

Sustainable Agroecosystem Management Integrating Ecology Economics And Society Advances In Agroecology

Successful management of agricultural landscapes depends on the recognition of the relationships between the processes and the structures that maintain the system. The rapidly growing science of Landscape Ecology quantifies the ways these ecosystems interact and establishes a link between the activities in one region and repercussions in another. A With all of the environmental and social problems confronting our food systems today, it is apparent that none of the strategies we have relied on in the past—higher-yielding varieties, increased irrigation, inorganic fertilizers, pest damage reduction—can be counted on to come to the rescue. In fact, these solutions are now part of the problem. It is becoming quite clear that the only way to keep the food crisis from escalating is to promote the conversion processes that will move agriculture to sustainability. Under the editorial guidance of agroecology experts Martha Rosemeyer and the internationally renowned Dr. Stephen R. Gliessman, *The Conversion to Sustainable Agriculture: Principles, Processes, and Practices* establishes a framework for how this conversion can be accomplished and presents case studies from around the world that illustrate how the process is already underway. The book provides a four-stage transition process for achieving sustainability and an in-depth analysis of the global efforts to make farms more energy-efficient and environmentally friendly. An international team of chapter contributors explores ways to lessen dependency on fossil fuels and pesticides, and examines each step in the conversion process. They also describe the process of monitoring change toward sustainable agriculture while integrating social and economic analysis within scientific practices. Serving as both a core textbook for students and a comprehensive reference for agricultural practitioners, this volume is a valuable resource for the change that is needed in our food system now and in the future.

Good agroecological practices are indispensable for the development of sustainable agriculture. In this book, principles, diversity and applications of agroecological practices for a range of systems are presented, transforming scientific research and participatory knowledge of production into practical application. It illustrates a broad range of research and teaching being used within the farming community to demonstrate best practice and current state-of-play within the field. Agroecological methods used in crop farming, grass-based livestock farming, fish production, and other complex farming systems are discussed. Conclusions are drawn from studies to provide an outlook on future trends of agroecological practices and on policies supporting implementation. Due to emphasis on real-life application, it is relevant not only to students of the agricultural sciences and public policy, but also to researchers, stakeholders and policy makers involved in the development of sustainable agriculture.

This book represents a first attempt to investigate the relations between Law and Agroecology. There is a need to adopt a transdisciplinary approach to multifunctional agriculture in order to integrate the agroecological paradigm in legal regulation. This does not require a super-law that hierarchically purports to incorporate and supplant the existing legal fields; rather, it calls for the creation of a trans-law that progressively works to coordinate interlegalities between different legal fields, respecting their autonomy but emphasizing their common historical roots in *rus* in the process. *Rus*, the rural phenomenon as a whole, reflects the plurality and interdependence of different complex systems based jointly on the land as a central point of reference. “Rural” is more than “agricultural”: if agriculture is understood traditionally as an activity aimed at exploiting the land for the production of material goods for use, consumption and private exchange, rurality marks the reintegration of agriculture into a broader sphere, one that is not only economic, but also social and cultural; not only material, but also ideal, relational, historical, and symbolic; and not only private, but also public. In approaching *rus*, the natural and social sciences first became specialized, multiplied, and compartmentalized in a plurality of first-order disciplines; later, they began a process of integration into Agroecology as a second-order, multi-perspective and shared research platform. Today, Agroecology is a transdiscipline that integrates other fields of knowledge into the concept of agroecosystems viewed as socio-ecological systems. However, the law seems to still be stuck in the first stage. Following a reductionist approach, law has deconstructed and shattered the universe of *rus* into countless, disjointed legal elementary particles, multiplying the planes of analysis and, in particular, keeping Agricultural Law and Environmental Law two separate fields.

