

Journal Of Applied Ecology The Biodiversity Audit Approach

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Delivering Arable Biodiversity Association of Applied Biologists. Meeting 2006

True Cost Accounting for Food Barbara Gemmill-Herren 2021-07-02 This book explains how True Cost Accounting is an effective tool we can use to address the pervasive imbalance in our food system. Calls are coming from all quarters that the food system is broken and needs a radical transformation. A system that feeds many yet continues to create both extreme hunger and diet-related diseases, and one which has significant environmental impacts, is not serving the world adequately. This volume argues that True Cost Accounting in our food system can create a framework for a systemic shift. What sounds on the surface like a practice relegated to accountants is ultimately a call for a new lens on the valuation of food and a new relationship with the food we eat, starting with the reform of a system out of balance. From the true cost of corn, rice and water, to incentives for soil health, the chapters economically compare conventional and regenerative, more equitable farming practices in and food system structures, including taking an unflinching look at the true cost of cheap labour. Overall, this volume points towards the potential for our food system to be more human-centred than profit-centred and one that has a more respectful relationship to the planet. It sets forth a path forward based on True Cost Accounting for food. This path seeks to fix our current food metrics, in policy and in practice, by applying a holistic lens that evaluates the actual costs and benefits of different food systems, and the impacts and dependencies between natural systems, human systems, agriculture and food systems. This volume is essential reading for professionals and policymakers involved in developing and reforming the food system, as well as students and scholars working on food policy, food systems and sustainability.

Trade-offs in Conservation Nigel Leader-Williams 2011-06-13 This book demonstrates that trade-offs can be very important for conservationists. Its various chapters show how and why trade-offs are made, and why conservationists need to think very hard about what, if anything, to do about them. The book argues that conservationists must carefully weigh up, and be explicit about, the trade-offs that they make every day in deciding what to save. Key Features: Discusses the wider non-biological issues that surround making decisions about which species and biogeographic areas to prioritise for conservation Focuses on questions such as: What are these wider issues that are influencing the decisions we make? What factors need to be included in our assessment of trade-offs? What package of information and issues do managers need to consider in making a rational decision? Who should make such decisions? Part of the Conservation Science and Practice book series This volume is of interest to policy-makers, researchers, practitioners and postgraduate students who are concerned about making decisions that include recognition of trade-offs in conservation planning.

Insect Conservation Biology Royal Entomological Society of London. Symposium 2007-01-01 These proceedings contain papers on insect conservation biology that are classified under 3 themes: (1) the current status of insect conservation, and major avenues for progress and hindrances (6 papers); (2) insects as model organisms in conservation biology (6 papers); and (3) future directions in insect conservation biology (6 papers).

Flammable Australia Ross A. Bradstock 2002 Fire is pivotal to the functioning of ecosystems in Australia, affecting the distribution and abundance of the continent's unique and highly diverse range of plants and animals. Conservation of this natural biodiversity therefore requires a good understanding of scientific processes involved in the action of fire on the landscape. This book provides an up-to-date synthesis of current knowledge in this area and its application in contemporary land management. Central to the discussion is an exploration of the concept of the fire regime and its interactions with biodiversity.

Handbook on Biodiversity and Ecosystem Services in Impact Assessment Davide Geneletti 2016-06-24 This Handbook presents state-of-the-art methodological guidance and discussion of international practice related to the integration of biodiversity and ecosystem services in impact assessment, featuring contributions from leading researchers and practitioners the world over. Its multidisciplinary approach covers contributions across five continents to broaden the scope of the field both thematically and geographically.

