

Addressing Desertification And Land Degradation Ec Un

This publication examines soil and water conservation technologies and approaches from a global perspective, using case studies from over 20 countries around the world. It addresses key environmental concerns such as desertification, poverty, water scarcity and conflicts. Various land use categories are covered (cropland, forest and grazing land) and technologies described include: conservation agriculture, manuring and composting including vermiculture, vegetative strips, agroforestry, water harvesting, gully rehabilitation, terraces and grazing land management. Co-published by the Technical Centre for Agricultural and Rural Co-operation (CTA), FAO, UNEP and the Centre for Development and Environment (CDE) on behalf of the World Overview of Conservation Approaches and Technologies (WOCAT), this publication sets new standards for the systematic documentation, evaluation and dissemination of knowledge on sustainable land management.

The problems related to the process of industrialisation such as biodiversity depletion, climate change and a worsening of health and living conditions, especially but not only in developing countries, intensify. Therefore, there is an increasing need to search for integrated solutions to make development more sustainable. The United Nations has acknowledged the problem and approved the "2030 Agenda for Sustainable Development". On 1st January 2016, the 17 Sustainable Development Goals (SDGs) of the Agenda officially came into force. These goals cover the three dimensions of sustainable development: economic growth, social inclusion and environmental protection. The Encyclopedia of the UN Sustainable Development Goals comprehensively addresses the SDGs in an integrated way. It encompasses 17 volumes, each one devoted to one of the 17 SDGs. This volume addresses SDG 15, namely "Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss" and contains the description of a range of terms, which allow a better understanding and foster knowledge. Concretely, the defined targets are: Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally Combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world Ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and protect and prevent the extinction of threatened species Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products Introduce measures to prevent the introduction and significantly Reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species Integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities Editorial Board Alexandra Aragão, Desalegn Yayeh Ayal, Ayansina Ayanlade, Anabela Marisa Azul, Adriana Consorte-McCrea, Muhammad Farooq, Ana Catarina Luz, María P. Martín, Sharif A. Mukul, Nandhivarman Muthu, Robert Russell Monteith Paterson, Isabel Ruiz-Mallén

This volume deals with land degradation, which is occurring in almost all terrestrial biomes and agro-ecologies, in both low and high income countries and is stretching to about 30% of the total global land area. About three billion people reside in these degraded lands. However, the impact of land degradation is especially severe on livelihoods of the poor who heavily depend on natural resources. The annual global cost of land degradation due to land use and cover change (LUCC) and lower cropland and rangeland productivity is estimated to be about 300 billion USD. Sub-Saharan Africa (SSA) accounts for the largest share (22%) of the total global cost of land degradation. Only about 38% of the cost of land degradation due to LUCC - which accounts for 78% of the US\$300 billion loss – is borne by land users and the remaining share (62%) is borne by consumers of ecosystem services off the farm. The results in this volume indicate that reversing land degradation trends makes both economic sense, and has multiple social and environmental benefits. On average, one US dollar investment into restoration of degraded land returns five US dollars. The findings of the country case studies call for increased investments into the rehabilitation and restoration of degraded lands, including through such institutional and policy measures as strengthening community participation for sustainable land management, enhancing government effectiveness and rule of law, improving access to markets and rural services, and securing land tenure. The assessment in this volume has been conducted at a time when there is an elevated interest in private land investments and when global efforts to achieve sustainable development objectives have intensified. In this regard, the results of this volume can contribute significantly to the ongoing policy debate and efforts to design strategies for achieving sustainable development goals and related efforts to address land degradation and halt biodiversity loss. This book presents an important discussion on the implementation of sustainable soil management in Africa from a range of governance perspectives. It addresses aspects such as the general challenges in Africa with regard to soil management; the structural deficiencies in legal, organizational and institutional terms; and specific policies at the

national level, including land cover policies and persistent organic pollutants. This fourth volume of the International Yearbook of Soil Law and Policy is divided into four parts, the first of which deals with several aspects of the theme "sustainable soil management in Africa." In turn, the second part covers recent international developments, the third part presents regional and national reports (i.a. Mexico, USA and Germany), and the fourth discusses cross-cutting issues (i.a. on rural-urban interfaces). Given the range of key topics covered, the book offers an indispensable tool for all academics, legislators and policymakers working in this field. The "International Yearbook of Soil Law and Policy" is a book series that discusses central questions in law and politics with regard to the protection and sustainable management of soil and land – at the international, national and regional level.