This book compiles a set of 26 papers that present the direct, practical experiences and results of a large number of local practitioners and experts that supported the Transboundary agro-ecosystem management project of the Kagera river basin (Kagera TAMP) during the period 2010-2015. The book has been compiled by the Land and Water Division of the Food and Agriculture Organization of the United Nations (FAO) to reflect the wide range of experiences, approaches and tools that were used for promoting participatory diagnostics, adaptive management and adoption of sustainable land and agro-ecosystem management (SLaM) practices from farm to watershed / landscape scale. The project was supported by the Global Environment Facility (GEF), the Governments of the four countries that share the transboundary basin - Burundi, Rwanda, the United Republic of Tanzania and Uganda and project partners. It is hoped that the lessons learned are considered and taken up by the Governments and the Terrafrica partnership for scaling up and mainstreaming SLaM as part of the wider set of lessons learned from the 36 projects in 26 countries under the Terrafrica Strategic Investment programme, including Kagera TAMP.

This compilation has been designed to provide a comprehensive source of theoretical and practical update for scientists working in the broad field of soil science. The book explores all possible mechanisms and means to improve nutrient use efficiencies involving developing and testing of nanofertilizers, developing consortia based microbial formulations for mobilization of soil nutrients, and engineering of nutrient efficient crops using molecular biology and biotechnological tools. This is an all-inclusive collection of information about soil science. This book is of interest to teachers, researchers, soil scientists, capacity builders and policymakers. Also the book serves as additional reading material for undergraduate and graduate students of soil science, quantitative ecology, earth sciences, GIS and geodetic sciences, as well as geologists, geomorphologists, hydrologists and landscape ecology. National and international agriculture and soil scientists, policy makers will also find this to be a useful read.

Agroecology is a science, a productive practice, and part of a social movement that is at the forefront of transforming food systems to sustainability. Building upon the ecological foundation of the agroecosystem, *Agroecology: The Ecology of Sustainable Food Systems*, Third Edition provides the essential foundation for understanding sustainability i

Report assessing society's ability to sustain itself without hurting the next generation

Key features: Reviews the development of agroecology in China, including research, practice, management, and education regarding challenges for rural and agricultural progress Presents information from sources not readily available in the West about agricultural development in China during the last several decades Provides models and indicates starting points for future research and practice Addresses how to meet future challenges of agroecosystems from the field to the table in China from scientific, technological, and management perspectives During the past 30 years, industrialization has fundamentally changed traditional rural life and agricultural practices in China. While the incomes of farmers have increased, serious issues have been raised concerning the environment, resource depletion, and food safety. In response, the Chinese government and Chinese scientists encouraged eco-agriculture, the practice of agroecology principles and philosophy, as a way to reduce the negative consequences of large-scale industrialized systems of farming. Agroecology in China: Science, Practice, and Sustainable Management represents the work of experts and leaders who have taught, researched, and expanded Chinese agroecology and eco-agriculture for more than 30 years. It reviews decades of agricultural change to provide an integrated analysis of the progress of research and development in agroecological farming practices. The book contains research on traditional and newly developed agricultural systems in China, including intercropping systems, rainfall harvest systems, and rice–duck, rice–fish, and rice–frog co-culture systems. It covers current eco-agriculture practices in the major regions of China according to climate conditions. The book closes with a discussion of the major technical approaches, necessary policy support, and possible major development stages that must occur to allow broader agroecological implementations toward the sustainability of future food systems in China. Presenting eco-agriculture systems that are somewhat unique in comparison to those of the United States, Latin America, and Europe, Agroecology in China gives insight on how Chinese agroecologists, under the political and cultural systems specific to China, have created a strong foundation for ecologically sound agroecosystem design and management that can be applied and adapted to food systems elsewhere in the world. By using selected regional examinations of agroecological efforts in China as examples, this book provides models of how to conduct research on a broad range of agroecosystems found worldwide.

