

Acces PDF Introduction Physical Hydrology Martin Hendriks

As recognized, adventure as with ease as experience roughly lesson, amusement, as skillfully as union can be gotten by just checking out a books **Introduction Physical Hydrology Martin Hendriks** as well as it is not directly done, you could put up with even more going on for this life, roughly speaking the world.

We give you this proper as with ease as easy showing off to acquire those all. We pay for Introduction Physical Hydrology Martin Hendriks and numerous ebook collections from fictions to scientific research in any way. along with them is this Introduction Physical Hydrology Martin Hendriks that can be your partner.

F6E - KAELYN GRETCHEN

"Rights to water are increasingly crucial and increasingly contested across the globe. Urbanization, industrialization, environmental degradation, agricultural intensification, rising per capita water use, increasing population, and other social, political, and economic transformations contribute to growing scarcity and demand for better management of water resources. In responding to these challenges, the world can draw on a rich heritage of institutions for regulating rights to water and resolving disputes, and a diversity of institutional arrangements that demonstrate great ingenuity in designing solutions to fit the conditions and priorities of various river basins. However, policy discussion in water management has often been impoverished by narrow polarization around a few idealized models of centrally integrated management or water commoditization, even though these comprise only a small and very incomplete subset of the institutional options available for effective management. The authors in this book expand the range of reflection and analysis of water rights reforms, offering insights aimed especially at those seeking practical pathways to improve equity, efficiency, and sustainability in access to water."

In this Very Short Introduction, Martin Price addresses the role of mountains in global ecosystems and within human culture. Considering the global effects of melting glaciers, and the conservation of mountain regions and peoples, he discusses the future of mountainous regions and the implications for all of us.

Climate change is expected to modify the hydrological cycle and affect freshwater resources. Groundwater is a critical source of fresh drinking water for almost half of the world's population and it also supplies irrigated agriculture. Groundwater is also important in sustaining streams, lakes, wetlands, and associated ecosystems. But despite this,

Beginning with elementary surveying techniques Surveying and Levelling, covers the entire spectrum of the subject in a single volume. This student-friendly book incorporates a large number of exercise problems.

At last – a second edition of this hugely important text that reflects the progress and experience gained in the last decade and aims at providing background and training material for a new generation of risk assessors. The authors offer an introduction to risk assessment of chemicals as well as basic background information on sources, emissions, distribution and fate processes for the estimation of exposure of plant and animal species in the environment and humans exposed via the environment, consumer products, and at the workplace. The coverage describes the basic principles and methods of risk assessment within their legislative frameworks (EU, USA, Japan and Canada).

Engineers in multiple disciplines—environmental, chemical, civil, and mechanical—contribute to our understanding of air pollution control. To that end, Noel de Nevers has incorporated these multiple perspectives into an engaging and accessible overview of the subject. While based on the fundamentals of chemical engineering, the book is accessible to any reader with only one year of college chemistry. In addition to detailed discussions of individual air pollutants and the theory and practice of air pollution control devices, de Nevers devotes seven chapters to topics that influence device selection and design, such as atmospheric models and U.S. air pollution law. The Third Edition's many in-text examples and end-of-chapter problems provide a more complex treatment of the concepts presented. Significant updates include more discussion on the problem of greenhouse gas emissions and a thorough look at the Volkswagen diesel-emission scandal.

To achieve goals for climate and economic growth, "negative emissions technologies" (NETs) that remove and sequester carbon dioxide from the air will need to play a significant role in mitigating climate change. Unlike carbon capture and storage technologies that remove carbon dioxide emissions directly from large point sources such as coal power plants, NETs remove carbon dioxide directly from the atmosphere or enhance natural carbon sinks. Storing the carbon dioxide from NETs has the same impact on the atmosphere and climate as simultaneously preventing an equal amount of carbon dioxide from being emitted. Recent analyses found that deploying NETs may be less expensive and less disruptive than reducing some emissions, such as a substantial portion of agricultural and land-use emissions and some transportation emissions. In 2015, the National Academies published *Climate Intervention: Carbon Dioxide Removal and Reliable Sequestration*, which described and initially assessed NETs and sequestration technologies. This report acknowledged the relative paucity of research on NETs and recommended development of a research agenda that covers all aspects of NETs from fundamental science to full-scale deployment. To address this need, *Negative Emissions Technologies and Reliable Sequestration: A Research Agenda* assesses the benefits, risks, and "sustainable scale potential" for NETs and sequestration. This report also defines the essential components of a research and development program, including its estimated costs and potential impact.