Carbon sequestration can be defined as the capture and secure storage of carbon that would otherwise be emitted to or remain in the atmosphere. This publication contains the results of a study on the origin and background of the carbon sequestration options and the Clean Development Mechanism. The attitude and position of the key countries involved in international environmental treaties is examined, as well as the various initiatives that have been taken and the legal bases for such initiatives. [FAO website]

Drylands are a sizeable part of the world's potentially arable land. They vary from the hyper-arid regions of the classic deserts of Africa and Asia to the more common semi-arid and sub-humid areas that support extensive agricultural systems dependent on rainfall or irrigation. Following their successful and innovative work *The Economics of Dryland Management* the editors have assembled twenty case studies from nine countries in the continents of Africa, Asia, North America and Australia. They help to explore more fully the costs of land degradation and illustrate the economics of reclamation, rehabilitation and prevention. The cases in this book present a rich, varied and readable survey of a wide range of drylands and their resources. Originally published in 1990

Although much is known about the processes and effects of land degradation and climate change, little is understood about the links between them. Less still is known about how these processes are likely to interact in different social-ecological systems around the world, or how societies might be able to adapt to this twin challenge. This book identifies key vulnerabilities to the combined effects of climate change and land degradation around the world. It identifies triple-win adaptations that can tackle both climate change and land degradation, whilst supporting biodiversity and ecosystem services. The book discusses methods for monitoring effects of climate change and land degradation, and adaptations to these processes. It argues for better co-operation and knowledge exchange, so that the research, land user and policy communities can work together more effectively to tackle these challenges, harnessing the "wisdom of crowds" to assess vulnerability and adapt to climate change and land degradation, whilst protecting livelihoods and biodiversity.

Land degradation is increasingly considered as a global problem. The extent of degraded and degrading areas adversely impacts on large numbers of people and leads to significant social and economic costs, thus raising the questions: In which way is it worth taking action against land degradation? Where and when should action take place, and what are costs related to certain actions? For policy makers it is important to know the social and economic costs linked to the current and future status of land degradation. A conceptual framework that allows comparing the costs of action against land degradation versus the costs of inaction is provided in this book. The applicability of the framework is illustrated with case studies and prepares the ground for a global assessment on the costs of land degradation.

The objective of this hugely important text is to contribute to the existing knowledge on soil pollution and remediation. Stress is given to the critical assessment of the used analyses and methods for study effects in combined chemical pollution (organic pollutants and pesticides, metals) on soil biota and fertility. Also featured is, among other things, an evaluation of specific aspects of risk assessment, and an assessment of advanced technologies for soil remediation. Based on an International Workshop held in Arusha, Tanzania, this book presents state-of-the-art papers, real world applications, and innovative techniques for combating land degradation. It offers recommendations for effectively using weather and climate information for sustainable land management practices.

Climate change and desertification are closely interlinked and most acutely experienced by people in drylands who are dependent on natural resources. This book explores the interactions between these people's livelihoods and their biophysical environment, focusing on how land users and the policy community can better anticipate, assess, and adapt to climate change and desertification. The authors draw on a wide range of case study examples, including from Sub-Saharan Africa, Australia, China, Europe, South America and the south-west USA. They extend these to evaluate the challenges for effective adaptation in the context of other developmental stresses (including poverty, energy insecurity, food insecurity, migration) and in light of the uncertainty associated with future climate projections and trends. The book also considers the governance and policy challenges that must be overcome in order to facilitate effective adaptation at national and international levels. It demonstrates clearly that an integrated approach to addressing desertification and climate change is both urgent and necessary, but that synergy and multiple benefits can only be achieved by taking a more holistic approach to these challenges.