Bringing together a wealth of knowledge, Environmental Management Handbook, Second Edition, gives a comprehensive overview of environmental problems, their sources, their assessment, and their solutions. Through in-depth entries and a topical table of contents, readers will quickly find answers to questions about environmental problems and their corresponding management issues. This six-volume set is a reimagining of the award-winning Encyclopedia of Environmental Management, published in 2013, and features insights from more than 400 contributors, all experts in their field. The experience, evidence, methods, and models used in studying environmental management are presented here in six stand-alone volumes, arranged along the major environmental systems. Features The first handbook that demonstrates the key processes and provisions for enhancing environmental management Addresses new and cutting-edge topics on ecosystem services, resilience, sustainability, food–energy–water nexus, socio-ecological systems, and more Provides an excellent basic knowledge on environmental systems, explains how these systems function, and offers strategies on how to best manage them Includes the most important problems and solutions facing environmental management today In this second volume, Managing Biological and Ecological Systems, the reader is introduced to the general concepts and processes of the biosphere and all its systems. This volume explains how these systems function and provides strategies on how to best manage them. It serves as an excellent resource for finding basic knowledge on the biosphere and ecological systems and includes important problems and solutions that environmental managers face today. This book practically demonstrates the key processes, methods, and models used in studying environmental management.

Sustainable agriculture is a key concept for scientists, researchers, and agricultural engineers alike. This book focuses on the FAM- project (FAM Munich Research Network on Agroecosystems) of the 1990s as a means to assessing, forecasting, and evaluating changes in the agroecosystems that are necessary for agricultural sustainability. The management of two separate management systems: an organic and an integrated farming system are described to provide an interdisciplinary approach Changes of matter fluxes in soils, changes of trace gas fluxes from soils, precision farming in a small scale heterogen landscape, influence of management changes on flora and fauna, as well as the development of agroecosystem models, the assessment of soil variability and the changes in nutrient status are important aspects of this book. * Contains detailed results and insight of a long-time project on agricultural sustainability * Provides an interdisciplinary approach for comprehensive understanding by scientists and researchers of soil, plants, agriculture, and environment * Includes an international perspective

Today, 20 percent of the global food supply relies on urban agriculture: social-ecological systems shaped by both human and non-human interactions. This book shows how urban agroecologists measure flora and fauna that underpin the ecological dynamics of these systems, and how people manage and benefit from these systems. It explains how the sociopolitical landscape in which these systems are embedded can in turn shape the social, ecological, political, and economic dynamics within them. Synthesizing interdisciplinary approaches in urban agroecology in the natural and social sciences, the book explores methodologies and new directions in research that can be adopted by scholars and practitioners alike. With contributions from researchers utilizing both social and natural science approaches, Urban Agroecology describes the current social-environmental understandings of the science, the movement and the practices in urban agroecology. By investigating the role of agroecology in cities, the book calls for the creation of spaces for food to be sustainably grown in urban spaces: an Urban Agriculture (UA) movement. Essential reading for graduate students, practitioners, policy makers and researchers, this book charts the course for accelerating this movement.

We hear a lot about how agriculture affects climate change and other environmental issues, but we hear little about how these issues affect agriculture. When we look at both

sides of the issues, we can develop better solutions for sustainable agriculture without adversely affecting the environment. Agroecology, Ecosystems, and Sustainability explore Key features: Describes the effects and responses of the macro and micro levels of crops under the different components of climate change Reports on the adaptation and resilience of food production systems within the changing climate Covers how plants cope with the changing climate including physiological, biochemical, phenotype, and ecosystem responses Provides an in-depth discussion on the importance of agricultural education connected to climate change Presenting an overview of agroecology within the framework of climate change, this book looks at the impact of our changing climate on crop production and agroecosystems, reporting on how plants will cope with these changes, and how we can mitigate these negative impacts to ensure food production for the growing population. It explores the ways that farmers can confront the challenges of climate change, with contributed chapters from around the world demonstrating the different challenges associated with differing climates. Examples are provided of the approaches being taken right now to expand the ecological, physiological, morphological, and productive potential of a range of crop types. Giving readers a greater understanding of the mechanisms of plant resilience to climate change, this book provides new insights into improving the productivity of an individual crop species as well as bringing resistance and resiliency to the entire agroecosystem. It offers a strong foundation for changing research and education programs so that they build the resistance and resilience that will be needed for the uncertain climate future ahead.

