

## BOOK REVIEWS

doi:10.1017/S0376892906213377

### **Enhancing Participation in Water Resources Management. Conventional Approaches and Information Technology**

EDITED BY LIBOR JANSKY AND JUHA I. UITTO

xi + 222 pp., 23.5 × 15.5 × 1 cm, ISBN 92 808 1120 7 paperback, US\$ 35.00, Tokyo, Japan: United Nations University Press, 2005

The book covers a range of topics dealing with ways to increase public participation in water resources management. In the first part, the authors share experiences on public involvement in governance and document successful processes that led to water conflict resolutions. They then proceed in introducing different IT approaches to enhance public participation and conclude with case studies that suggest how enhanced participation can improve overall water management.

In chapter 2, Jansky *et al.* contrast two situations in Indonesia where one government initiative failed to provide safe water to local communities because traditional practices and local inputs were ignored. In a second case study, the project was judged successful because of full input and participation by the stakeholders. A lot of conflicts can be avoided by giving greater emphasis to an open mode of governance and providing access to key information on a timely basis. However, the negative side of the consultative multi-stakeholder approach is that it takes patience to arrive at workable agreements and often a compromising solution is not necessarily the most cost-effective and efficient solution. The long process to arrive at a tentative agreement is demonstrated in the second case study of the Okavango River and, despite enormous efforts, long-term solutions have yet to be fully realized. What is good in this chapter is the documentation of the process and conditions that have proven to be effective to getting the stakeholders together and arriving at common grounds for negotiations.

In the fourth chapter, environmental impact assessment (EIA) is being once again promoted as a tool to involve or inform the public of possible impacts of a proposed development. As pointed out in later chapters, EIA is not a particularly objective evaluation since it often precludes assessments of alternative development options. What is new in this chapter is the suggestion that EIAs work more effectively in transboundary situations, when regulations and programmes are harmonized between countries. However, the shortcomings of EIA remain, and I am surprised that no mention is made of a more proactive approach to river basin protection by first conducting an Environmental Sensitive Areas Assessment (ESA). In this type of approach, the key sensitive areas are identified and their size, importance and resilience then assessed before development proposals are considered. This will not only influence the size and location of proposed development, but will also make subsequent EIA more objective.

Enhancing public participation with Information Technology (IT) tools is discussed in four chapters, however these do not fully capture the potential and effectiveness of these tools. There are many excellent examples where IT has made substantial progress in informing and engaging the public in rehabilitating and managing watersheds. These chapters do not capture the different opportunities that exist in using the internet and

multi-media tools to effectively communicate vital water data to the public or get interactive participation with stakeholders, nor do they convey fully the many successful efforts of web-based education programmes that are now available to professionals and community groups.

The fifth chapter covers the question of why IT has the potential to improve the process of getting information to the public and having public involvement. While the authors give a good overview about the potential for IT to engage the public, they fail to provide good examples of effective use of IT in addressing water management issues. There are plenty of excellent examples, particularly the efforts by USA agencies such as the USEPA and the USGS, which show how the internet can be used to make vital water information easily accessible to the public on a real-time basis. These agencies provide data fact sheets, education programmes, relevant water quantity and quality information and expert advice to watershed communities. They are one of the best examples of enhanced public involvement in governance and management of watershed. It is disappointing that these examples are not highlighted.

The peer review discussed in chapter 6 also falls short in assessing the potential of effective public involvement because it covers basic questions but does not provide examples of how web-based discussions have helped in educating participants to address issues and arrive at common solutions. Students and professionals have now access to many excellent web-based educational programmes that are globally accessible.

The email-based information system section also falls short of capturing the IT potential for field data collection because it focuses on a custom-made system, rather than the common use of spreadsheets and database exchanges for collecting and exchanging information. The last of the IT chapters discusses the use of decision-support systems. This section is quite theoretical and is somewhat unbalanced because there is a fine line between decision-support systems that are very simplistic versus those that are too complex for public use.

Chapter 9 explains how the Global Environmental Facility (GEF) helps provide for public involvement. It is informative and provides a framework for transboundary collaboration, tools for participation and types of indicators for assessment and monitoring, and various GEF initiatives are described.