The question in the title of this book draws attention to the shortcomings of a concept that has become a political tool of global importance even as the scientific basis for its use grows weaker. The concept of desertification, it can be argued, has ceased to be analytically useful and distorts our understanding of social-environmental systems and their resiliency, particularly in poor countries with variable rainfall and persistent poverty. For better policy and governance, we need to reconsider the scientific justification for international attempts to combat desertification. Our exploration of these issues begins in the Sahel of West Africa, where a series of severe droughts at the end of the 20th century led to the global institutionalization of the idea of desertification. It now seems incontrovertible that these droughts were not caused primarily by local land use mismanagement, effectively terminating a long-standing policy and scientific debate. There is now an opportunity to treat this episode as an object lesson in the relationship between science, the formation of public

opinion and international policy-making. Looking beyond the Sahel, the chapters in this book provide case studies from around the world that examine the use and relevance of the desertification concept. Despite an increasingly sophisticated understanding of dryland environments and societies, the uses now being made of the desertification concept in parts of Asia exhibit many of the shortcomings of earlier work done in Africa. It took scientists more than three decades to transform a perceived desertification crisis in the Sahel into a non-event. This book is an effort to critically examine that experience and accelerate the learning process in other parts of the world.

This book contains selected contributions from the Sixth Meeting of the International Geographical Union's Commission on Land Degradation and Desertification, held in Perth, Australia, in September 1999. Collectively, these contributions explicitly seek to understand not only the mechanisms responsible for the problem of land degradation but their social and economic implications, the means of overcoming the problems, and the policy instruments whereby remedial measures may be implemented. This breadth of approach is both distinctive and essential if the problems are to be tackled effectively. The authorship comprises of specialists (mostly geographers) from universities, research organizations, and government agencies, who provide a truly international perspective with contributions from Iceland to Australia and from the USA to Japan. Audience: The book presents current research findings which will be of particular benefit to professionals and practitioners, as well as researchers and tertiary-level educationalists who are involved with land degradation.

Based on the suggestions made by the speakers of Plenary Session IV "Challenges to the management of water resources and to countering desertification in the Mediterranean region" during the 15th Economic and Environmental Forum, the OCEEA proposed to organize a workshop on "Water Scarcity, Land Degradation and Desertification in the Mediterranean region – Environment and Security Aspects". In order to build on common synergies, OSCE sought cooperation with coalitions from NATO, in particular from the Science for Peace and Security Programme. NATO has a longstanding expertise on the issue and had organised in Valencia, in December 2003, a NATO scientific workshop on "Desertification and Security in the Mediterranean Region". The objective of the new proposed workshop would be to broaden its focus from the scientific community to include also policy makers. The workshop, aimed at government officials from the Mediterranean Region, gathered representatives of Water management, Land degradation and Desertification Departments of Ministries of Environment and representatives from the Ministries of Foreign Affairs. In addition, policy makers, scientists and experts were also invited. The aim was to discuss how the OSCE, NATO and other competent organizations like the UNCCD, UNEP, MAP, and the EU could play a role in ensuring that environment and security linkages in terms of water scarcity, land degradation and desertification are addressed in the Mediterranean Region.

Addressing Desertification and Land Degradation
The Activities of the European Community in the Context of the United Nations Convention to Combat Desertification
Climate Change and Land
An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems
Land Degradation, Desertification and Climate Change
Anticipating, assessing and adapting to future change
Routledge

This book focuses on the global effects of land degradation, but emphasizes other important levels of land degradation: at the field level, it may result in reduced productivity; at the national level, it may cause flooding, and sedimentation; and, at the global level, it can contribute to climate changes, damaging bio-diversity, and international waters. The effects on climate changes are explored, and the report questions the extent to which land degradation on agricultural land, affects climate change. Does it increase emissions of greenhouse gases? Does it affect land's capacity to serve as a carbon sink? Can appropriate management enhance both land's productivity, and its capacity to store carbon? The carbon cycle in soils is analyzed, indicating land degradation is likely to reduce the ability of soils to serve as carbon sink, and release stored carbon into the atmosphere, and, bio-diversity effects are likely to be adverse. Global benefits of land degradation control, include afforestation, to allow increased carbon sequestration, and provide adequate bio-diversity habitats; and, community-based wildlife management, can provide alternatives to some marginal areas. Although integrating global dimensions into land degradation control projects, may reverse the field level, or national problems it is causing, difficulties and constraints will likely contribute to the failure of these projects.