Zero Waste: Management Practices for Environmental Sustainability Ashok K. Rathoure 2019-08-30 Zero Waste: Management Practices for Environmental Sustainability presents approaches for resource management centered on reducing waste and reusing and recycling materials. It aims to save energy by reducing energy consumption associated with extracting, processing, and transporting raw materials and waste, and also to reduce and eventually eliminate the need for landfills and incinerators. This book presents the various principles, methods, and tools that can be used to address different issues in the areas of industrial waste reduction and sustainability. It examines how to eliminate waste at the source and at all points of a supply chain, and how to shift from the current one-way linear resource model to a sustainable "closed-loop" system. Proposes strategies for businesses to reduce and reuse waste with a goal of reaching a zero waste status. Focuses on how mitigating waste and promoting recycling can save vast amounts of energy. Explains how the zero waste approach would be a key measure to ensure environmental sustainability and help to offset global climate change.

Plant Life on the Sandplains in Southwest Australia Hans Lambers 2014 "A thorough revision and expansion of Pate and Beard's *Kwongan--Plant Life of the Sandplain (1984)*"--Page 4 of cover.

Methods of Environmental Impact Assessment Peter Morris 2001 Written by experts, this text deals with how environmental impact assessment should be carried out for specific environmental components such as air and water.

Emulating Natural Forest Landscape Disturbances Ajith H. Perera 2008-01-11 What is a natural forest disturbance? How well do we understand natural forest disturbances and how might we emulate them in forest management? What role does emulation play in forest management? Representing a range of geographic perspectives from across Canada and the United States, this book looks at the escalating public debate on the viability of natural disturbance emulation for sustaining forest landscapes from the perspective of policymakers, forestry

professionals, academics, and conservationists. This book provides a scientific foundation for justifying the use of and a solid framework for examining the ambiguities inherent in emulating natural forest landscape disturbance. It acknowledges the divergent expectations that practitioners face and offers a balanced view of the promises and challenges associated with applying this emerging forest management paradigm. The first section examines foundational concepts, addressing questions of what emulation involves and what ecological reasoning substantiates it. These include a broad overview, a detailed review of emerging forest management paradigms and their global context, and an examination of the ecological premise for emulating natural disturbance. This section also explores the current understanding of natural disturbance regimes, including the two most prevalent in North America: fire and insects. The second section uses case studies from a wide geographical range to address the characterization of natural disturbances and the development of applied templates for their emulation through forest management. The emphasis on fire regimes in this section reflects the greater focus that has traditionally been placed on understanding and managing fire, compared with other forms of disturbance, and utilizes several viewpoints to address the lessons learned from historical disturbance patterns. Reflecting on current thinking in the field, immediate challenges, and potential directions, the final section moves deeper into the issues of practical applications by exploring the expectations for and feasibility of emulating natural disturbance through forest management.

Vegetation of Australian Riverine Landscapes Samantha Capon 2016-04 Vegetation communities in Australia's riverine landscapes are ecologically, economically and culturally significant. They are also among the most threatened ecosystems on the continent and have been dramatically altered as a result of human activities and climate change. *Vegetation of Australian Riverine Landscapes* brings together, for the first time, the results of the substantial amount of research that has been conducted over the last few decades into the biology, ecology and management of these important plant communities in Australia. The book is divided into four sections. The first section provides context with respect to the spatial and temporal dimensions of riverine landscapes in Australia. The second section examines key groups of riverine plants, while the third section provides an overview of riverine vegetation in five major regions of Australia, including patterns, significant threats and management. The final section explores critical issues associated with the conservation and management of riverine plants and vegetation, including water management, salinity, fire and restoration. *Vegetation of Australian Riverine Landscapes* highlights the incredible diversity and dynamic nature of riverine vegetation across Australia, and will be an excellent reference for researchers, academics and environmental consultants.