The efforts to involve participation in the Mekong basin are discussed in the last chapter. The complexity of this river basin is described, the key development issues are identified and the need for integrated evaluations in a transboundary context is addressed.

Overall the book provides some useful examples of what is needed to make progress in getting a better dialogue going in transboundary basin evaluation. However, few successes are highlighted that could be used as examples to be applied in other transboundary basins. Also, it is a pity that the book highlighted few of the successful web-based efforts that show how IT tools have helped in the development of watershed councils and to involve community groups through education programmes, making vital information available to them in real time and linking stakeholders.

HANS SCHREIER  
*Institute for Resources and Environment*  
*University of British Columbia*  
*2202 Main Mall, Vancouver, BC*  
*Canada, V6T 1Z3*  
*e-mail: star@interchange.ubc.ca*

doi:10.1017/S037689290623373

### Ecology and Evolution in the Tropics. A Herpetological Perspective

EDITED BY MAUREEN A. DONNELLY, BRIAN I. CROTHER,  
CRAIG GUYER, MARVALEE H. WAKE AND MARY E. WHITE

xv + 675 pp., 23 × 15 × 3 cm, ISBN 0 226 15658 3 paperback,  
US\$ 45.00, Chicago, USA/London, UK: The University of  
Chicago Press, 2005

This volume results from a symposium sponsored jointly in 2000 by the American Society of Ichthyologists and Herpetologists, the Society for the Study of Amphibians and Reptiles, and the Herpetologists League, which was convened in La Paz (Baja, Mexico). The symposium honoured Jay M. Savage, and many of the chapters were written by his former students.

The book is divided into two parts ('Evolution and Biogeography' and 'Ecology, Biogeography, and Faunal Studies'), although the reason for the partition is unclear, as there is great overlap in subject matter. The two parts each include nine chapters, most of which are well written and easy to read. The references are collated at the end of the book rather than at the end of each chapter and are followed by subject and taxonomic indices. The book is adequately illustrated and includes four colour plates of frogs (Chapter 12). The typeface is clear and there appear to be few production errors, although some chapters include internal inconsistencies that copy editors would not be expected to catch. The title is misleading. Reference to the 'Tropics' is too broad, as 14 of the 18 chapters are confined to studies of Neotropical herpetofauna, with only one chapter (13) restricted to the Old World Tropics. Furthermore there is very little 'ecology', at least in the classical sense, in the book, and 'evolution' is largely restricted to cladistics. The editors admit that most chapters are taxon- rather than question-oriented.

The quality of the chapters varies widely. The first chapter on taxonomy in theory and practice seems out of place as it is a theoretical paper that outlines Arnold Kluge's views on classification and has nothing *per se* to do with tropical biology or herpetology. The best chapter is Steven Werman's biogeographical analysis of pit vipers in the Neotropics, which includes a phylogenetic analysis of 24 species based on morphology, allozymes and DNA sequence data from GenBank. Character states are fully referenced, and the methods and data matrix are available online. Werman's biogeographical hypotheses, derived from his phylogenetic analyses, are clear, consistent, convincing and illustrated with numerous distribution maps. By contrast, the chapter on New World caecilians by Marvalee Wake, Gabriela Parra-Olea and Judy Sheen is less credible, the authors making a poor choice of taxa for cladistic analysis, considering the hypotheses they chose to discuss. For example, an obvious choice for inclusion would have been *Schistometopum thomense* (sequences already available), which would have tested their dubious assertion that *Dermophis* and *Gymnopsis* are a Laurasian group. The authors included a specimen of '*Ichthyophis bannanicus*' from Viet Nam, even though it is not certain that this species occurs in that country; they could have checked this by comparing their data with published sequences of *I. bannanicus* from near its type locality. This chapter also includes errors, such as the bootstrap proportions in the text (pp. 56–7) being transposed with their figures (Figs 2.2 and 2.3), and the claim that groups with bootstrap proportions as low as 57% are 'well supported'. Most importantly, their DNA sequence data and alignments are not presented, nor are these data currently available on

GenBank, oversights which could still be corrected! The remaining 16 chapters range somewhere between these two extremes in quality and usefulness.

The variable quality of the chapters of this book and its limited geographic and taxonomic coverage reduce its value, to the extent that it will not become a 'must have' volume for herpetologists. The book does not contain enough information of general interest to be useful for the non-herpetologist or the tropical ecologist.

