

Human Impacts On Amazonia The Role Of Traditional Ecological Knowledge In Conservation And Development Biology And Resource Management Series

"Plagues upon the Earth is a history of human civilization and the germs that have shaped its course. At every stage in our species' past, micro-organisms have had macro-effects on the development of human societies. Kyle Harper proposes the first history of human disease to make full use of a radical new source of evidence: pathogen genomes as a biological archive and window into prehistoric times. We can now begin to reconstruct the natural history of human disease at the molecular level, tracing the biographies of the viruses, bacteria, and protozoa that have haunted our species. The story reveals, Harper will show, the continuing importance of the deep past in determining the patterns of global divergence today. Plagues upon the Earth puts the dynamic two-way relationship between humanity and its germs in the foreground. The takeover and transformation of the planet by Homo sapiens has been the most powerful force shaping the evolution of microbial pathogens, and in turn, pathogen evolution has been a decisive influence on the destiny of human societies. From humanity's dispersal out of Africa to the rise of agriculture and complex civilizations, from the great pandemics of the medieval world to the age of global expansion and industrialization, from the modern increase in life expectancy to the ongoing threats of microbial resistance and emerging pathogens like HIV and Ebola, disease evolution has been and remains a primary, powerful, and unpredictable factor in human history. This will be the story of how we made our germs, and how our germs made the world as we know it. Harper aims to cover the entire timespan of Homo sapiens and to set the history of our species in deep perspective. The pathogens that exist today are the heirs of millions of years of evolution. Similarly, the patterns of economic development, and the roots of global inequality, have distant origins. Thus, Harper aims to bring together two bodies of literature: the history of disease and the study of geography and social development. The book is global in coverage, insisting on the importance of understanding how the tropics and temperate zones, the Old World and the New World, differ and interact throughout the course of history. Viruses, bacteria, and protozoa - in all their peculiarity and specificity - have played an enormous part in shaping the different outcomes experienced by human societies. Plagues upon the Earth combines biology, geography, and economics to understand these differences but emphasizes the central importance of evolution as a source of constant change. The past is always present in the history of disease, and the future is always unpredictable. The story continues right up to our own world. The book closes with a reflection on antibiotic resistance as a form of evolution that continues the ancient molecular antagonism between pathogens and host immune systems, and the importance of seeing this struggle in a broader environmental framework. Freedom from infectious disease remains an unachieved goal for our species, which is more interconnected than ever. The biology of infectious disease has been one of the great forces shaping the patterns of global development, but only with a sense of history - of the interplay of change, conjunction, and chance - can we begin to understand the intertwined story of human societies and their germs"--

Sustainability is now key to international and national policy, manufacture and consumption. It is also central to many individuals who try to lead environmentally ethical lives. Historically, religion has been a significant part of many visions of sustainability. Pragmatically, the inclusion of religious values in conservation and development efforts has facilitated relationships between people with different value structures. Despite this, little attention has been paid to the interdependence of sustainability and religion, and no significant comparisons of religious and secular sustainability advocacy. Religion and Sustainability presents the first broad analysis of the spiritual dimensions of sustainability-oriented social movements. Exploring the similarities and differences between the conceptions of sustainability held by religious, interfaith and secular organizations, the book analyses how religious practice and discourse have impacted on political ideology and process.

The idea of pre-Columbian Amazonia as a "cultural parkland" or "modified landscape" (hereafter referred to as the cultural parkland hypothesis) is becoming widely accepted within the archaeological community, and posits that large human populations had transformative influences and long-lasting impacts on the entire Amazonian landscape. The acceptance and implications of these assertions have recently spread into other disciplines, including tropical-forest ecology and conservation, biogeography, and climate-change ecology. The archaeological data to support this hypothesis, however, are relatively scarce within the Amazon Basin, which is similar in size to the continental United States. Natural fire is rare in the Amazon and therefore the presence of fire is indicative of human settlements. Surveys analyzing the evidence of fire history thereby provide an avenue to investigate the claim of a basin-wide-scale alteration of the forests by pre-Columbian human populations. Through soil charcoal and phytolith analysis, I tested the predictions of the cultural parkland hypothesis. As subsidiary questions I analyzed the sphere of influence around known settlement sites to obtain a measure of the ubiquity of human disturbance. Replicable methods of soil collection and charcoal analyses are presented, and were used to statistically compare spatial and temporal aspects of fire history that for the most part have previously been descriptive in nature. I also modeled how preferred settlement sites, such as those in riverine forests and in the driest Amazonian rainforests, affected the probability of finding evidence of past fire. Also included is a test of whether large bamboo patches in western Amazonia are remnants of pre-Columbian settlements. The 14C dates obtained through all of these studies were also cumulatively analyzed to provide a comprehensive characterization of fire ages in western Amazonia, and these were then contrasted with previously published fire ages from eastern Amazonia. The results of my research illustrated that much of western Amazonia was not cultural parkland, or a highly modified landscape. While evidence of historical fire was present in most locations, human impacts were heterogeneous and localized. Comparisons of soil and lake-sediment charcoal revealed that localized pockets of human disturbance occurred, generally, within 5 km of the lake edge, and that lake sediment records containing evidence of