This Handbook provides insights to the ways in which globalisation is affecting the whole agri-food system from farms to the consumer. It covers themes including the physical basis of agriculture, the influence of trade policies, the nature of globalis

One of the challenges under current land management practices is to increase food and soil security to meet projected trends in food production, while maintaining the resilience to climate change. This book provides a forum for researchers to access the most recent developments in enhancing carbon sinks and minimizing greenhouse gas emissions. It suggests that policies and practices integrating microbial technology, modern crop cultivars, conservation practices, increased manure application, organic farming and agroforestry have a greater capacity to sequester carbon and reduce carbon-based greenhouse gases, leading to more robust agroecosystems compared to conventional agriculture. It is argued that empirical models can represent powerful tools for assessing how mitigation and adaptation strategies can be used to optimize crop yield and minimize greenhouse gas emissions under future climate change scen

Agroecologists from around the world share their experiences in the analysis and development of indicators of agricultural sustainability in *Agroecosystem Sustainability: Developing Practical Strategies*. The authors build on the resource-conserving aspects of traditional, local, and small-scale agriculture while at the same time drawing on modern ecological knowledge and methods. They define the relationship between agroecology and sustainable development. Leading researchers present case studies that attempt to determine 1) if a particular agricultural practice, input, or management decision is sustainable, and 2) what is the ecological basis for the functioning of the chosen management strategy over the long term. They discuss common findings, define the future role of agroecology, and explore strategies for helping farmers make the transition to sustainable farming systems. Preserving the productivity of agricultural land over the long term requires sustainable food production. *Agroecosystem Sustainability: Developing Practical Strategies* covers topics that range from management practices specific to a particular region to more global efforts to develop sets of indicators of sustainability. It links social and ecological indicators of sustainability. From this foundation we can move towards the social and economic changes that promote sustainability in all sectors of the food system.

Energy in Agroecosystems: A Tool for Assessing Sustainability is the first book on energy analysis that is up-to-date and specifically dedicated to agriculture. It is written from an agroecological perspective and goes beyond the conventional analysis of the efficient use of energy. The book provide a methodological guide to assess energy efficiency and sustainability from an eco-energetic point of view. Case studies from both Europe and America, which are representative of today's most used scales of analysis (crop, farm, local or national) and the different farm management practices (traditional, industrialized, and contemporary organic), apply this methodology This book will be of primary interest to researchers, practitioners, and students working in the areas of agroecology, sustainable agriculture, environmental science, energy analysis, natural resources management, rural development and international development.

Taking a broad and innovative informational approach, *Sustainable Agriculture and New Biotechnologies* is the first book to apply omic technologies to address issues related to understanding and improving agricultural sustainability in the food production process. The transformation from industrial to sustainable agriculture is discussed within the

Tropical ecosystems are some of the most biologically and ecologically diverse in the world. Traditional, local agroecosystems in the tropics reflect this diversity, and provide excellent examples of how nature can be used as the model for designing and managing sustainable agroecosystems. This book brings together such examples. Using an agroecological approach, the collection of chapters demonstrates how agroecology must simultaneously be a science, a practice, and a movement for social change towards a paradigm of sustainability that engages all parts of the food system, from the field to the table. Chapter contributors were selected from multiple countries and backgrounds, providing a valuable diversity of approaches and knowledge systems, and the interaction of these systems gives this book the important transdisciplinarity that has become a key component of agroecology. Working across disciplines and knowledge systems is necessary in order to link the multiple components of food systems that promote effective change. As food systems return to the diversity, complexity, and resilience they once had, it is collections of experiences as presented in this book that provide examples of the path we must be on. Steve Gliessman, Professor Emeritus of Agroecology, University of California, Santa Cruz, USA.

