. It describes the history of colonial and post-colonial governments restricting local communities' access to lands, and recognizes the positive and essential nature of more recent community-based efforts. Chapter 5 focuses on the consumers of illegally traded wildlife, and Chapter 6 on the government agencies in Africa and the USA charged with protecting wildlife. Given that the USA is not, compared with many countries, a major source of trafficked wildlife, it is unclear why so much emphasis is given to describing their wildlife protection systems, unless perhaps as an example of what is working relatively effectively?

Finally, Chapter 7 looks at a range of current efforts to protect wildlife in Africa, including community-based conservation programmes and the application of modern techniques and technologies. Notable absences from the discussion are Namibia, which is arguably the best example in Africa of community-based conservation involving trophy hunting, and also the wildlife enforcement tool SMART (<http://smartconservationtools.org/>) which has now been adopted by more than 380 sites in 46 countries globally, including across much of eastern and southern Africa.

The book covers much ground, but suffers throughout from a lack of accuracy on details (e.g. CITES enforcement mechanisms, species taxonomies) and, more importantly, from relying extensively on grey literature, much of it more than 15 years old, when the whole picture is changing so rapidly, rather than on

the extensive recent peer-reviewed literature. Given this, it is not clear who the intended audience is: the book is in some ways too technical for the general public, but it is not current or accurate enough for the academic or practitioner. The strength that the author brings to the subject is his criminological background alluding, for example, to the application of modern urban policing to wildlife conservation. For his next volume, it would be extremely helpful to students and practitioners of wildlife conservation alike if this perspective could be explored further.

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Aid Performance and Climate Change by Julian Caldecott (2017), 260 pp., Routledge, London, UK. ISBN 9781138294486 (pbk), GBP 23.99; ISBN 9781138294462 (hbk), GBP 88.00.

Aid Performance and Climate Change by Julian Caldecott is a fine book on the mechanics of evaluating the performance of development projects and programmes. It fails, however, to deliver on its promise to be 'a necessary tool in training the next generation of aid professionals to respond to the causes and consequences of climate change'.

The book is organized into seven chapters, plus an introduction and a conclusion. Chapters 2 (Core evaluation criteria), 3 (Keeping human development going), 7 (Evaluating partnerships) and 8 (Evaluating transformations) discuss performance evaluation of development projects. Unfortunately, there is little there on climate change. For example, Chapter 2 discusses eight key criteria for evaluating aid performance (relevance, efficiency, effectiveness, impact, sustainability, connectedness, coherence and replicability), followed by descriptions of other criteria (including donor development policies, partner satisfaction, crosscutting themes and mainstreaming, design quality, and performance of aid institutions). The author is clearly in his element.

However, the discussion generally remains within the ambit of development project evaluation, failing to offer specific guidance on evaluating efforts designed to reduce the impacts of climate change, help build resilience to it, or in reducing greenhouse gas emissions. It would have been helpful to outline the nature of development risks from climate change, some of the promising ways of dealing with such risks, and the specific challenges they pose for evaluation.

Chapter 3 begins promisingly on the purposes of aid given climate change, with examples of actions to mitigate greenhouse gas emissions and to enhance climate change adaptation. The discussion soon leaves climate change considerations for conventions on biodiversity and desertification and then on to changing priorities for terrorism and nationalism, and official development assistance eligibility, a bewildering array of topics. Nor are the solutions proposed always invigorating or breaking new ground. The discussion on terrorism, for example, ends disappointingly, 'Various solutions are being tried, including military strikes, preventative security, counter-propaganda, and re-education, but these often address symptoms rather than root causes. In the absence of other ideas and without guarantees of success, we will just have to try to build equity and sustainability as widely as we can, while also trying to settle fairly, comprehensively, and in line with our values, as many of the underlying disputes as possible'.

Chapters 4–6, on climate change mitigation and climate change adaptation efforts, form the heart of the book. The author enlivens discussion through a number of examples of project evaluations. It becomes apparent that the projects cited are limited to those in which the author was personally involved. Hydropower, biogas, biofuels and tidal power, for example, are discussed as important renewable sources of energy. The most prominent renewable resource for a majority of developing countries, solar power, is, however, markedly absent. Description of the Norway–Indonesia REDD+ partnership is dated. Readers may be left unaware, for example, that the REDD+ agency (a key compo-

nent of the Norway–Indonesia partnership) lost its independence in January 2015 to become part of the Ministry of Environment and Forestry (to widespread dismay, both within Indonesia and internationally). The account on green finance is partial, with no mention of the groundbreaking work of the UN Environment Programme or the great strides of the Chinese government in operationalizing green finance. Furthermore, climate change impetus is not spelled out in several of the examples presented (organic farming, timber regulation, and investing in protected areas, for instance). Although the efforts may all be worthwhile, in what ways could climate change resiliency or mitigation be advanced in their design? In the absence of a framework, issues discussed in the chapter on adaptation seem arbitrary, from bioprospecting, the ASEAN regional biodiversity initiative, and grasslands and desertification, to water diplomacy, environmental monitoring and policy development. The chapter abounds with examples of evaluation from Costa Rica to Nepal, and Bolivia to Mongolia. The spatial diversity could have been enriched by methodological diversity as well, by drawing on the work of others. The last two substantive chapters of the book, on evaluating partnerships and transformations, cover much ground but are devoid of climate change considerations.

The absence of practical guidance to aid professionals on the challenges of climate change is the central weakness of this book. No attempt is made to unpack climate change or to inform readers on the diversity of climate risks and vulnerabilities, and hence responses, that are urgently required in the developing world. Professionals who pick up this book will get a sound overview of aid project evaluation metrics. However, those wishing to know how to design and implement development projects that successfully respond to the causes and consequences of climate change will be disappointed.

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