humans could not be assumed to have resulted from uniform or widespread forest clearing. Soil surveys indicated that human impacts were concentrated in preferable habitation areas, on river bluffs, or were concentrated in localities containing the highest resource abundances. My work documented that the highest human impacts occurred in the eastern-most forests of western Amazonia, which have a stronger dry season than those in the western-most forests, and in forests that were close to the major Amazonian rivers. My research has also provided evidence that the large bamboo forests within western Amazonia were not remnants of pre-Columbian forest clearing, and were often not associated with any historical fire. Instead, the bamboo forests appear to be an ancient biome within Amazonia, which established before humans or fires appeared in the landscape. The 14C dates obtained through my research also revealed that the timing of historical fires in western Amazonia was considerably different than the trajectory of previously published fire histories from eastern Amazonia. Although fires from both areas are linked to human activity, the timing of these fires may also reflect historical droughts. In light of my findings, several conclusions by prior researchers who have assumed all of Amazonian forests were cultural parklands are in need of reassessment. Pre-Columbian anthropogenic activity has been implicated as a major factor in structuring biodiversity patterns and influencing global carbon budgets. Pre-Columbian human disturbances in western Amazonia were most likely not sufficient to structure the hyper-diverse flora and fauna of Amazonian forests, or affect global CO2 levels. Therefore, the assumed forest resiliency underlying the cultural parkland hypothesis is unwarranted because many of the forests have experienced little to no historical disturbances, at least over the last few millennia.

This book reconstructs the world of eighteenth-century Amazonia to argue that indigenous mobility did not undermine settlement or community. In doing so, it revises longstanding views of native Amazonians as perpetual wanderers, lacking attachment to place and likely to flee at the slightest provocation. Instead, native Amazonians used traditional as well as new, colonial forms of spatial mobility to build enduring communities under the constraints of Portuguese colonialism. Canoeing and trekking through the interior to collect forest products or to contact independent native groups, Indians expanded their social networks, found economic opportunities, and brought new people and resources back to the colonial villages. When they were not participating in these state-sponsored expeditions, many Indians migrated between colonial settlements, seeking to be incorporated as productive members of their chosen communities. Drawing on largely untapped village-level sources, the book shows that mobile people remained attached to their home communities and committed to the preservation of their lands and assets. This argument still matters today, and not just to scholars, as rural communities in the Brazilian Amazon find themselves threatened by powerful outsiders who argue that their mobility invalidates their claims to territory.

Organization of research for the development of the amazon region; How research can contribute to the sustainable use of the amazon; Technology transfer to the private sector; European research activities on sustainable management of the amazon region; State-of-the-art of information sources in brazilian amazon and amazonian information systems; Perspectives and trends in global information management; The transfer and application of research results: how to link the science-business with the development-business; Introductory statements of the working group I: socio-economic implication; Amazonia: conflict and violence a threat to sustainable development; Legal aspects concerning the conservation and sustainable use of amazonian forest; Social and economic implications of recent strategies for amazonia: a critical assessment; Land tenure, forms of production and environment in the amazon region; Conservation and sustainable development in amazonia: the programme on south-south co-operation on environmentally sound socio-economic development in the humid tropics; Carbon balance and tropical ecosystems, problems of measurement and scaling up; LBA - the large-scale biosphere-atmosphere experiment in amazonia; Deforestation and use of soil as pasture: climatic impacts; Biodiversity and economic botany; Sustainable land use systems for the amazon region; Pastures on amazonian forestlands: a review of environmental and economic performance; Agroforestry.