Reduce the environmentally negative aspects of industrial agriculture with an ecologically sound philosophy! *New Dimensions in Agroecology* explores the latest developments in the emerging science of agroecology, focusing on how these new concepts and cutting-edge tools will help minimize the impact of agriculture on the environment and fos

Political Agroecology is the first book to offer a systematic and articulated reflection on Political Agroecology from the Agroecological perspective. It defines the disciplinary field responsible for designing and producing actions, institutions and regulations aimed at achieving agrarian sustainability. In short, it aims to build a political theory that makes the scaling-up of agroecological experiences possible, turning them into the foundation of a new and alternative food regime. The book proposes theoretical, practical and epistemological foundations of a new theoretical and practical field of work for agroecologists:

Political Agroecology. It establishes a framework for a common agroecological strategy, covering the different levels of collective action and the different instruments with which it can be developed. This will be essential reading for agroecologists, environmentalists, farming and food communities, and an ideal textbook for advanced agroecology courses in universities. Key features: Offers a unique state of the art

on this fundamental new topic: Political Agroecology Presents a complete introduction to the political and institutional aspects of Agroecology, covering the whole food system Offers an important tool for searching agrarian sustainability Provides a broad epistemological, theoretical and methodological focus, exploring the connection between the different levels and scales involved in agroecological theory and practice

Sustainable Agroecosystem Management Integrating Ecology, Economics, and Society CRC Press

This timely book contributes to discussions on the best legal practices to use to promote conservation, protection and sustainable use of biological diversity in forest and marine areas. The breadth of issues explored across these two themes is immense, and the book identifies both key differences, and striking commonalities between them.

Winner of an Outstanding Academic Title Award from CHOICE Magazine Encyclopedia of Environmental Management gives a comprehensive overview of environmental problems, their sources, their assessment, and their solutions. Through in-depth entries and a topical table of contents, readers will quickly find answers to questions about specific pollution and management issues. Edited by the esteemed Sven Erik Jørgensen and an advisory board of renowned specialists, this four-volume set shares insights from more than 500 contributors—all experts in their fields. The encyclopedia provides basic knowledge for an integrated and ecologically sound management system. Nearly 400 alphabetical entries cover everything from air, soil, and water pollution to agriculture, energy, global pollution, toxic substances, and general pollution problems. Using a topical table of contents, readers can also search for entries according to the type of problem and the methodology. This allows readers to see the overall picture at a glance and find answers to the core questions: What is the pollution problem, and what are its sources? What is the "big picture," or what background knowledge do we need? How can we diagnose the problem, both qualitatively and quantitatively, using monitoring and ecological models, indicators, and services? How can we solve the problem with environmental technology, ecotechnology, cleaner technology, and environmental legislation? How do we address the problem as part of an integrated management strategy? This accessible encyclopedia examines the entire spectrum of tools available for environmental management. An indispensable resource, it guides environmental managers to find the best possible solutions to the myriad pollution problems they face. Also Available Online This Taylor & Francis encyclopedia is also available through online subscription, offering a variety of extra benefits for researchers, students, and librarians, including: Citation tracking and alerts Active reference linking Saved searches and marked lists HTML and PDF format options Contact us to inquire about subscription options and print/online combination packages. US: (Tel) 1.888.318.2367 / (email) e-reference@taylorandfrancis.com International: (Tel) +44 (0) 20 7017 6062 / (email) online.sales@tandf.co.uk

Ecologists, agronomists, and others who may question the validity of current models for determining sustainable growth of agroecosystems, need a new set of analytical tools that more effectively address the complex nature of related processes. Those who challenge traditional assumptions of optimization and static factors in agricultural modeling demand new methods beyond differential equations and traditional statistical tests. Multi-Scale Integrated Analysis of Agroecosystems explores alternative ways to study agricultural sustainability, presenting new approaches to organizing data and applying complex systems theory to actual cases. This innovative text recognizes the changing dynamics of the multiple processes and cross-relations within an environment, proposing a clearer analysis of agroecosystems than that which can be provided by rigid, reductionist methods. Main concepts, new vocabulary and narratives, and practical examples open the book, followed by technical chapters that provide a more detailed explanation of concepts. The final section of the book presents a tool kit based on these concepts, resulting in strong support of empirical observations that challenge traditional notions regarding the sustainability of farming systems, food systems, and agroecosystems.