Landscape Analysis and Visualisation Christopher Pettit 2008-06-03 Michael Batty Centre for Advanced Spatial Analysis, University College London Landscapes, like cities, cut across disciplines and professions. This makes it especially difficult to provide an overall sense of how landscapes should be studied and researched. Ecology, aesthetics, economy and sociology combine with physiognomy and deep physical structure to confuse our understanding and the way we should react to the problems and potentials of landscapes. Nowhere are these dilemmas and paradoxes so clearly highlighted as in Australia — where landscapes dominate and their relationship to cities is so fragile, yet so important to the sustainability of an entire nation, if not planet. This book presents a unique collection and synthesis of many of these perspectives — perhaps it could only be produced in a land urbanised in the tiniest of pockets, and yet so daunting with respect to the way non-populated landscapes dwarf its cities. Many travel to Australia to its cities and never see the landscapes — but it is these that give the country its power and imagery. It is the landscapes that so impress on us the need to consider how our intervention, through activities ranging from resource exploitation and settled agriculture to climate change, poses one of the greatest crises facing the modern world. In this sense, Australia and its landscape provide a mirror through which we can glimpse the extent to which our intervention in the world threatens its very existence.

Effective Ecological Monitoring Gene Likens 2018-05-01 Long-term monitoring programs are fundamental to understanding the natural environment and managing major environmental problems. Yet they are often done very poorly and ineffectively. This second edition of the highly acclaimed *Effective Ecological Monitoring* describes what makes monitoring programs successful and how to ensure that long-term monitoring studies persist. The book has been fully revised and updated but remains concise, illustrating key aspects of effective monitoring with case studies and examples. It includes new sections comparing surveillance-based and question-based monitoring, analysing environmental observation networks, and provides examples of adaptive monitoring. Based on the authors' 80 years of collective experience in running long-term research and monitoring programs, *Effective Ecological Monitoring* is a valuable resource for the natural resource management, ecological and environmental science and policy communities.

Metabarcoding for use in Nordic routine aquatic biomonitoring: a validation study Meissner, Kristian 2021-01-12 Available online: <https://pub.norden.org/temanord2020-538/> Over 75% of all lakes and 40% of all rivers in the EU are found in the Nordic countries. Biomonitoring according to the EU Water Framework Directive (WFD) is adopted by all Nordic countries and forms an integral part of management efforts to preserve and restore the ecological quality of freshwaters and their ecosystem services. Organisms used in WFD biomonitoring are identified by experts; this is time consuming and error prone. Molecular identification methods could be used but have not been tested for monitoring. We compared molecular to expert identification for samples from 297 Nordic lakes and streams. The DNA-based results were highly similar to expert identifications. We suggest that Nordic or European efforts towards implementation and standardization of DNA-based methodology should be undertaken to swiftly ensure the use of this promising tool in future WFD monitoring.

Conservation of Tropical Birds Navjot S. Sodhi 2011-02-23 *Conservation of Tropical Birds* has been written by four conservation biologists whose expertise spans all the tropical regions of the world. It is the first book to cover all the major issues in tropical bird conservation. Current problems faced by tropical bird conservationists are summarised and potential solutions outlined based on the results of case studies. Birds are key indicators of ecosystem health, and such a well-studied group of organisms, that they provide an excellent lens through which to examine global conservation problems caused by phenomena such as climate change, declines in ecosystem services, habitat loss, fires, overexploitation, and invasive species. Therefore, the book also provides an engaging synopsis of the general issues in conservation and the problems faced by other wildlife. This book serves as an important resource and companion to all people interested in observing and conserving birds in the tropics and elsewhere.

Handbook of Biodiversity Methods David Hill 2005-08-04 This Handbook, first published in 2005, provides standard procedures for planning and conducting a survey of any species or habitat and for evaluating the data.

Wildlife Conservation on Farmland Volume 2 David W. Macdonald 2015-07-30 Many of the encounters between farming and wildlife, especially vertebrates, involve some level of conflict which can cause disadvantage to both the wildlife and the people involved. Through a series of WildCRU case-studies, this volume investigates the sources of the problems, and ultimately of the threats to conservation, discussing a variety of remedies and mitigations, and demonstrating the benefits of evidence-based, inter-disciplinary policy.

Proceedings of the Royal Society of Victoria Royal Society of Victoria (Melbourne, Vic.) 2005 List of members in each volume (except v. 6, new ser., v. 27).