This book offers a panorama of recent scientific achievements produced through the framework of the Large-Scale Biosphere-Atmosphere programme (LBA) and other research programmes in the Brazilian Amazon. The content is highly interdisciplinary, with an overarching aim to contribute to the understanding of the dynamic biophysical and societal/socio-economic structure and functioning of Amazonia as a regional entity and its regional and global climatic teleconnections. The target readership includes advanced undergraduate and post-graduate students and researchers seeking to untangle the gamut of interactions that the Amazon's complex biophysical and social system represent. Exploring a topic of vital and ongoing importance, Traditional Forest Knowledge examines the history, current status and trends in the development and application of traditional forest knowledge by local and indigenous communities worldwide. It considers the interplay between traditional beliefs and practices and formal forest science and interrogates the often uneasy relationship between these different knowledge systems. The contents also highlight efforts to conserve and promote traditional forest management practices that balance the environmental, economic and social objectives of forest management. It places these efforts in the context of recent trends towards the devolution of forest management authority in many parts of the world. The book includes regional chapters covering North America, South America, Africa, Europe, Asia and the Australia-Pacific region. As well as relating the general factors mentioned above to these specific areas, these chapters cover issues of special regional significance, such as the importance of traditional knowledge and practices for food security, economic development and cultural identity. Other chapters examine topics ranging from key policy issues to the significant programs of regional and international organisations, and from research ethics and best practices for scientific study of traditional knowledge to the adaptation of traditional forest knowledge to climate change and globalisation.

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Winner of the Society for Economic Botany's Mary W. Klinger Book Award. *Cultural Forests of the Amazon* is a comprehensive and diverse account of how indigenous people transformed landscapes and managed resources in the most extensive region of tropical forests in the world. Until recently, most scholars and scientists, as well as the general public, thought indigenous people had a minimal impact on Amazon forests, once considered to be total wildernesses. William Balé e's research, conducted over a span of three decades, shows a more complicated truth. In *Cultural Forests of the Amazon*, he argues that indigenous people, past and present, have time and time again profoundly transformed nature into culture. Moreover, they have done so using their traditional knowledge and technology developed over thousands of years. Balé e demonstrates the inestimable value of indigenous knowledge in providing guideposts for a potentially less destructive future for environments and biota in the Amazon. He shows that we can no longer think about species and landscape diversity in any tropical forest without taking into account the intricacies of human history and the impact of all forms of knowledge and technology. Balé e describes the development of his historical ecology approach in Amazonia, along with important material on little-known forest dwellers and their habitats, current thinking in Amazonian historical ecology, and a narrative of his own dialogue with the Amazon and its people. Around the year 1800, independent Native groups still effectively controlled about half the territory of the Americas. How did they maintain their political autonomy and territorial sovereignty, hundreds of years after the arrival of Europeans? In a study that spans the eighteenth to twentieth centuries and ranges across the vast interior of South America, Heather F. Roller examines this history of power and persistence from the vantage point of autonomous Native peoples in Brazil. The central argument of the book is that Indigenous groups took the initiative in their contacts with Brazilian society. Rather than fleeing or evading contact, Native peoples actively sought to appropriate what was useful and potent from outsiders, incorporating new knowledge, products, and even people, on their own terms and for their own purposes. At the same time, autonomous Native groups aimed to control contact with dangerous outsiders, so as to protect their communities from threats that came in the form of sicknesses, vices, forced labor, and land invasions. Their tactical decisions shaped and limited colonizing enterprises in Brazil, while revealing Native peoples' capacity for cultural persistence through transformation. These contact strategies are preserved in the collective memories of Indigenous groups today, informing struggles for survival and self-determination in the present.

From the pre-Columbian era to the present, native Amazonians have shaped the land around them, emphasizing utilization, conservation, and sustainability. These priorities stand in stark contrast to colonial and contemporary exploitation of Amazonia by outside interests. With essays from environmental scientists, botanists, and anthropologists, this volume explores the various effects of human development on Amazonia. The contributors argue that by protecting and drawing on local knowledge and values, further environmental ruin can be avoided.

Issues in General Science and Scientific Theory and Method: 2013 Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about Mixed Methods Research. The editors have built *Issues in General Science and Scientific Theory and Method: 2013 Edition* on the vast information databases of ScholarlyNews.™ You can expect the information about Mixed Methods Research in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of *Issues in General Science and Scientific Theory and Method: 2013 Edition* has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>.