This book examines the impacts of global change on terrestrial ecosystems. Emphasis is placed on impacts of atmospheric, climate and land use change, and the book discusses the future challenges and the scientific frameworks to address them. Finally, the book explores fundamental new research developments and the need for stronger integration of natural and human dimensions in addressing the challenge of global change.

Land degradation which is caused by multiple forces-extreme weather conditions and anthropogenic activities that pollute or degrade the quality of soils and land utility-negatively affects food production, livelihoods, and the provision of other ecosystem goods and services. Land degradation can also lead to climate change and affect human health. The problem is more pronounced in least developing countries due to overdependence of natural resources for survival. Sustainable ways to reduce land degradation and desertification demand research and advocacy of sustainable land management practices. This book is organized into two sections. The first section covers three major aspects, viz., an understanding of patterns of land degradation and desertification for developing mitigation strategies, land-atmosphere interaction from response of land cover to climate change effects of Karst rocky desertification, and the effect of unprecedented human activity into land degradation and desertification processes using natural and human-induced landscape research. The last section dwells on the relationship between soil degradation and crop production and an examination on how land degradation impacts the quality of soil in communal rangelands. Environmentalists, land-use planners, ecologists, pedologists, researchers, and graduate students will find this book to be an essential resource.

Small Island Developing States (SIDS) are continuously under the threat from the adverse effects of climate change and land degradation impacts. Land degradation directly increases CO₂ emissions, contributing to climate change and vice versa. The LDN Target Setting Programme (TSP) of the UNCCD has substantially contributed to land degradation receiving the policy attention and securing political commitments for addressing the obvious and immediate threats of climate change and natural disasters to SIDS. It has strengthened the availability and accessibility of data for assessing land degradation and enabled SIDS to set specific measurable science-based targets. LDN provides the framework for the sustainable development of human settlements in SIDS through policy, planning, design and regulatory instruments. Drylands have been cradles to some of the world's greatest civilizations, and contemporary dryland communities feature rich and unique cultures. Dryland ecosystems support a surprising amount of biodiversity. Desertification, however, is a significant land degradation problem in the arid, semi-arid and dry sub-humid regions of the world. Deterioration of soil and plant cover has adversely affected 70% of the world's drylands as a result of extended droughts as well as mismanagement of range and cultivated lands. The situation is likely to worsen with high population growth rates and accompanying land-use conflicts. The contributions to The Future of Drylands – an international scientific conference held under the leadership of UNESCO – address these issues and offer practical solutions for combating desertification along with conserving and sustainably managing dryland ecosystems. Major themes include the conservation of dryland biological and cultural diversity and the human dryland interface. This volume documents how our improved understanding of drylands provides insight into the health and future prospects of these precious ecosystems that should help ensure that dryland communities enjoy a sustainable future.

Desertification is a form of land degradation in drylands. It is a growing threat in the EU. The long period of high temperatures and low rainfall in the summer of 2018 reminded us of the pressing importance of this problem. Climate change scenarios indicate an increasing vulnerability to desertification in the EU throughout this century, with increases in temperatures and droughts and less precipitation in southern Europe. Its effects will be particularly acute in Portugal, Spain, Italy, Greece, Cyprus, Bulgaria and Romania. We found that the risk of desertification in the EU was not being effectively and efficiently addressed. While desertification and land degradation are growing threats, the steps taken to combat desertification lack coherence. There is no shared vision in the EU about how land degradation neutrality will be achieved by 2030. We recommend the Commission aims at a better understanding of land degradation and desertification in the EU; assesses the need to enhance the EU legal framework for soil; and steps up actions towards delivering the commitment made by the EU and the Member States to achieve land degradation neutrality in the EU by 2030.