Plate tectonics is a revolutionary theory on a par with modern genetics. Yet, apart from the frequent use of clichés such as 'tectonic shift' by economists, journalists, and politicians, the science itself is rarely mentioned and poorly understood. This book explains modern plate tectonics in a non-technical manner, showing not only how it accounts for phenomena such as great earthquakes, tsunamis, and volcanic eruptions, but also how it controls conditions at the Earth's surface, including global geography and climate. The book presents the advances that have been made since the establishment of plate tectonics in the 1960s, highlighting, on the 50th anniversary of the theory, the contributions of a small number of scientists who have never been widely recognized for their discoveries. Beginning with the publication of a short article in *Nature* by Vine and Matthews, the book traces the development of plate tectonics through two generations of the theory. First generation plate tectonics covers the exciting scientific revolution of the 1960s and 1970s, its heroes and its villains. The second generation includes the rapid expansions in sonar, satellite, and seismic technologies during the 1980s and 1990s that provided a truly global view of the plates and their motions, and an appreciation of the role of the plates within the Earth 'system'. The final chapter brings us to the cutting edge of the science, and the latest results from studies using technologies such as seismic tomography and high-pressure mineral physics to probe the deep interior. Ultimately, the book leads to the startling conclusion that, without plate tectonics, the Earth would be as lifeless as Venus.

A practical guide for the identification and management of a range of hazardous wastes, *Waste Management Practices: Municipal, Hazardous, and Industrial* integrates technical information including chemistry, microbiology, and engineering, with current regulations. Emphasizing basic environmental science and related technical fields, the book is an

The ocean helps moderate climate change thanks to its considerable capacity to store CO₂, through the combined actions of ocean physics, chemistry, and biology. This storage capacity limits the

amount of human-released CO₂ remaining in the atmosphere. As CO₂ reacts with seawater, it generates dramatic changes in carbonate chemistry, including decreases in pH and carbonate ions and an increase in bicarbonate ions. The consequences of this overall process, known as "ocean acidification", are raising concerns for the biological, ecological, and biogeochemical health of the world's oceans, as well as for the potential societal implications. This research level text is the first to synthesize the very latest understanding of the consequences of ocean acidification, with the intention of informing both future research agendas and marine management policy. A prestigious list of authors has been assembled, among them the coordinators of major national and international projects on ocean acidification.

This book analyses the relationship between the media and politics in new democracies in Europe and other parts of the world. It does so from both theoretical and empirical angles. How is power being mediated in new democracies? Can media function independently in the unstable and polarised political environment experienced after the fall of autocracy? Do major shifts in economic and ownership structures help or hinder the quality of the media? How much can new media laws alter old journalistic habits and political cultures? And how do new technologies impact the media and democracy? The book examines these questions, drawing on a vast set of data assembled by a large international project. *Media and Politics in New Democracies* focuses chiefly on new democracies in Central and Eastern Europe, but chapters analysing new democracies in Latin America, Africa, and South-east Asia are also included. These new democracies represent a variety of what sociologists call 'globalism': homogenisation and heterogenisation coexist, revealing hybrid models and multiple modernities. It is local culture that assigns meaning to global and regional influences. 'Ideal' liberal models and best practices are being promoted and aspired to, but these models and practices are often being adopted in opaque ways generating results opposite to those intended. The book finds many new democracies to be fragile if not deficient, and tries to show what is really going on in these countries, how they compare to each other, and what they can learn from each other.