RONALD A. NUSSBAUM  
*Museum of Zoology*  
*University of Michigan*  
*Ann Arbor*  
*Michigan 48109-1079, USA*  
*e-mail: nuss@umich.edu*

doi:10.1017/S037689290623373X

### Public Participation in the Governance of International Freshwater Resources

EDITED BY CARL BRUCH, LIBOR JANSKY, MIKIYASU  
NAKAYAMA AND KAZIMIERZ A SALEWICZ

xiii + 506 pp., 23.5 × 15.5 × 2.5 cm, ISBN 92 808 1106 1  
paperback US\$ 38.00, New York, USA: United Nations University  
Press, 2005

There are more than 263 international rivers in the world and about 40% of the world's population lives in transboundary river basins. Water management and implementation of large water projects substantially impact the livelihood of the population across the state borders. The affected population is in many cases left without access to information on water policy and without means to participate in the decision-making process. Public participation in governance of international freshwater resources is becoming an increasingly important theme, and this volume seeks to improve public involvement in water management putting together experiences from particular transboundary watersheds. The volume is the result of a collaborative effort of 26 contributing authors synthesized in 24 chapters organized around five themes. Despite some unevenness in the quality of the papers, the book as a whole is an excellent scientific work and the themes are comprehensively addressed.

The opening chapter of the first part written by Carl Bruch surveys the evolution of the most important norms and practices facilitating public participation in the transboundary water management. Bruch examines norms and rules governing institutional life of both generic and basin-specific water institutions like international treaties, river basin organizations and international tribunals. Particular attention is paid to the provisions concerning access to information, access to justice and overall readiness for public participation.

In the next chapter, Bradley Krakkaenen discusses the problem of mismatch between the scale of shared transboundary water resources and the size of the territories of sovereign states defined by political boundaries. Scale mismatch can lead to a capacity mismatch, an incapacity of sovereign states to tackle transboundary environmental issues by traditional means. Fixed-rule regulatory solutions might not correspond with erratic non-linear behaviour of ecosystems. Two examples of 'post-sovereign' environmental governance are included in this chapter.

Next, the book covers experiences from international watersheds in the form of case studies: the Danube (Jansky & Bell), Great Lakes (Jakson), Mekong (Chomchai), watercourses of South Africa (Kidd & Quinn), and the Okavango (Ashton & Neal). The case studies contain a wealth of information, but particularly memorable is Jansky's study of dissent group involvement in the campaign against the Gabčíkovo-Nagymaros dam, which was one of the few ways to publicly defy the government behind the iron curtain.

Charles Di Leva delivers an excellent study of the World Bank policy towards public participation written with remarkable insight to the World Bank's system of work. The World Bank Inspection Panel and independent World Commission on Dams are specifically mentioned. The African Development Bank (AFDB) together with World Bank, UNDP and USAID played a decisive role in assisting the *Organisation pour la Mise en Valeur du Fleuve Sénégal* (OMVS), to implement joint transboundary water projects. Institutional readiness of OMVS to embrace principles of public participation is investigated in the next chapter and the survey of the North American institutional framework by Geoffrey Garver closes the third part.

The fourth part on 'domestic watercourses' highlights some novel approaches from Africa, Asia and North America that may serve as models for improving public involvement in transboundary watercourse management. The case studies are written by skilled experts and practitioners. I especially value Nakayama's chapter about resettlement processes in Indonesia.

The last part of the book is on emerging tools which facilitate public participation and access to information. Kazimierz Salewicz prepared a chapter about decision support systems (DSS), which is a little bit out of the scope of the book because the author is too concerned with technical aspects of computer programmes for DSS analysis. This topic is very interesting for the computer-savvy readership, but the decision makers and water managers might not fully enjoy it. Readers without knowledge of programming languages might find satisfaction in the comprehensive survey of internet-based tools by Carl Bruch. The rest of the fifth part includes chapters about alternative dispute resolution, adaptive ecosystem management, environmental impact assessment in East Africa and access to justice through the Central American Water Tribunal.

This excellent work should be read by water scientists as well as by decision makers in the area of development cooperation and by those concerned with the implementation of large-scale water infrastructure projects.