Sustainable Development of Organic Agriculture Kimberly Etingoff 2017-01-06 This title includes a number of Open Access chapters. This important compilation presents an in-depth view spanning past values and practices, present understandings, and potential futures, and

covering a range of concrete case studies on sustainable development of organic agriculture. The book explores the very different facets of organic and sustainable agriculture. Part I of this book delves into the ways that people have approached organic agriculture in sociological, scientific, and economic terms. Part II looks ahead to the future of organic agriculture, presenting opportunities for further progress. Part III consists of an extensive bibliography chronologically developing the progress of organic and sustainable agriculture over two thousand years. The book Studies the cultural dimension of organic consumption Presents how sustainable agriculture can reduce and mitigate the impact of climate change on crop production Looks at the impact of agriculture on both famine and rural poverty in an ecofriendly and socially inclusive manner Examines six of the oldest grain-crop-based organic comparison experiments in the US, looking at the environmental and economic outcomes from organic agroecosystems, to both producers and policymakers Reviews the role of experimentation and innovation in developing sustainable organic agriculture Looks at the challenges of organic farmers Discusses ways to ensure sustainability and resilience of farming Looks at ways to change the mindset of farmers especially in traditional farming communities Explores the development of organic and sustainable agriculture through more than 500 years, ending with the early twenty-first century. Altogether, the chapters provide a nuanced look at the development of organic and sustainable agriculture, with the conclusion that organic is not enough to be sustainable.

The Nature of Northern Australia John Woinarski 2007-07-01 Northern Australia stands out as one of the largest natural areas remaining on Earth - alongside such global treasures as the Amazon rainforests, the boreal conifer forests of Alaska and Canada, and the polar wilderness of Antarctica. Nature remains in abundance in 'the North'. Its intact tropical savannas, rainforests, and free flowing rivers provide a basis for much of the economic activity and the quality of life for residents of the area. *THE NATURE OF NORTHERN AUSTRALIA* details the latest science on the Northern environment. With increasing debate over the future of Australia's often forgotten North, this is a timely examination of its environmental significance, the ecological processes that make it function, and the economies that are compatible with maintaining healthy communities and people and healthy country into the future.

Integrated Pest Management D. P. Abrol 2012 Providing a critical evaluation of the management strategies involved in ecologically-based pest management, this book presents a balanced overview of environmentally safe and ecologically sound approaches. Topics covered include biological control with fungi and viruses, conservation of natural predators, use of botanicals and how effective pest management can help promote food security. In the broader context of agriculture, sustainability and environmental protection, the book provides a multidisciplinary and multinational perspective on integrated pest management useful to researchers in entomology, crop protection, environmental sciences and pest management.

Conserving Biodiversity Ross Andrew Bradstock 1995 Arising from a conference held at the University of Sydney in 1993, this collection of 35 papers addresses topics such as habitat loss, degradation and pollution of water resources, weeds and feral animals, and commercial use of native biota. Also discusses the role of government and non-government agencies in conservation. Includes 25 colour plates, references and an index. The editors work in the Environmental Survey and Research Division of the NSW National Parks and Wildlife Service.

Sustainable food Great Britain: Parliament: House of Commons: Environmental Audit Committee 2012-05-13 Obesity and diet related illness is on the increase, fewer young people are being taught how to cook or grow food, and advertisers are targeting kids with junk food ads. At the same time the world faces growing fears about food security as the global population increases, more people eat meat and dairy, and the climate destabilises as a result of forest destruction and fossil fuel use. The Committee, in summary, recommends: stricter advertising limits on junk food marketing; food skills, such as cooking and gardening, should be part of the curriculum in all schools; new national planning policy guidance for Local Authorities should ensure communities have access to healthy food and land to grow their own produce; Government Buying Standards for food must be improved on meat and dairy and extended to cover hospitals, prisons and schools; the Office of Fair Trading's remit should be amended so supermarkets are not blocked from cooperating on sustainability initiatives; and the scope for simple and consistent labelling on the sustainability of food products should be examined. The report warns that there is no overarching food strategy in place. Defra's 'Green Food Project' due in June examines only part of the food system and the focus on 'sustainable intensification' risks ignoring wider social and health implications. The UK does not currently have the basic science base to deliver more sustainable food and relying on markets to identify and to direct where the research is needed is likely to fail. An independent body to research GM crops and their impacts should also be established