This book examines both ancient and current agricultural field types and technologies in the Andes and Amazonia. These systems have often been intensive, highly productive, and have supported large numbers of people and complex societies in lands considered mostly marginal for farming today.

Environmental Anthropology studies historic and present human-environment interactions. This volume illustrates the ways in which today's environmental anthropologists are constructing new paradigms for understanding the multiplicity of players, pressures, and ecologies in every environment, and the value of cultural knowledge of landscapes. This Handbook provides a comprehensive survey of contemporary topics in environmental anthropology and thorough discussions on the current state and prospective future of the field in seven key sections. As the contributions to this Handbook demonstrate, the subfield of environmental anthropology is responding to cultural adaptations and responses to environmental changes in multiple and complex ways. As a discipline concerned primarily with human-environment interaction, environmental anthropologists recognize that we are now working within a pressure cooker of rapid environmental damage that is forcing behavioural and often cultural changes around the world. As we see in the breadth of topics presented in this volume, these environmental challenges have inspired renewed foci on traditional topics such as food procurement, ethnobiology, and spiritual ecology; and a broad new range of subjects, such as resilience, nonhuman rights, architectural anthropology, industrialism, and education. This volume enables scholars and students quick access to both established and trending environmental anthropological explorations into theory, methodology and practice.

Presents an introduction to rivers and streams, including the effects they have had on human settlements and trade, and the physical geography of the earth; also examines the major rivers in the world, including the Nile, Amazon, and Ganges.

This timely book provides the first examination of the relationship between cultural and environmental variation in the Amazon, with special reference to the survival and welfare of indigenous societies. The particular strength of this collection is that it emphasizes ongoing changing elements rather than static ones in Amazonian human ecology in the context of colonization. Leslie Sponsel and twelve other contributors, including archaeologists, biological anthropologists, cultural ecologists, and nutritionists, review traditional and changing adaptations of indigenous societies to Amazonian ecosystems; they analyze the challenges presented to indigenes by the massive cultural and environmental impact of Westernization. They also discuss the applications of research results to the needs, interests, and priorities of indigenous societies. In his concluding chapter, Sponsel calls for anthropologists to contribute through their research to the empowerment of indigenous communities and organizations. "In the Amazon the only people who already know and practice ecologically sound economies are most indigenous societies. Documenting their ecologically sound values, knowledge, and technology is one of the most

important tasks for cultural ecology".

This is a multidisciplinary collection of thirty nine key articles concerned with the human impact on the natural environment.

Sustainable development is often thought of as a product that can be obtained by following a prescribed course of interventions. Rather than conceptualizing it as a sweet spot of economic, ecological, and social balance, sustainable development is an ongoing process of embroilments requiring constant negotiation of often-competing aims. Sustainable development politics yield highly uneven results among different members of society and different geographic areas. As this book argues, such imbalances mean that sustainable development processes often prioritize economic over environmental goals, perpetuating and reinforcing economic and political inequalities. *Governing the Rainforest* looks at development and conservation efforts in the Brazilian Amazon, where the government and corporate interests bump up against those of environmentalists and local populations. This book asks why sustainable development continues to be such a powerful and influential idea in the region, and what impact it has had on various political and economic interests and geographic areas. In other words, as Eve Z. Bratman argues, sustainable development is a political practice in itself. This book offers detailed case study analysis, including of the creation of vast conservation corridors, the construction of one of the largest hydroelectric plants in the world, and new forms of land settlement projects. Based on a decade of Bratman's ethnographic fieldwork throughout Brazil, and particularly along the Trans-Amazonian Highway, *Governing the Rainforest* offers a fresh take on sustainable development within a multi-level analysis of actors, discourses, and practices.

Any reader eager to gain a comprehensive insight into forest development policy, praxis and reality shouldn't miss this excellent publication. Hard to find a comparable reading where the author is digging as deep into Forest Development Policy. The author discovered numerous highly relevant theories as well as inspiring cases about forests and people from around the world, focusing on 'change' rather than 'development' and on the role of various actors in creating or preventing 'change'. The exciting results uncover reality and lead to inspiring discussions on concepts of development cooperation. All individual theoretical arguments and empirical proofs are well based and shed light into the political process of Forest Development Policy. The book is an essential contribution to scholarly debate and research on forestry in the South, and its relations to development cooperation, for both, readers with theoretical and practice related interests.