The *Handbook of Political Representation in Liberal Democracies* offers a state-of-the-art assessment of the functioning of political representation in liberal democracies. In 34 chapters the world's leading scholars on the various aspects of political representation address eight broad themes: The concept and theories of political representation, its history and the main requisites for its development; elite orientations and behavior; descriptive representation; party government and representation; non-electoral forms of political participation and how they relate to political representation; the challenges to representative democracy originating from the growing importance of non-majoritarian institutions and social media; the rise of populism and its consequences for the functioning of representative democracy; the challenge caused by economic and political globalization: what does it mean for the functioning of political representation at the national level and is it possible to develop institutions of representative democracy at a level above the state that meet the normative criteria of representative democracy and are supported by the people? The various chapters offer a comprehensive review of the literature on the various aspects of political representation. The main organizing principle of the *Handbook* is the chain of political representation, the chain connecting the interests and policy preferences of the people to public policy via political parties, parliament, and government. Most of the chapters assessing the functioning of the chain of political representation and its various links are based on original comparative political research. Comparative research on political representation and its various subfields has developed dramatically over the last decades so that even ten years ago a *Handbook* like this would have looked totally different.

This book focuses on central themes related to the conservation of bats. It details their response to land-use change and management practices, intensified urbanization and roost disturbance and loss. Increasing interactions between humans and bats as a result of hunting, disease relationships, occupation of human dwellings, and conflict over fruit crops are explored in depth. Finally, contributors highlight the roles that taxonomy, conservation networks and conservation psychology have to play in conserving this imperilled but vital taxon. With over 1300 species, bats are the second largest order of mammals, yet as the Anthropocene dawns, bat populations around the world are in decline. Greater understanding of the anthropogenic drivers of this decline and exploration of possible mitigation measures are urgently needed if we are to retain global bat diversity in the coming decades. This book brings together teams of international experts to provide a global review of current understanding and recommend directions for future research and mitigation.

Technology-based firms continue to compete primarily on innovation, and one continuously required to present new solutions to an exacting market. As technological complexity and specialization intensifies, firms increasingly need to integrate and co-ordinate knowledge by means of project groups, diversified organizations, inter-organizational partnerships, and strategic alliances. Innovation processes have progressively become interdisciplinary, collaborative, inter-organizational, and international, and a firm's ability to synthesize knowledge across disciplines, organizations, and geographical locations has a major influence on its viability and success. This book demonstrates how knowledge integration is crucial in facilitating innovation within modern firms. This book provides original, detailed empirical studies of prerequisites, mechanisms, and outcomes of knowledge integration processes on several organizational levels, from key individuals, projects, and internal organizations, to collaboration between firms. It stresses the need to understand knowledge integration as a multi-level phenomenon, which requires a broad repertoire of organizational and technical means. It further clarifies the need for strong internal capabilities for exploiting external knowledge, reveals how costs of knowledge integration affect outcomes and strategic decisions, and discusses the managerial implications of fostering knowledge integration, providing practical guidance and support for managers of knowledge integration in high technology enterprises.

This open access book synthesizes leading-edge science and management information about forest and rangeland soils of the United States. It offers ways to better understand changing conditions and their impacts on soils, and explores directions that positively affect the future of forest and rangeland soil health. This book outlines soil processes and identifies the research needed to manage forest and rangeland soils in the United States. Chapters give an overview of the state of forest and rangeland soils research in the Nation, including multi-decadal programs (chapter 1), then summarizes various human-caused and natural impacts and their effects on soil carbon, hydrology, biogeochemistry, and biological diversity (chapters 2-5). Other chapters look at the effects of changing conditions on forest soils in wetland and urban settings (chapters 6-7). Impacts include: climate change, severe wildfires, invasive species, pests and diseases, pollution, and land use change. Chapter 8 considers approaches to maintaining or regaining forest and rangeland soil health in the face of these

varied impacts. Mapping, monitoring, and data sharing are discussed in chapter 9 as ways to leverage scientific and human resources to address soil health at scales from the landscape to the individual parcel (monitoring networks, data sharing Web sites, and educational soils-centered programs are tabulated in appendix B). Chapter 10 highlights opportunities for deepening our understanding of soils and for sustaining long-term ecosystem health and appendix C summarizes research needs. Nine regional summaries (appendix A) offer a more detailed look at forest and rangeland soils in the United States and its Affiliates.