JAKUB LANDOVSKY  
Faculty of Social Sciences  
Charles University  
Prague, Czech Republic  
e-mail: landovsky@email.cz

doi:10.1017/S0376892906243376

### **Multilevel Governance of Global Environmental Change. Perspectives from Science, Sociology and the Law**

EDITED BY GERD WINTER

xxii + 630 pp., 23 × 15.5 × 4 cm, ISBN 0 521 85261 7 hardback, GB£ 75.00/US\$ 130.00, Cambridge, UK: Cambridge University Press, 2006

Governance has become a popular notion highlighting the shift away from the traditional policy analysis. However, governance is also a difficult concept owing to the different meanings given to it in various contexts. It appears even more ambiguous when coupled with the adjective 'multi-level', which emphasizes cooperative forms of governance at different levels. This book must primarily be seen as an interdisciplinary effort to clarify international and global environmental policy processes. The authors work with international and comparative environmental law, the sociology and politics of global governance, and the study of global climate change.

The book, which contains no less than 24 articles, ambitiously aims to transfer earth system analysis as developed by the natural sciences to the analysis of institutions of global environmental change. Therefore, a system of multilevel institutions is advocated. The main topics covered are: the roles of industrial self-regulation, horizontal transfer of national policies, regional integration and improved coordination between international environmental organizations, and basic principles for sustainable use of resources. The chapters are organized into eight sections, and the story proceeds from earth system analysis and societal self-organization to the state, and moves on to international institutions. Not surprisingly, climate change is the case dominating the illustrations.

Because of the numerous articles, editing this collection has probably been no easy task, and the editor clearly has made effort to create the thread that holds the book together. In the introductory chapter, Gerd Winter discusses the need for the holistic institutional analysis and defines interrelations between institutions, society and the natural earth systems. The basic concepts are clarified and an overview of the chapters is also provided. Winter agrees with the reader who might be a bit critical about the title of the book: this volume is, ultimately, more about institutions than governance (the former being the broader concept).

After having read the book from cover to cover, I could not help being a bit confused. Many of the chapters are comprehensive, even impressive, and independently they do read well. Somewhat arbitrarily, I bring up the well written introductions to global civil society (chapter 5 by Alkoby) and to the thinking about regionalized environmental policy (chapter 13 by Krämer). Further, of particular interest is Joyeeta Gupta's chapter on the specific problems faced by developing countries in the implementation of international treaties. In addition, the chapter by Andrew Jordan *et al.* provides very interesting comparative results on the use of new environmental policy instruments in seven European Union countries. However, since the book addresses various audiences, such as academics and politicians, the clarity of the main lessons should be considered. That is, the final section with four chapters discusses 'principles overarching the different levels and the different segmental institutions'. Do they clarify the questions of scale and interplay, for instance? Basically, I think they do: even if the concluding section does not provide any rigorous conceptualizations, this readable collection contributes importantly to the interdisciplinary understanding of institutions on various levels of governance.

PEKKA JOKINEN  
Department of Regional Studies  
University of Tampere  
Finland  
e-mail: pekka.jokinen@uta.fi

doi:10.1017/S0376892906253372

### Seagrasses: Biology, Ecology and Conservation

EDITED BY ANTHONY W. D. KARKUM, ROBERTH J. ORTH AND CARLOS M. DUARTE

xvi + 691 pp., 67 figs, 47 tables, 26.5 × 20 × 3.5 cm, ISBN 13 978 1 4020 2942 4 hardback, US\$ 119.00, Dordrecht, the Netherlands: Springer, 2006

This book comprehensively reviews and updates essential aspects of seagrass biology, ecology and conservation. It is timely and relevant for more developed countries of Australia, Europe and America, but long overdue for those in the tropical developing world.

Its comprehensiveness makes it useful reading material especially for graduate students, researchers and professors in science institutions. In addition, the chapters which deal with distribution (chapter 1), fisheries (chapter 21) and conservation (chapters 2, 23–26) make the book useful for conservationists, coastal managers and policy makers. Unfortunately, the other more technical chapters (chapters 6–10, 12 and 15) are not intended for those with only meagre knowledge of seagrass.