This book provides an overview of recent advances in Integrated Community-Managed Development (ICMD) as an innovative strategy for the community-based development of local institutions in order to achieve lasting poverty reduction and empowerment. The original approach presented here to improving the lives and livelihoods of the poor takes a critical stance on the failing concept of conventional community development, as it is based on the shifting paradigm of 'bottom-up' cooperation and development, where recent regional autonomy policies are enabling national services to successfully integrate with local institutions at the community level. Based on recent experiences in South-East Asia, where the implementation of an alternative approach to integrating financial, medical, educational, communication and socio-cultural services has led to increased community participation and impressive poverty reduction, the book highlights the theoretical, methodological and practical aspects of this innovative strategy. The potential offered by applying the newly developed 'ICMD formula' worldwide as a function of themes, principles and services is reflected in the book's diverse range of contributions, written by respected researchers and practitioners in the fields of development economics and financial management.

This book analyses the potential socio-economic and environmental impacts of the Initiative for Regional Infrastructure Integration in South America (IIRSA), a continent-wide programme. IIRSA aims at facilitating intra-regional trade and at improving trade and transport links with world markets. This is the first book on IIRSA and its potential implications for South America and more specifically for Amazonia. The book provides an in-depth analysis of the infrastructure programme and deals particularly with methods to assess the probable effects of road construction in environmentally fragile territories. To deepen our understanding of the potential impacts of roads in these areas, the book combines insights from economic and environmental sciences and gives a critical review of traditional assessments and strategic environmental assessments (SEAs). A comprehensive approach of assessing impacts is presented in three case studies of SEAs: the Corredor Norte in Bolivia, the road between Manaus and Porto Velho in Brazil, and the proposed road to link Suriname with Brazil.

Forests, Water and People in the Humid Tropics is a comprehensive review of the hydrological and physiological functioning of tropical rain forests, the environmental impacts of their disturbance and conversion to other land uses, and optimum strategies for managing them. The book brings together leading specialists in such diverse fields as tropical anthropology and human geography, environmental economics, climatology and meteorology, hydrology, geomorphology, plant and aquatic ecology, forestry and conservation agronomy. The editors have supplemented the individual contributions with invaluable overviews of the main sections and provide key pointers for future research. Specialists will find authenticated detail in chapters written by experts on a whole range of people-water-land use issues, managers and practitioners will learn more about the implications of ongoing and planned forest conversion, while scientists and students will appreciate a unique review of the literature.

Deforestation and logging degrade more forest in eastern and southern Amazonia than in any other region of the world. This forest alteration affects regional hydrology and the global carbon cycle, but our current understanding of these effects is limited by incomplete knowledge of tropical forest ecosystems. It is widely agreed that roots are concentrated near the soil surface in moist tropical forests, but this generalization incorrectly implies that deep roots are unimportant in water and C budgets. Our results indicate that half of the closed-canopy forests of Brazilian Amazonia occur where rainfall is highly seasonal, and these forests rely on deeply penetrating roots to extract soil water.

Pasture vegetation extracts less water from deep soil than the forest it replaces, thus increasing rates of drainage and decreasing rates of evapotranspiration. Deep roots are also a source of modern carbon deep in the soil. The soils of the eastern Amazon contain more carbon below 1 m depth than is present in above-ground biomass. As much as 25 percent of this deep soil C could have annual to decadal turnover times and may be lost to the atmosphere following deforestation. We compared the importance of deep roots in a mature, evergreen forest with an adjacent man-made pasture, the most common type of vegetation on deforested land in Amazonia. The study site is near the town of Paragominas, in the Brazilian state of Para, with a seasonal rainfall pattern and deeply-weathered, kaolinitic soils that are typical for large portions of Amazonia. Root distribution, soil water extraction, and soil carbon dynamics were studied using deep auger holes and shafts in each ecosystem, and the phenology and water status of the leaf canopies were measured. We estimated the geographical distribution of deeply-rooting forests using satellite imagery, rainfall data, and field measurements. Nepstad, Daniel C. and Stone, Thomas A. and Davidson, Eric A. Unspecified Center NAGW-2750...