Biodiversity in Locally Managed Lands Jeffrey Sayer 2018-07-02 This book is a printed edition of the Special Issue "Biodiversity in Locally Managed Lands" that was published in *Land*

Woodland Flowers Keith Kirby 2020-08-06 Observing the plants of the forest floor – the flowers, ferns, sedges and grasses – can be a vital way of understanding our relationship with British woodland. They tell us stories about its history and past management, and can be a visible sign of progress when we get conservation right. For centuries, woodland plants have also been part of our lives in practical ways as food and medicines, and they have influenced our culture through poetry, perfume and pub signs. In this insightful and original account, Keith Kirby explores how woodland plants in Great Britain have come to be where they are, coped with living in the shade of their bigger relatives, and responded to threats in the form of storms, fires, floods, the attentions of grazing herbivores and the effects of the changing seasons. Along the way, the reader is introduced to the work of important botanists who have walked the woods in the past, collecting information on where plants occur and why. In-depth profiles of some of our most important and popular ground flora species provide extra detail and insight. Beautifully illustrated, *Woodland Flowers* is a must for anyone who appreciates and wants to learn more about British woodland and its plants.

Recovering Australian Threatened Species Stephen Garnett 2018-03-01 Australia's nature is exceptional, wonderful and important. But much has been lost, and the ongoing existence of many species now hangs by a thread. Against a relentless tide of threats to our biodiversity, many Australians, and government and non-government agencies, have devoted themselves to the challenge of conserving and recovering plant and animal species that now need our help to survive. This dedication has been rewarded with some outstanding and inspiring successes: of extinctions averted, of populations increasing, of communities actively involved in recovery efforts. *Recovering Australian Threatened Species* showcases successful conservation stories and identifies approaches and implementation methods that have been most effective in recovering threatened species. These diverse accounts – dealing with threatened plants, invertebrates, fish, reptiles, birds and mammals – show that the conservation of threatened species is achievable: that it can be done and should be done. They collectively serve to inform, guide and inspire other conservation efforts. This is a book of hope and inspiration. It shows that with dedication, knowledge and support, we can retain and restore our marvellous natural heritage, and gift to our descendants a world that is as diverse, healthy and beautiful as that which we have inherited.

Contemporary Rural Geographies Hugh Clout 2007-06-11 This book provides a cohesive set of research statements on critical related issues in British rural geography, as well as echoing the priorities identified by an influential figure in British rural geography, Richard Munton. This book demonstrates that the rural world needs to be seen in a far wider perspective than that of agriculture/ food production, in order to comprehend how resources are being appraised and exploited in new ways, and to respond to the pressing challenges of sustainability for the decades ahead. Chapters adopt a time perspective to explore a series of key themes: the rise of productivist farming ways of conceptualising agricultural

change the evolution of landownership and property rights rural and urban agendas for nature conservation the gap between policy and action for sustainable development. The final set of chapters is devoted to policy-related issues associated with agricultural change and the profound challenge of rural diversification for the future. The last chapter traces the prominent career of Richard Munton.

New Frontiers on Life Cycle Assessment Antonella Petrillo 2019-06-05 The purpose of this book is to collect a high-quality selection of contemporary research articles on life cycle perspectives when we want to assess and predict the sustainability of solutions that lie in front of us. The book focuses on methodologies and tools used for life cycle sustainability management covering environmental, social, and economic aspects in business practices, including modeling and simulation-based approaches. In particular, the book aims to collect research, applications, and case studies in the field of environmental analysis and industrial ecology, with a focus on how to assess contributions to increase resource efficiency and reduce environmental impact on production and service systems in a life cycle perspective (raw material extraction, production, use, and end-of-life management). This book is intended to be a useful resource for anyone who deals with this issue.