As the editors intended, the book is a landmark, since it provides for the most part ‘... the necessary background on what brought each topic to where it is today and indicates where future research needs to go to advance the field to the next level’, (Foreword, p. xvi). However, the book implies that advances in seagrass science have remained largely in those countries where the research was conducted decades ago, in Australia, the USA and Europe. In addition, in connection with the conservation theme, and while the science may be there, it fails to provide clear paradigms that would enable people to understand better and sustainably use the seagrass resources which are disappearing at a rate much greater than that at which we are gaining knowledge about them. As important is that the book also fails miserably to provide the information which gives impetus to these places in the world where seagrass diversity and urgent research needs are greatest, namely the Indo-West Pacific region.

It is not surprising to see practically no technical contribution from Third World authors in chapters 7 (carbon flux), 10 (oxygen movement), 12 (optics) or 17 (biology of *Posidonia*), but it is amazing to see no such contribution in chapter 15 (remote sensing), and only two in chapter 21 (fisheries), one in chapter 23 (decline and recovery), and three in chapter 24 (human impacts). There are more local publications that could be cited to emphasize this critical part of the book on conservation. While it is not indeed possible to get hold of all these materials, the authors/editors should have made extra effort and also made it a point to put the topics in their proper spatial context. In the book, there are less than 100 citations of works by authors from developing countries of the Indo-West Pacific!

At first glance, readers would be expecting a logical sequence of relevant topics under each of the major headings, for example biology, ecology or conservation. Obviously because of the current inherent inseparability of certain topics (such as ecology, conservation and management) and the authors’ professional biases, this positive feature of reading material was partly sacrificed. The result is a non-logical sequence or unholy alliance of topics. Chapters 15, 20 and 21 appear out of place. What are the compelling reasons for this?

As a whole the book is however highly commendable! In its appearance, the only problem I see is the cover figures, which are too small and do not justifiably reflect the true intention of the title. Biology and ecology are reflected (where are the animals?),

but conservation is definitely not. At least people should have been shown why this is so.

MIGUEL D. FORTES  
Marine Science Institute CS  
University of the Philippines  
Diliman, QC 1101, Philippines  
e-mail: m.fortes@unescoibkk.org

doi:10.1017/S0376892906263379

### Slash-and-Burn Agriculture. The Search for Alternatives

EDITED BY CHERYL A. PALM, STEPHEN VOSTI, PEDRO A. SANCHEZ AND POLLY J. ERICKSEN

xiv + 480 pp., 25 × 17.5 × 2.5 cm, ISBN 0 231 13451 7 paperback, US\$ 39.50/GB£ 29.00, New York, USA: Columbia University Press, 2005

The title of this book will attract the attention of those involved in tropical agriculture and ecology. With its title, the book raises great expectations; despite the innumerable approaches in the search for alternatives, slash-and-burn practice has remained indispensable for myriads of land users, in particular for the resource-poor at lower latitudes.

The four editors, well known in the field of tropical agriculture and natural resource management, brought together 76 individuals to synthesize a decade of research, capacity building and policy making in the framework of the Alternative to Slash-and-Burn (ASB) programme. The aim of this international programme is to reduce poverty in developing countries and to conserve the tropical forests. It has a network of benchmark sites including the Amazon (Brazil, Peru), Cameroon, Indonesia, Thailand and the Philippines.

First of all, the book is worth reading. It is a cornucopia of facts, hypotheses, research approaches, thoughts and examples exciting for scientists, advanced students, English-speaking policy makers and development experts.

The first of the five sections of the book introduces slash-and-burn agriculture and provides an overview of the ASB programme. The second ‘Thematic Research’ section comprises analyses of carbon and greenhouse gas dynamics with land-use change, an assessment of above- and below-ground biodiversity and of the sustainability of tropical land-use systems, and finally a discussion of macroeconomic factors affecting deforestation. In the third section, four site-specific alternatives to slash-and-burn agriculture are given. These are two from the Brazilian Amazon, namely a forest management approach for smallholders and a farm-level bioeconomic model which analyses coffee cultivation, pastures and forest conversion, and two from Indonesia, namely rubber agroforestry and smallholder options for the use of *Imperata* grassland. The fourth section shows national perspectives for the Brazilian and Peruvian Amazon, the forest margins of Sumatra and Cameroon and the mountainous areas in northern Thailand. The book concludes with chapters on smallholder land-use systems in Brazil, Cameroon and Indonesia, and the discussion of trade-offs between agricultural development and environmental objectives in the humid tropics.