In recent years, tropical forests have received more attention and have been the subject of greater environmental concern than any other kind of vegetation. There is an increasing public awareness of the importance of these forests, not only as a diminishing source of countless products used by mankind, nor for their effects on soil stabilization and climate, but as unrivalled sources of what today we call biodiversity. Threats to the continued existence of the forests represent threats to tens of thousands of species of organisms, both plants and animals. It is all the more surprising, therefore, that there have been no major scientific accounts published in recent years since the classic handbook by Paul W. Richards, *The Tropical Rain Forest* in 1952. Some excellent popular accounts of tropical rain forests have been published including Paul Richard's *The Life of the Jungle*, and Catherine Caulfield's *In the Rainforest and Jungles*, edited by Edward Ayensu. There have been numerous, often conflicting, assessments of the rate of conversion of tropical forests to other uses and explanations of the underlying causes, and in 1978 UNESCO/UNEPI FAO published a massive report, *The Tropical Rain Forest*, which, although full of useful information, is highly selective and does not fully survey the enormous diversity of the forests.

Amazonian soils are almost universally thought of as extremely forbidding. However, it is now clear that complex societies with large, sedentary populations were present for over a millennium before European contact. Associated with these are tracts of anomalously fertile, dark soils termed 'terra preta' or dark earths. These soils are presently an important agricultural resource within Amazonia and provide a model for developing long-term future sustainability of food production in tropical environments. The late Dutch soil scientist Wim Sombroek (1934-2003) was instrumental in bringing the significance of these soils to the attention of the world over four decades ago. Wim saw not only the possibilities of improving the lives of small holders throughout the world with simple carbon based soil technologies, but was an early proponent of the positive synergies also achieved in regards to carbon sequestration and global climatic change abatement. Wim's vision was to form a multidisciplinary group whose members maintained the ideal of open collaboration toward the attainment of shared goals. Always encouraged and often shaped by Wim, this free association of international scholars termed the "Terra Preta Nova" Group came together in 2001 and has flourished. This effort has been defined by enormous productivity. Wim who is never far from any of our minds and hearts, would have loved to share the great experience of seeing the fruits of his vision as demonstrated in this volume.

The field of ecological restoration is a rapidly growing discipline that encompasses a wide range of activities and brings together practitioners and theoreticians from a variety of backgrounds and perspectives, ranging from volunteer backyard restorationists to highly trained academic scientists and professional consultants. Ecological Restoration offers for the first time a unified vision of ecological restoration as a field of study, one that clearly states the discipline's precepts and emphasizes issues of importance to those involved at all levels. In a lively, personal fashion, the authors discuss scientific and practical aspects of the field as well as the human needs and values that motivate practitioners. The book: -identifies fundamental concepts upon which restoration is based -considers the principles of restoration practice -explores the diverse values that are fulfilled with the restoration of ecosystems -reviews the structure of restoration practice, including the various contexts for restoration work, the professional development of its practitioners, and the relationships of restoration with allied fields and activities A unique feature of the book is the inclusion of eight "virtual field trips," short photo essays of project sites around the world that illustrate various points made in the book and are "led" by those who were intimately involved with the project described. Throughout, ecological restoration is conceived as a holistic endeavor, one that addresses issues of ecological degradation, biodiversity loss, and sustainability science simultaneously, and draws upon cultural resources and local skills and knowledge in restoration work.

The Physical Geography of South America, the eighth volume in the Oxford Regional Environments series, presents an enduring statement on the physical and biogeographic conditions of this remarkable continent and their relationships to human activity. It fills a void in recent environmental literature by assembling a team of specialists from within and beyond South America in order to provide an integrated, cross-disciplinary body of knowledge about this mostly tropical continent, together with its high mountains and temperate southern cone. The authors systematically cover the main components of the South American environment - tectonism, climate, glaciation, natural landscape changes, rivers, vegetation, animals, and soils. The book then presents more specific treatments of regions with special attributes from the tropical forests of the Amazon basin to the Atacama Desert and Patagonian steppe, and from the Atlantic, Caribbean, and Pacific coasts to the high Andes. Additionally, the continent's environments are given a human face by evaluating the roles played by people over time, from pre-European and European colonial impacts to the effects of modern agriculture and urbanization, and from interactions with El Niño events to prognoses for the future environments of the continent.