Ten Commitments David Lindenmayer 2008-01-01 "In *Ten Commitments*, leading environmental thinkers in Australia have written provocative chapters on environmental issues facing the country. It is organised into three sections: by ecosystem (deserts, rangelands), by sector (fisheries, forestry); and cross-sector and cross-ecosystem themes. Each chapter addresses the question: What are the 10 key things that must be urgently addressed to improve Australia's environment? Readily accessible using straightforward language, this is a must-read for anyone interested in the environment."--Provided by publisher.

British Journal of Entomology and Natural History 1997

Species Management Scottish Natural Heritage (Agency) 2010 This is the latest book in the *Natural Heritage of Scotland* series from Scottish Natural Heritage (SNH). The book contains the papers read at SNH's 2008 conference on the subject and provides the reader with valuable, high quality, up-to-date information and research on the subject, interspersed with stunning full colour images. The long-term aim for all species management is for thriving and self-sustaining, self-regulating populations of native species throughout their natural ranges. The challenge is to achieve this in the face of increasing pressures from developments, exploitation, habitat loss and climate change. This book explores the challenges and solutions to species management for species conservation, the control of invasive non-native species, resolving conflicts of interest between native species, and the sustainable use of species, with contributions from a range of international experts including scientists, conservationists and managers.

A Resource-Based Habitat View for Conservation Roger L. H. Dennis 2012-04-10 Winner of the Marsh Book of the Year Award 2012 by the British Ecological Society. In *A Resource-Based Habitat View for Conservation* Roger Dennis introduces a novel approach to the understanding of habitats based on resources and conditions required by organisms and their access to them, a quantum shift from simplistic and ineffectual notions of habitats as vegetation units or biotopes. In drawing attention to what organisms actually use and need in landscapes, it focuses on resource composition, structure and connectedness, all of which describe habitat quality and underpin landscape heterogeneity. This contrasts with the current bipolar view of landscapes made up of habitat patches and empty matrix but illustrates how such a metapopulation approach of isolated patchworks can grow by adopting the new habitat viewpoint. The book explores principles underlying this new definition of habitat, and the impact of habitat components on populations, species' distributions, geographical ranges and range changes, with a view to conserving resources in landscapes for whole communities. It does this using the example of butterflies - the most alluring of insects, flagship organisms and key indicators of environmental health - in the British Isles, where they have been studied most intensively. The book forms essential reading for students, researchers and practitioners in ecology and conservation, particularly those concerned with managing sites and landscapes for wildlife.

Biodiversity Enrichment in a Diverse World Gbolagade Akeem Lameed 2012-08-29 This book - *Biodiversity Enrichment in a Diverse World* - considers biodiversity (plants, animals, fungi, and microbes) from three different angles: genetics, species, and ecosystems. The relationships between them are complex and it looks at these aspects from different angles and also various interventions at different levels. The scientific approach of the book demonstrates that the three levels are closely inter-connected and action is therefore needed to conserve and protect the systems if the benefits provided to human life will continue to be available. However, conservation of the biological diversity is essentially an umbrella term for traditional species, relationship to human health, ecosystem conservation and the need to manage the human use of the species and ecosystems in a sustainable way.

The Nexus of Law and Biology Barbara Ann Hocking 2016-02-17 Although law and science have interacted for centuries, today their interactions pose enormous challenges. These challenges are reflected in issues ranging from reproductive technology and resource conservation, to genetic technology and biological warfare. The emerging dialogue is complex and requires an ongoing re-thinking of general principles, such as expert biological evidence, which features in a wide range of legal contexts, and including medical law, torts, crime and intellectual property. Studying the many ways in which law and biology come together in many areas of contemporary life, *The Nexus of Law and Biology: New Ethical Challenges* explores the juridical uses of biological sciences to illuminate key issues and contemporary intersections, arguing that each of several disciplines must communicate with one another, recognizing a common ground in ethics. Featuring an impressive list of contributors, this book is an invaluable reference for legal scholars, students, practising lawyers and scientists engaged with the legal system.