The 18 chapters of the book are rather heterogeneous, varying from method-oriented to cross-disciplinary, from plot-level approaches to cross-regional overviews, from textbook knowledge to innovative scientific insights. This reflects the complexity of the



topic, the differences between the benchmark sites and Programme partners and the different stages of progress within the Programme's projects. Unfortunately, the book is restricted to the activities within the ASB Programme. This means that approaches like mulch systems, which are real alternatives to slash burning, are not considered. Hence, the book is not a compendium of alternatives to slash-and-burn agriculture, but rather provides descriptions of how to reduce deforestation in the humid tropics. Although deforestation deals indirectly with slash-and-burn, the title of the book is somewhat misleading.

What is missing in the book is a chapter on how to bridge the gap between research and agricultural practice and how to conceptualize the transition from traditional to research-based land-use approaches. The farmers' behaviour and their management capability are aspects that deserved closer attention.

Direct solutions for the involved farmers and extension workers are not a main issue in the book. There is, however, a strong emphasis on the interaction between research and policy makers, and any parts of the book have a strong focus on policy advice. On the other hand, the limits of ecological and economic arguments are recognized and, not very satisfactory for the reader, laws, enforceable regulations or institutional innovations are called for.

Each benchmark site has its special features. This, in turn, points to the difficulty of transferring findings from one region to another, and highlights how site-specific rather than universal solutions are therefore more likely. In other words, synergistic effects can be seen with regard to gaining scientific knowledge but hardly in the context of problem solving. A chapter reflecting on the pros and cons of the cross-site approach as such would have been welcome.

The following three statements of the concluding chapter describe the problem the search for alternatives to deforestation and slash-and-burn agriculture is facing: (1) '... from a purely private perspective, returns to forest conversion are high at all benchmark sites', (2) '... how can the necessary incentives to conserve [the rainforests] be put in place?' and (3) 'If the international community wants the global benefits of rainforest preservation, it is going to have to pay some of the costs'.

In general, the texts are well edited. Tables and figures, however, are not always clear and self-explanatory. In a second edition, the graphics should be redesigned. The index is helpful; why some authors are mentioned in the index and others are not, could not be determined. Literature originating after 2001 is cited only sporadically. Nevertheless, this is a lot of book at a very reasonable price.

MANFRED DENICH  
Center for Development Research (ZEF)  
University of Bonn  
Walter-Flex-Straße 3  
53113 Bonn, Germany  
e-mail: m.denich@uni-bonn.de

doi:10.1017/S0376892906273375

**Water from Heaven. The Story of Water from the Big Bang to the Rise of Civilisation and Beyond**

BY ROBERT KANDEL

xiii + 312 pp., 22 × 14.5 × 1.75 cm, ISBN 0 231 12245 4 paperback, US\$19.95, New York, USA: Columbia University Press, 2006

The story of water is detailed from its cosmological origins as basic hydrogen and oxygen atoms to water's role in sustaining life on Earth. Three distinct chronological sections are present within the book; the first addresses the origins of water to the first signs of human life. Within this section the cosmological origins of water are considered moving through to the importance of water as a principal component of the evolution of life on Earth. The second section considers the role of water in today's world as a crucial component in the energy cycle and its importance in driving weather systems. The final section considers the importance of water within human history, from the development of the earliest civilizations to the role of water within politics and the increasing pressures and demand for potable water in the 21st century.

In considering the development of water from its origins within the universe to the spatial and temporal cycles of water on Earth, Robert Kandel approaches the topic from a perspective different from that of many previous authors, and it is this unique approach which makes *Water from Heaven* stand out. It reads as a story rather than an academic text book, continually building and developing on the previous chapters, slowly raising the reader's understanding of the topic. This allows a greater appreciation of the later concepts and improved understanding of the challenges facing future water management.

*Water from Heaven* is easy to read and this makes the content appealing to a wide range of individuals, from those with a general curiosity concerning water to the specialist hydrologist, climatologist or chemist, in considering the properties and processes that shape water's path on Earth.