The early 21st century has presented considerable challenges to the problem-solving capacity of the contemporary state in the industrialised world. Among the many uncertainties, anxieties and tensions, it is, however, the cumulative challenge of fiscal austerity, demographic developments, and climate change that presents the key test for contemporary states. Debates abound regarding the state's ability to address these and other problems given increasingly dispersed forms of governing and institutional vulnerabilities created by politico-administrative and economic decision-making structures. This volume advances these debates, first, by moving towards a cross-sectoral perspective that takes into account the cumulative nature of the contemporary challenge to governance focusing on the key governance areas of infrastructure, sustainability, social welfare, and social integration; second, by considering innovations that have sought to add problem-solving capacity; and third, by exploring the kind of administrative capacities (delivery, regulatory, coordination, and analytical) required to encourage and sustain innovative problem-solving. This edition introduces a framework for understanding the four administrative capacities that are central to any attempt at problem-solving and how they enable the policy instruments of the state to have their intended effect. It also features chapters that focus on the way in which these capacities have become stretched and how they have been adjusted, given the changing conditions; the way in which different states have addressed particular governance challenges, with particular attention paid to innovation at the level of policy instrument and the required administrative capacities; and, finally, types of governance capacities that lie outside the boundaries of the state.

The ability of beavers to create an abundant habitat for a diverse array of plants and animals has been analyzed time and again. The disappearance of beavers across the northern hemisphere, and what this effects, has yet to be comprehensively studied. *Saving the Dammed* analyzes the beneficial role of beavers and their dams in the ecosystem of a river, focusing on one beaver meadow in Colorado. In her latest book, Ellen Wohl contextualizes North St. Vrain Creek by discussing the implications of the loss of beavers across much larger areas. *Saving the Dammed* raises awareness of rivers as ecosystems and the role beavers play in sustaining the ecosystem surrounding rivers by exploring the macrocosm of global river alteration, wetland loss, and the reduction in ecosystem services. The resulting reduction in ecosystem services span things such as flood control, habitat abundance and biodiversity, and nitrate reduction. Allowing readers to follow her as she crawls through seemingly impenetrable spaces with slow and arduous movements, Wohl provides a detailed narrative of beaver meadows. *Saving the Dammed* takes readers through twelve months at a beaver meadow in Colorado's Rocky Mountain National Park, exploring how beavers change river valleys and how the decline in beaver populations has altered river ecosystems. As Wohl analyzes and discusses the role beavers play in the ecosystem of a river, readers get to follow her through tight, seemingly impenetrable, crawl spaces as she uncovers the benefit of dams.

Thoughtfully illustrated, carefully written, and covering a broad spectrum of topics, this classic text clarifies a subject that is often misunderstood and oversimplified.

Introduction to Physical Hydrology explores the principal rules that govern the flow of water by considering the four major types of water: atmospheric, ground, soil, and surface. It gives insights into the major hydrological processes, and shows how the principles of physical hydrology inform our understanding of climate and global hydrology.

Intermittent Rivers and Ephemeral Streams: Ecology and Management takes an internationally broad approach, seeking to compare and contrast findings across multiple continents, climates, flow regimes, and land uses to provide a complete and integrated perspective on the ecology of these ecosystems. Coupled with this, users will find a discussion of management approaches applicable in different regions that are illustrated with relevant case studies. In a readable and technically accurate style, the book utilizes logically framed chapters authored by experts in the field, allowing managers and policymakers to readily grasp ecological concepts and their application to specific situations. Provides up-to-date reviews of research findings and management strategies using international examples. Explores themes and parallels across diverse sub-disciplines in ecology and water resource management utilizing a multidisciplinary and integrative approach. Reveals the relevance of this scientific understanding to managers and policymakers.

Air pollution control can be approached from a number of different engineering disciplines environmental, chemical, civil, and mechanical. To that end, Noel de Nevers has written an engaging overview of the subject. While based on the fundamentals of chemical engineering, the treatment is accessible to readers with only one year of college chemistry. In addition to discussions of individual air pollutants and the theory and practice of air pollution control devices, de Nevers devotes about half the book to topics that influence device selection and design, such as atmospheric models and U.S. air pollution law. The generous number of end-of-chapter problems are designed to develop more complex thinking about the concepts presented and integrate them with readers personal experience increasing the likelihood of deeper understanding.