Biofuels and food are dependent on the same resources for production: land, water, and energy. The conjuncture of food, energy, and climate crises demands a new direction in how to harness agriculture to the joint tasks of energy-saving, emissions reduction, and food security. Global Economic and Environmental Aspects of Biofuels focuses on the all This book bridges the gap between two critical issues—environmental literacy and social norms – and explores various topics and case studies from Sinophone and Taiwanese perspectives. Each chapter includes extensive information on pro-environmental behaviors, and on people with working experiences, home experiences, and actual philosophies in their daily lives. In keeping with the Sustainable Development Goals (SDGs), this book highlights our potential to contribute to social inclusion and environmental protection, and offers a comprehensive guide for scholars, students, practitioners, and entrepreneurs in environmental education and related disciplines.

Stephen Gliessman's complementary volumes, Agroecology: The Ecology of Sustainable Food Systems, Third Edition and Field and Laboratory Investigations in Agroecology, Third Edition are now available together for one low price. Completely revised, updated, and reworked, the third edition of Agroecology presents new data, material, case studies, and options, as well as more emphasis on topics such as the values, beliefs, and ethics of sustainable food systems. The new edition of Field and Laboratory Investigations in Agroecology facilitates hands-on, experimental learning that involves close observation, creative interpretation, and constant questioning of findings.

21st Century Homestead: Agroecology contains everything you need to stay up to date on organic agroecology.

This edited book provides a comprehensive account of the sustainable intensification process through various forms of case studies and scientific approaches studied across the globe. It also focuses on the agroecosystem services and their subsequent management for ecological integrity. The book helps to understand the interconnection of food, nutrition, economic growth, and environmental security on the planet. It provides comprehensive information with photographic illustration and various other forms of scientific databases on sustainable intensification of agroecosystems. The book also supports decision-making, strategies, and policy formulation for effective implementation of sustainable intensification towards higher productivity along with maintenance and management of agroecosystem services. Proper sustainable intensification of agroecosystem

services and their management by maintaining ecological harmony is the future prospect for sustainable development. High input agriculture gives rise to a high-energy footprint, agricultural pollution, resource depletion, loss of agro-biodiversity, and decline of human health. Through this connection, the sustainable intensification approach addresses the advanced food security, sustainability, and overall prosperity of humankind. The book is helpful for both undergraduate and postgraduate students, policymakers, the farming community, as well as the scientific community across the globe to understand the concept of sustainable intensification and its application in relevant fields for proper management of agroecosystems services.

This text reflects the immense current growth in interest in agroecology and changing approaches to it. While it is acknowledged that the science of ecology should be the basis of agroecological planning, many analysts have out-of-date ideas about contemporary ecology. Ecology has come a long way since the old days of "the balance of nature" and other romantic notions of how ecological systems function. In this context, the new science of complexity has become extremely important in the modern science of ecology. The problem is that it tends to be too mathematical and technical and thus off-putting for the average student of agroecology, especially those new to the subject. Therefore this book seeks to present ideas about ecological complexity with a minimum of formal mathematics. The book's organization consists of an introductory chapter, and a second chapter providing some of the background to basic ecological topics as they are relevant to agroecosystems (e.g., soil biology and pest control). The core of the book consists of seven chapters on key intersecting themes of ecological complexity, including issues such as spatial patterns, network theory and tipping points, illustrated by examples from agroecology and agricultural systems from around the world.

21st Century Homestead: Organic Farming contains everything you need to stay up to date on organic farming.

While soil ecologists continue to be on the forefront of research on biodiversity and ecosystem function, there are few interdisciplinary studies that incorporate ecological knowledge into sustainable land management practices. Conventional, high fossil-fuel input-based agricultural systems can reduce soil biodiversity, alter soil community structure

Comprised of three sections, this covers the nutrient dynamics and productivity of global agroecosystems. It focuses on the major aspects that make up agroecosystems, such as soils, climate, crops, nutrient dynamics, and productivity. It introduces agroecosystems and describes global soil types that support vast crop belts, then deals with the principles that drive crop growth, nutrient dynamics and ecosystematic functions within any agroecosystem. It also details the influence of agronomic practices and factors such as soil microbes, organic matter, crop genetic nature, irrigation, weeds, and cropping systems that affect productivity of agroecosystems.