The book is well presented, though the diagrams are at times of poor quality. This is primarily as a result of blocky pixels and could quite easily have been improved. However, this detracts little from the book. As the book is not explicitly intended for academic use, the referencing within the text is limited, making it a little challenging to identify further reading of interest or relevance to any particular section. The notes provided for each of the chapters are valuable in providing interesting additional points and clarify the context within which events occurred. The novel approach and relaxed style make this a very enjoyable book, with more complex concepts succinctly explained. This book should be of interest not only to those with a specific focus on hydrology or climatology, but also to anyone with an interest in the development of planet Earth and its current processes.

NEIL MACDONALD  
*River Basin Dynamics and Hydrology Research Group*  
*Institute of Geography and Earth Sciences*  
*University of Wales, Aberystwyth*  
*Ceredigion, SY23 3DB, UK*  
e-mail: n.macdonald@aber.ac.uk

doi:10.1017/S0376892906283371

**The Environment in Anthropology. A Reader in Ecology, Culture, and Sustainable Living**

EDITED BY NORA HAENN AND RICHARD R. WILK

ix + 492 pp., 25 × 18 × 2 cm, ISBN 0 8147 367 8 paperback, US\$ 28.00, New York, USA/London, UK: New York University Press, 2005

The editors of this collection selected highly readable articles to demonstrate the importance of anthropological theory and practice for addressing what they consider the key environmental questions of the 21st century. The questions themselves define the major sections for the reader: population growth, economic development, conservation of biodiversity, managing the environment, indigenous groups, and consumption and globalization. One additional section presents an overview and background to anthropological approaches to the environment. Drawing from both classic and contemporary scholarship, the editors admirably connect theory to practice by the systematic comparison of specific issues to provide readers a path through the overwhelming diversity of environmental problems and proffered solutions.

Each section consists of a theoretical chapter, typically three empirical chapters from either an academic or a popular source, one polemical chapter with opposing information, and one chapter discussing the ethics of the issue in a larger social or human context. The editors believe that a combination of theory, empiricism and ethical debate provides a powerful anthropological response to environmental problems. The intended audience for this collection is evidently advanced undergraduate through beginning-graduate classes. Although the editors do not make this claim, the selections and organization of the material make the material suitable not only for anthropology students, but also to students in other environmental fields where a human dimension is often emphasized, including wildlife, forestry and conservation.

The potential success of this with respect to readers within and beyond the discipline of anthropology reflects the editors' ability to link topical sections by demonstrating the diversity of approaches available to understanding of environmental problems, the need for creative inquiry within the limits of different knowledge structures and the importance of personal action. Each section balances theory, empiricism, polemics and ethics to successfully avoid the vanity of narrative-counternarrative and discourse studies of environment that have dominated several fields in the last decade. Placed alongside empirical and ethical studies, as they are in this book, reveals the

value of narrative studies in sharpening understanding and focusing personal action without descending into the abyss of criticism that fails to offer a constructive alternative to the object criticized.

The chapters within a section are generally eclectic in orientation, on ecosystem ecology, feminist ecology, political ecology and ethnoecology, since they are organized thematically rather than by perspective. The selection reflects the goal of pushing students 'beyond cursory analyses to a more comprehensive approach' (p. 2). In the aggregate, the effect is to avoid telling readers that either the invisible hand of the market or the invisible hand of ecology will guide them to an efficient, healthy and sustainable future. Such simplistic advice may be emotionally and intellectually compelling, but it would hardly have been an effective guide to the types of practice that can lead to solutions.

The book contains 42 chapters arranged into seven sections, yet it remains manageable as a text both in size and readability. The original chapters were often abridged by as much as a third to ensure the volume remained affordable, yet they retain the coherence of the argument as well as the narrative flow of the original. The source of the original publication is always listed as a footnote on the first page of the chapter so readers can easily locate it depending on their interest in the argument. The notes and citations from the original publication are placed immediately following the chapter making it convenient to pursue the sources to the argument, which is more difficult when the citations in a book are collated into a unified reference section. The book has a comprehensive and detailed author-subject index that makes it easy to locate topics and ideas throughout the text. Overall, this book is a solid demonstration of the contributions of anthropology to understanding and developing solutions to environmental problems.

TED L. GRAGSON  
*Department of Anthropology*  
*University of Georgia*  
*Athens, GA 30602-1619, USA*  
*e-mail: tgragson@uga.edu*