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Namibia Business Intelligence Report - Practical Information, Opportunities, Contacts

As climate change and extreme weather events increasingly threaten traditional landscapes and livelihoods of entire communities the need to study its impact on human migration and population displacement has never been greater. The Atlas of Environmental Migration is the first illustrated publication mapping this complex phenomenon. It clarifies terminology and concepts, draws a typology of migration related to environment and climate change, describes the multiple factors at play, explains the challenges, and highlights the opportunities related to this phenomenon. Through elaborate maps, diagrams, illustrations, case studies from all over the world based on the most updated international research findings, the Atlas guides the reader from the roots of environmental migration through to governance. In addition to the primary audience of students and scholars of environment studies, climate change, geography and migration it will also be of interest to researchers and students in politics, economics and international relations departments.

The first volume of the International Yearbook of Soil Law and Policy includes an important discussion on the implementation of the Sustainable Development Goals that are the basis for the post-2015 development agenda up to the year 2030; the Yearbook focuses in particular on Goal 15, which includes achieving a "land degradation-neutral world." It also provides a comprehensive and highly informative overview of the latest developments at the international level, important cross-disciplinary issues and different approaches in national legislation. The book is divided into four sections. Forewords by internationally renowned academics and politicians are followed by an analysis of the content and structure of the Sustainable Development Goals with regard to soil and land as well as the scientific methods for their implementation. In addition, all relevant international regimes are discussed, including the latest developments, such as the decisions made at the 12th Conference of the Parties to the United Nations Convention to Combat Desertification (UNCCD) and the Paris Agreement on Climate Change. The next section deals with cross-disciplinary issues relevant to the implementation of the Sustainable Development Goals like the right to food, land tenure, migration and the "Economics of Land Degradation" initiative. The last section gathers reports on the development of national legislation from various nations and supra-national entities, including Brazil, China, the European Union, Mongolia, Namibia and the United States. Addressing this broad range of key topics, the book offers an indispensable tool for all academics, legislators and policymakers working in this field. The "International Yearbook of Soil Law and Policy" is a book series that discusses the central questions of law and politics with regard to the protection and sustainable management of soil and land – at the international, national and regional level.

This book presents an important discussion on future options for sustainable soil management in Africa from various perspectives, including national soil protection regulations, the role of tenure rights, the work of relevant international institutions such as the UNCCD and FAO, and regional and international cooperation. This first volume of the new subseries Regional Perspectives to the International Yearbook of Soil Law and Policy includes contributions by African and international experts alike. Given the range of key topics covered, the book offers an indispensable tool for all academics, legislators and policymakers working in this field. The "International Yearbook of Soil Law and Policy – Regional Perspectives" series discusses central questions in law and politics that concern the protection and sustainable management of soil and land in different regions of the world.

In the Indian context; contributed papers presented at the 22nd Conference of the Institute of Indian Geographers, and International Geographical Union Commission Meeting on Land Degradation and Desertification, held at the Dept. of Geography, Visva-Bharati University, on January 9-11, 2001.

This volume includes over 30 chapters, written by experts from around the world. It examines the environmental aspects of drought such as groundwater and soil contamination, river low-flow, urban water quality, and desertification. It also examines the effects of climate change and variability on drought, and discusses the differences in groundwater, rainfall, and temperatures and their related effects. It presents analytical modeling for better understanding drought in uncertain and changing climates.

The World Atlas of Desertification summarises the state of scientific knowledge on the drylands of the globe. Representing in graphic form the current stage of our understanding of desertification, as well as its extent and possible solutions, it contains an extraordinary amount of information of value to students and experts alike. The Atlas clearly shows that desertification is one of the world's most pressing environmental problems, and that it is a truly global issue. Since the publication of the first edition in 1992, over 100 countries have ratified the United Nations Convention to Combat Desertification. This 2nd edition reflects major advances in our understanding of desertification over the past few years and has been thoroughly revised and expanded to almost twice its original size. Because combating desertification involves all aspects of environmental issues, this edition covers a broader range of topics, including concerns surrounding poverty, biodiversity, climate change and the availability of water. Social and economic conditions also have a major impact on the progress and control of desertification and this edition contains the latest information on population movements which result from, and lead to desertification. Desertification directly affects the livelihoods of more than one billion people who are directly dependent on the land for their survival. Using the latest updated digitised maps of desertification and fully referenced throughout, this Atlas is essential reading for everyone concerned with the drylands and their people.

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