This volume aims to present the essential work of geographer and historical ecologist William M. Denevan to explain the impact and influence his thinking had on the conceptual advancement not only in his own discipline, but in a range of related disciplines such as anthropology, archaeology, and environmental history. The book is organized around eight themes, demonstrating Denevan's early and profound insights on topics that remain of current relevance today, and the scholarly impact his writing had on subsequent scholarship. The book is unique because it offers commentary from active scholars who address the impacts of Prof. Denevan's thinking and work on contemporary environmental and ecological issues, with a focus on several groundbreaking themes (e.g. historical demography, agricultural landforms, cultural plant geography, human environmental impacts, indigenous agro-ecology, tropical agriculture, livestock and landscape, and synthetic contributions). This book will be of interest to a range of scholars in geography, anthropology, archaeology, history, and ecology, as well as to environmental managers and practitioners, especially those working for non-profit organizations and government organizations tasked with finding ways to adapt to global environmental change. .

This report, prepared by the Commission on Development and Environment for Amazonia at the initiative of the Amazon Cooperation Treaty and supported by the Inter-American Development Bank and the United Nations Development Programme, is based on the concept of an Amazonia that exists above and beyond the world of fantasy and myth: an Amazonia of flesh and blood, of human toil, of human history, of human faces and hopes, and future human beings. It is an analysis based not only on the experiences and technologies of today's world but also, and with greater emphasis, on the wisdom accumulated for centuries by Amazonia itself: standing Amazonia. The Amazon region has the largest area of tropical forest on the planet, and concern for its environmental deterioration extends well beyond the borders of the eight countries that form a part of it. With support from the IDB and UNDP, the Commission on Development and Environment for Amazonia prepared this report that provides data on the region's natural resources, population, health and infrastructure.

This work is an overview of the critical natural resource conflicts facing the United States and the world, and current attempts to resolve them peacefully. * Provides an overview of the six major periods in U.S. history that defined natural resource issues and conflicts * Includes a chronology of renewable natural resource issues in the United States from the colonial period to the present

The fortunes of the late nineteenth century's imperial and industrial powers depended on a single raw material—rubber—with only one source: the Amazon basin. And so began the scramble for the Amazon—a decades-long conflict that found Britain, France, Belgium, and the United States fighting with and against the new nations of Peru, Bolivia, and Brazil for the forest's riches. In the midst of this struggle, Euclides da Cunha, engineer, journalist, geographer, political theorist, and one of Brazil's most celebrated writers, led a survey expedition to the farthest reaches of the river, among the world's most valuable, dangerous, and little-known landscapes. The Scramble for the Amazon tells the story of da Cunha's terrifying journey, the unfinished novel born from it, and the global strife that formed the backdrop for both. Haunted by his broken marriage, da Cunha trekked through a beautiful region thrown into chaos by guerrilla warfare, starving migrants, and native slavery. All the while, he worked on his masterpiece, a nationalist synthesis of geography, philosophy, biology, and journalism he named the Lost Paradise. Da Cunha intended his epic to unveil the Amazon's explorers, spies, natives, and brutal geopolitics, but, as Susanna B. Hecht recounts, he never completed it—his wife's lover shot him dead upon his return. At once the biography of an extraordinary writer, a masterly chronicle of the social, political, and environmental history of the Amazon, and a superb translation of the remaining pieces of da Cunha's project, *The Scramble for the Amazon* is a work of thrilling intellectual ambition.

Dark Earths are a testament to vanished civilizations of the Amazon Basin, but may also answer how large societies could sustain intensive agriculture in an environment of infertile soils. This book examines their origin, properties, and management. Questions remain: were they intentionally produced or a by-product of habitation. Additional new and multidisciplinary perspectives by leading experts may pave the way for the next revolution in soil management in the humid tropics.

The seventh edition of this classic student text explores the multitude of impacts that humans have had over time upon vegetation, animals, soils, water, landforms and the atmosphere. It also looks into the future and considers the ways in which climate changes and modifications in land cover may change the environment in coming decades. Extensively re-written, it contains many new statistical tables, figures, and references. It is essential reading for undergraduates in geography and environmental science, and for those who want a thorough, wide-ranging and balanced overview of the impacts of humans upon natural processes and systems from the Stone Age to the Anthropocene and who wish to understand the major environmental issues that concern the human race at the present time. Additional resources for this book can be found at: <http://www.wiley.com/go/goudiehumanimpact> www.wiley.com/go/goudiehumanimpact/a.

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