This book provides an introduction to a range of fundamental questions that have taxed evolutionary biologists and ecologists for decades. All of the questions posed have at least a partial solution, all have seen exciting breakthroughs in recent years, yet many of the explanations have been hotly debated.

* A practical teaching course * Takes an environmental approach to hydrology This is a textbook in environmental hydrology—a field of study concerned with the basic system of water circulation and patterns of runoff and the major ways in which human occupation of Earth alters both processes and patterns. It focuses on the river basin or catchment unit not only because of its geographical appeal but because it is the basic experimental and data-gathering unit, and the fundamental unit for water management. The book explores a considerable number of methodological frameworks. Most of these are scientific; an acceptable replacement for problem-solving by data collection, analysis, and prediction has yet to be found. However, it also considers non-digital values-attitudes, preferences, policies, laws—especially in the case of the freshwater environment, where key data are still relatively scarce. Having developed a holistic approach to river basins, the author concludes by considering the utility of our current knowledge of environment hydrology to provide the reader with a practical response to the conservation of fresh water.

The first-ever book on this subject establishes a rigid, transparent and useful methodology for investigating the material metabolism of anthropogenic systems. Using Material Flow Analysis (MFA), the main sources, flows, stocks, and emissions of man-made and natural materials can be determined. By demonstrating the application of MFA, this book reveals how resources can be conserved and the environment protected within complex systems. The fourteen case studies presented exemplify the potential for MFA to contribute to sustainable materials management. Exercises throughout the book deepen comprehension and expertise. The authors have had success in applying MFA to various

fields, and now promote the use of MFA so that future engineers and planners have a common method for solving resource-oriented problems.

This open access book examines global plastic pollution, an issue that has become a critical societal challenge with implications for environmental and public health. This volume provides a comprehensive, holistic analysis on the plastic cycle and its subsequent effects on biota, food security, and human exposure. Importantly, global environmental change and its associated, systems-level processes, including atmospheric deposition, ecosystem complexity, UV exposure, wind patterns, water stratification, ocean circulation, etc., are all important direct and indirect factors governing the fate, transport and biotic and abiotic processing of plastic particles across ecosystem types. Furthermore, the distribution of plastic in the ocean is not independent of terrestrial ecosystem dynamics, since much of the plastic in marine ecosystems originates from land and should therefore be evaluated in the context of the larger plastic cycle. Changes in species size, distribution, habitat, and food web complexity, due to global environmental change, will likely alter trophic transfer dynamics and the ecological effects of nano- and microplastics. The fate and transport dynamics of plastic particles are influenced by their size, form, shape, polymer type, additives, and overall ecosystem conditions. In addition to the risks that plastics pose to the total environment, the potential impacts on human health and exposure routes, including seafood consumption, and air and drinking water need to be assessed in a comprehensive and quantitative manner. Here I present a holistic and interdisciplinary book volume designed to advance the understanding of plastic cycling in the environment with an emphasis on sources, fate and transport, ecotoxicology, climate change effects, food security, microbiology, sustainability, human exposure and public policy.

Remote Sensing and GIS 2e is a comprehensive textbook specially designed to meet the requirements of undergraduate courses in civil, geoinformatics/geomatics, geotechnical, survey, and environmental engineering. It will equally meet the requirements of undergraduate courses in geological science, environmental science, earth sciences, geography, geophysics, earth resources management, environmental management, and disaster management.

Temperature affects everything. It influences all aspects of the physical environment and governs any process that involves a flow of energy, setting boundaries on what an organism can or cannot do. This novel textbook reveals the key principles behind the complex relationship between organisms and temperature, namely the science of thermal ecology. It starts by providing a rigorous framework for understanding the flow of energy in and out of the organism, before describing the influence of temperature on what an organism can do. With these fundamental principles covered, the book's final section explores thermal ecology itself, incorporating the important extra dimension of interactions with other organisms. An entire chapter is devoted to the crucially important subject of how organisms are responding to climate change. Indeed, the threat of rapid climatic change on a global scale is a stark reminder of the challenges that remain for evolutionary thermal biologists, and adds a sense of urgency to this book's mission.