Monitoring Threatened Species and Ecological Communities Sarah Legge 2018-01-20 Monitoring is integral to all aspects of policy and management for threatened biodiversity. It is fundamental to assessing the conservation status and trends of listed species and ecological communities. Monitoring data can be used to diagnose the causes of decline, to measure management effectiveness and to report on investment. It is also a valuable public engagement tool. Yet in Australia, monitoring threatened biodiversity is not always optimally managed. *Monitoring Threatened Species and Ecological Communities* aims to improve the standard of monitoring for Australia's threatened biodiversity. It gathers insights from some of the most experienced managers and scientists involved with monitoring programs for threatened species and ecological communities in Australia, and evaluates current monitoring programs, establishing a baseline against which the quality of future monitoring activity can be managed. Case studies provide examples of practical pathways to improve the quality of biodiversity monitoring, and guidelines to improve future programs are proposed. This book will benefit scientists, conservation managers, policy makers and those with an interest in threatened species monitoring and management.

Wildlife Toxicology Ronald J. Kendall 2016-04-19 Updating the extremely successful *Wildlife Toxicology and Population Modeling* (CRC Press, 1994), *Wildlife Toxicology: Emerging Contaminant and Biodiversity Issues* brings together a distinguished group of international contributors, who provide a global assessment of a range of environmental stressors, including pesticides, environmental contaminants, and other emerging chemical threats, and their impact on wildlife populations. Addresses *Emerging Wildlife Threats in One Concise Volume* A decade ago, many of these threats existed but were either unrecognized or considered minor issues, and all have now snowballed into major challenges for the conservation of wildlife populations. This is the first book to address these dangers in a single volume and recommend proven mitigation techniques to protect and sustain Earth's wildlife populations. Examines Species Range Shifts, Ocean Acidification, Coral Bleaching, & Impacts

of Heightened UV Influx This comprehensive reference identifies and documents examples of chemical stressor exposures and responses among ecosystem receptors worldwide. Chapters discuss emerging diseases and the expansion of pesticide/contaminant use, as well as agricultural trends and biofuels, and the widespread use of munitions and explosives from military and industrial-related activities. With the aid of several solid case studies, the book also addresses atmospheric contaminants and climate change, population modeling, and emerging transnational issues in ecotoxicology. *Wildlife Toxicology: Emerging Contaminant and Biodiversity Issues* stimulates dialogue among the academic and research communities and environmental public policy decision makers. The book challenges these groups to think more globally about environmental contaminants and their potential impacts on biodiversity and environmental degradation. Check out Ronald J. Kendall's *Advances in Biological and Chemical Terrorism Countermeasures*. Professor Kendall has been quoted recently in several news outlets in connection with the Gulf Oil Spill. Check out these articles on the CRC Press Ning page.

Biodiversity Monitoring and Conservation Ben Collen 2013-02-14 As the impacts of anthropogenic activities increase in both magnitude and extent, biodiversity is coming under increasing pressure. Scientists and policy makers are frequently hampered by a lack of information on biological systems, particularly information relating to long-term trends. Such information is crucial to developing an understanding as to how biodiversity may respond to global environmental change. Knowledge gaps make it very difficult to develop effective policies and legislation to reduce and reverse biodiversity loss. This book explores the gap between global commitments to biodiversity conservation, and local action to track biodiversity change and implement conservation action. High profile international political commitments to improve biodiversity conservation, such as the targets set by the Convention on Biological Diversity, require innovative and rapid responses from both science and policy. This multi-disciplinary perspective highlights barriers to conservation and offers novel solutions to evaluating trends in biodiversity at multiple scales.