Many of the environmental and social problems we face today are symptoms of a deeper systemic failing: a dominant cultural paradigm that encourages living in ways that are often directly counter to the realities of a finite planet. This paradigm, typically referred to as 'consumerism,' has already spread to cultures around the world and has led to consumption levels that are vastly unsustainable. If this pattern spreads further there will be little possibility of solving climate change or other environmental problems that are poised to dramatically disrupt human civilization. It will take a sustained, long-term effort to redirect the traditions, social movements and institutions that shape consumer cultures towards becoming cultures of sustainability. These institutions include schools, the media, businesses and governments. Bringing about a cultural shift that makes living sustainably as 'natural' as a consumer lifestyle is today will not only address urgent crises like climate change, it could also tackle other symptoms like extreme income inequity, obesity and social isolation that are not typically seen as environmental problems. State of the World 2010 paints a picture of what this sustainability culture could look like, and how we can - and already are - making the shift.

There can be little doubt that there are truly colossal challenges associated with providing food, fibre and energy for an expanding world population without further accelerating already rapid rates of biodiversity loss and undermining the ecosystem processes on which we all depend. These challenges are further complicated by rapid changes in climate and its additional direct impacts on agriculture, biodiversity and ecological processes. There are many different viewpoints about the best way to deal with the myriad issues associated with land use intensification and this book canvasses a number of these from different parts of the tropical and temperate world. Chapters focus on whether science can suggest new and improved approaches to reducing the conflict between productive land use and biodiversity conservation. Who should read this book? Policy makers in regional, state and federal governments, as well as scientists and the interested lay public.

Mexico is the fourteenth largest country in the world and ranks fifth in biodiversity. Located in the transition zone between the temperate and tropical regions of North and South America, Mexico is an important migratory corridor for wildlife and also provides wintering habitat for several species of bats, monarch butterflies, and temperate North American nesting birds. Mexico faces several challenges to wildlife management and conservation efforts. While there is increased public education and acknowledgment of the valuable benefits wildlife provides, there is still much work to do to incentivize conservation efforts. Fortunately, there is growing recognition that Mexico's wildlife resources can be a critical component in the rural economic development of the country. Bringing together an international team of wildlife experts across North America, *Wildlife Ecology and Management in Mexico* provides information on the status, distribution, ecological relationships, and habitat requirements and management of the most important game birds and mammals in Mexico. It also reviews current threats and challenges facing wildlife conservation as well as strategies for resolving these issues. This reference is a valuable tool for wildlife biologists, wildlife management professionals, and anyone interested in conserving Mexico's wealth of natural resources. By laying out the challenges to conservation research, editors Raul Valdez and J. Alfonso Ortega-S. hope to encourage interdisciplinary communication and collaboration across borders.

Emphasizes Centrality of the Ecosystem Perspective Sustainable management of agroecosystems in the 21st century faces unprecedented challenges. Protecting the environment while feeding a burgeoning population that could reach nine billion by mid-century, preserving the world's biodiversity, and sustaining agriculture in an increasingly urban world i

Agro-Ecosystem Diversity: Impact on Food Security and Environmental Quality presents cutting-edge exploration of developing novel farming systems and introduces landscape ecology to

agronomy. It encompasses the broad range of links between agricultural development and ecological impact and how to limit the potential negative results. Presented in seven sections, each focusing on a specific challenge to sustaining diversity, the book provides insights toward the argument that by re-introducing diversity, it should be possible to maintain a high level of productivity of agro-ecosystems while also maintaining and/or restoring a satisfactory level of environment quality and biodiversity. Demonstrates that diversified agro-ecosystems can be intensified with environmental quality preserved, restored and enhanced Includes analysis of economic constraints leading to specialization of farms and regions and the social locking forces resisting to diversification of agro-ecosystems Presents a global vision of world agriculture and the tradeoff between a necessary increase in food production and restoring environment quality
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