The authors perceive a trend in the study and practice of groundwater hydrology. They see a science that is emerging from its geological roots and its early hydraulic applications into a full-fledged environmental science. They see a science that is becoming more interdisciplinary in nature and of greater importance in the affairs of man. This book is their response, and they have provided a text that is suited to the study of groundwater during this period of emergence.

The global environment is a complex mix of interlinked processes, about which observation can tell us a great deal. This book shows how modelling can be used to explain experimental observations, and how these observations - and data gathered - can be extrapolated to explain novel situations. It also illustrates how models are actively applied.

This definitive resource from the eminent Oxford Textbooks series, the *Oxford Textbook of Anaesthesia* addresses the fundamental principles, underpinning sciences and the full spectrum of clinical practice. It brings together the most pertinent research from on-going scientific endeavours with practical guidance and a passion to provide the very best clinical care to patients. This comprehensive work covers all aspects of anaesthesia; volume one addresses the fundamental principles and the basic sciences whose understanding is required for a logical, effective and evidence-based approach to practice. Volume two focuses on the clinical aspects of anaesthesia, including those aspects of intensive care and pain medicine that are required by all general anaesthetists as well as sections dedicated to procedures, surgical specialities, paediatrics, the conduct of anaesthesia outside the theatre, and concurrent disease. In 91 finely crafted and highly illustrated chapters, experts in anaesthesia review the supporting evidence and key techniques for the clinical management of specific conditions and patient groups. International contributors share their research and extensive experience to provide a wealth of practical advice for use in clinical situations in a global context. The *Oxford Textbook of Anaesthesia* will publish both in print and online on Oxford Medicine Online where it can be accessed via smartphone or similar devices and will be updated annually to reflect major changes in clinical practice. The print edition of the *Oxford Textbook of Anaesthesia* comes with a year's access to the online version. This essential reference tool supports all anaesthetists seeking an up-to-date and trustworthy account of all aspects of anaesthesia. It will be an indispensable guide to anaesthetists of all grades and subspecialty interest.

Restoring Layered Landscapes brings together historians, geographers, philosophers, and interdisciplinary scholars to explore ecological restoration in landscapes with complex histories shaped by ongoing interactions between humans and nature. For many decades, ecological restoration - particularly in the United States - focused on returning degraded sites to conditions that prevailed prior to human influence. This model has been broadened in recent decades, and restoration now increasingly focuses on the recovery of ecological functions and processes rather than on returning a site to a specific historical state. Nevertheless, neither the theory nor the practice of restoration has fully come to terms with the challenges of restoring layered landscapes, where nature and culture shape one another in deep and ongoing relationships. Former military and industrial sites provide paradigmatic examples of layered landscapes. Many of these sites are not only characterized by natural ecosystems worth preserving and restoring, but also embody significant political, social, and cultural histories. This volume grapples with the challenges of restoring and interpreting such complex sites: What should we aim to restore in such places? How can restoration adequately take the legacies of human use into account? Should traces of the past be left on the landscape, and how can interpretive strategies be creatively employed to make visible the complex legacies of an open pit mine or chemical weapons manufacturing plant? Restoration aims to create new value, but not always without loss. Restoration often disrupts existing ecosystems, infrastructure, and artifacts. The chapters in this volume consider what restoration can tell us more generally about the relationship between continuity and change, and how the past can and should inform our thinking about the future. These insights, in turn, will help foster a more thoughtful approach to human-environment relations in an era of unprecedented anthropogenic global environmental change.

Within the realm of the newly evolving discipline of environmental sciences, the stable-isotope methodology is being used to an ever-increasing extent, especially in the study of the water cycle and of paleo-climatology. This book introduces the rules of the game, by reviewing the natural variability of stable isotopes in the hydrosphere, describing the physico-chemical basis of isotope fractionation, and applying this knowledge to natural waters as they move through the hydrologic cycle

from the ocean to the atmosphere, the biosphere and the lithosphere. There is a special focus on the processes at the surface?atmosphere and land?biosphere?atmosphere interfaces, since these are the sites of major changes in isotope composition. In response to the increasing awareness of our changing climate, a discussion on the global view of the changing water cycle, in the past and future, winds up the presentation.