Biodiversity and Environmental Change Emma Burns 2014-02-06 This data-rich book demonstrates the value of existing national long-term ecological research in Australia for monitoring environmental change and biodiversity. Long-term ecological data are critical for informing trends in biodiversity and environmental change. The Terrestrial Ecosystem Research Network (TERN) is a major initiative of the Australian Government and one of its key areas of investment is to provide funding for a network of long-term ecological research plots around Australia (LTERN). LTERN researchers and other authors in this book have maintained monitoring sites, often for one or more decades, in an array of different ecosystems across the Australian continent – ranging from tropical rainforests, wet eucalypt forests and alpine regions through to rangelands and deserts. This book highlights some of the temporal changes in the environment that have occurred in the various systems in which dedicated field-based ecologists have worked. Many important trends and changes are documented and they often provide new insights that were previously poorly understood or unknown. These data are precisely the kinds of data so desperately needed to better quantify the temporal trajectories in the environment in Australia. By presenting trend patterns (and often also the associated data) the authors aim to catalyse governments and other organisations to better recognise the importance of long-term data collection and monitoring as a fundamental part of ecologically-effective and cost-effective management of the environment and biodiversity.

The Action Plan for Australian Lizards and Snakes 2017 Nicola Mitchell 2019-12-01 Lizards and snakes (squamate reptiles) are the most diverse vertebrate group in Australia, with approximately 1000 described species, representing about 10% of the global squamate diversity. Squamates are a vital part of the Australian ecosystem, but their conservation has been hindered by a lack of knowledge of their diversity, distribution, biology and key threats. *The Action Plan for Australian Lizards and Snakes 2017* provides the first comprehensive assessment of the conservation status of Australian squamates in 25 years. Conservation assessments are provided for 986 species of Australian lizards and snakes (including sea snakes). Over the past 25 years there has been a substantial increase in the number of species and families recognised within Australia. There has also been an increase in the range and magnitude of threatening processes with the potential to impact squamates. This has resulted in an increase in the proportion of the Australian squamate fauna that is considered Threatened. Notably over this period, the first known extinction (post-European settlement) of an Australian reptile species occurred – an indication of the increasingly urgent need for better knowledge and management of this fauna. Six key recommendations are presented to improve the conservation management and plight of Australian squamates. This Action Plan represents an essential resource for research scientists, conservation biologists, conservation managers, environmental consultants, policy makers from Commonwealth and State/Territory governments, and the herpetological community.

Invasive and Introduced Plants and Animals Ian D. Rotherham 2012-12-06 There have been many well-publicized cases of invasive species of plants and animals, often introduced unintentionally but sometimes on purpose, causing widespread ecological havoc. Examples of such alien invasions include pernicious weeds such as Japanese knotweed, an introduced garden ornamental which can grow through concrete, the water hyacinth which has choked tropical waterways, and many introduced animals which have out-competed and displaced local fauna. This book addresses the broader context of invasive and exotic species, in terms of the perceived threats and environmental concerns which surround alien species and ecological invasions. As a result of unprecedented scales of environmental change, combined with rapid globalisation, the mixing of cultures and diversity, and fears over biosecurity and bioterrorism, the known impacts of particular invasions have been catastrophic. However, as several chapters show, reactions to some exotic species, and the justifications for interventions in certain situations, including biological control by introduced natural enemies, rest uncomfortably with social reactions to ethnic cleansing and persecution perpetrated across the globe. The role of democracy in deciding and determining environmental policy is another emerging issue. In an increasingly multicultural society this raises huge questions of ethics and choice. At the same time, in order to redress major ecological losses, the science of reintroduction of native species has also come to the fore, and is widely accepted by many in nature conservation. However, with questions of where and when, and with what species or even species analogues, reintroductions are acceptable, the topic is hotly debated. Again, it is shown that many decisions are based on values and perceptions rather than objective science. Including a wide range of case studies from around the world, his book raises critical issues to stimulate a much wider debate.