This book is open access under a CC BY 4.0 license. This volume focuses on microscopic plastic debris, also referred to as microplastics, which have been detected in aquatic environments around the globe and have accordingly raised serious concerns. The book explores whether microplastics represent emerging contaminants in freshwater systems, an area that remains underrepresented to date. Given the complexity of the issue, the book covers the current state-of-research on microplastics in rivers and lakes, including analytical aspects, environmental concentrations and sources, modelling approaches, interactions with biota, and ecological implications. To provide a broader perspective, the book also discusses lessons learned from nanomaterials and the implications of plastic debris for regulation, politics, economy, and society. In a research field that is rapidly evolving, it offers a solid overview for environmental chemists, engineers, and toxicologists, as well as water managers and policy-makers.

What were the landscapes of the past like? What will landscapes look like in the future? Landscapes are all around us, but most of us know very little about how they have developed, what goes on in them, and how they react to changing climates, tectonics and human activities. Examining what landscape is, and how we use a range of ideas and techniques to study it, Andrew Goudie and Heather Viles demonstrate how geomorphologists have built on classic methods pioneered by some great 19th century scientists to examine our Earth. Using examples from around the world, including New Zealand, the Tibetan Plateau, and the deserts of the Middle East, they examine some of the key controls on landscape today such as tectonics and climate, as well as humans and the living world. They also discuss some key 'landscape detectives' from the past, including Charles Darwin who did some important, but often overlooked, research on landscape. Concluding with the cultural importance of landscape, and exploring how this has led to the conservation of much 'earth heritage', they delve into the future and look at how we can predict the response of landscapes to climate change in the future. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Deliberative democracy has been one of the main games in contemporary political theory for two decades, growing enormously in size and importance in political science and many other disciplines. The Oxford Handbook of Deliberative Democracy takes stock of deliberative democracy as a research field, in philosophy, in various research programmes in the social sciences and law, and in po-

litical practice around the globe. It provides a concise history of deliberative ideals in political thought and discusses their philosophical origins. The Handbook locates deliberation in political systems with different spaces, publics, and venues, including parliaments, courts, governance networks, protests, mini-publics, old and new media, and everyday talk. It engages with practical applications, mapping deliberation as a reform movement and as a device for conflict resolution, documenting the practice and study of deliberative democracy around the world and in global governance.

Provides a comprehensive review of the role of species interactions in the process of plant community assembly.

The Transportation Experience explores the historical evolution of transportation modes and technologies. The book traces how systems are innovated, planned and adapted, deployed and expanded, and reach maturity, where they may either be maintained in a polished obsolesce often propped up by subsidies, be displaced by competitors, or be reorganized and renewed. An array of examples supports the idea that modern policies are built from past experiences. William Garrison and David Levinson assert that the planning (and control) of nonlinear, unstable processes is today's central transportation problem, and that this is universal and true of all modes. Modes are similar, in that they all have a triad structure of network, vehicles, and operations; but this framework counters conventional wisdom. Most think of each mode as having a unique history and status, and each is regarded as the private playground of experts and agencies holding unique knowledge, operating in isolated silos. However, this book argues that while modes have an appearance of uniqueness, the same patterns repeat: systems policies, structures, and behaviors are a generic design on varying modal cloth. In the end, the illusion of uniqueness proves to be myopic. While it is true that knowledge has accumulated from past experiences, the heavy hand of these experiences places boundaries on current knowledge; especially on the ways professionals define problems and think about processes. The Transportation Experience provides perspective for the collections of models and techniques that are the essence of transportation science, and also expands the boundaries of current knowledge of the field.

This handbook is the first of its kind to provide a clear, accessible, and comprehensive introduction to the most important scientific and management topics in marine environmental protection. Leading experts discuss the latest perspectives and best practices in the field with a particular focus on the functioning of marine ecosystems, natural processes, and anthropogenic pressures. The book familiarizes readers with the intricacies and challenges of managing coasts and oceans more sustainably, and guides them through the maze of concepts and strategies, laws and policies, and the various actors that define our ability to manage marine activities. Providing valuable thematic insights into marine management to inspire thoughtful application and further study, it is essential reading for marine environmental scientists, policy-makers, lawyers, practitioners and anyone interested in the field.