

# Agroforestry - The Future of Global Land Use

# Advances in Agroforestry

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## Volume 9

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### Series Editor:

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### Aims and Scope

Agroforestry, the purposeful growing of trees and crops in interacting combinations, began to attain prominence in the late 1970s, when the international scientific community embraced its potentials in the tropics and recognized it as a practice in search of science. During the 1990s, the relevance of agroforestry for solving problems related to deterioration of family farms, increased soil erosion, surface and ground water pollution, and decreased biodiversity was recognized in the industrialized nations too. Thus, agroforestry is now receiving increasing attention as a sustainable land-management option the world over because of its ecological, economic, and social attributes. Consequently, the knowledge-base of agroforestry is being expanded at a rapid rate as illustrated by the increasing number and quality of scientific publications of various forms on different aspects of agroforestry.

Making full and efficient use of this upsurge in scientific agroforestry is both a challenge and an opportunity to the agroforestry scientific community. In order to help prepare themselves better for facing the challenge and seizing the opportunity, agroforestry scientists need access to synthesized information on multi-dimensional aspects of scientific agroforestry.

The aim of this new book-series, *Advances in Agroforestry*, is to offer state-of-the art synthesis of research results and evaluations relating to different aspects of agroforestry. Its scope is broad enough to encompass any and all aspects of agroforestry research and development. Contributions are welcome as well as solicited from competent authors on any aspect of agroforestry. Volumes in the series will consist of reference books, subject-specific monographs, peer-reviewed publications out of conferences, comprehensive evaluations of specific projects, and other book-length compilations of scientific and professional merit and relevance to the science and practice of agroforestry worldwide.

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P.K. Ramachandran Nair • Dennis Garrity  
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# Agroforestry - The Future of Global Land Use

 Springer

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ISSN 1875-1199

ISBN 978-94-007-4675-6

DOI 10.1007/978-94-007-4676-3

Springer Dordrecht Heidelberg New York London

ISSN 1875-1202 (electronic)

ISBN 978-94-007-4676-3 (eBook)

Library of Congress Control Number: 2012945635

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Printed on acid-free paper

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# Preface

Agroforestry ranks high among the significant initiatives in improving land management that have occurred the world over during the past few decades. The establishment of ICRAF (World Agroforestry Centre) in 1977 signified the beginning of organized global efforts to transform the age-old forms of agroforestry from a “*set of practices in search of science*” to its present status as a science-based, integrated approach that is vigorously addressing many of the world’s most serious land-management challenges. The developments in the discipline during this period have been quite substantial. Today, agroforestry has carved out a distinct niche as a robust land-management discipline, and it is now recognized as being at the heart of the global community’s commitment to banish hunger and poverty and rebuild resilient rural environments. This is not surprising given that nearly a billion hectares of agricultural landscapes already have more than 10 % tree cover, and an estimated total of 1.6 billion ha of land worldwide has the potential to be under agroforestry management in the foreseeable future. The drivers underpinning such a transformation are increasingly favorable.

An important set of events that stand out in the impressive developmental pathway of agroforestry is the World Congress of Agroforestry (WCA) series. The inaugural congress (WCA1) was held in Florida, USA, in 2004. It was a highly successful event in terms of the numbers of participants (nearly 600), countries (82), and organizations represented, and in the breadth and scope of presentations and discussions. The 2nd World Congress (WCA2) was held in Nairobi, Kenya, in 2009 (<http://www.worldagroforestry.org/wca2009/>). It eclipsed WCA1 in every aspect, with the participation of about 1,200 delegates from 96 countries.

Significant outputs from these world congresses include many professional publications on different aspects of agroforestry, including high-quality books and special issues of peer-reviewed, international scientific journals. For example, four such books and journal special issues have been published out of presentations at WCA2. Although outstanding in their disciplinary merits, these publications do not fully represent all the deliberations at the congress. For example, keynote speeches by world leaders and comprehensive reviews covering a variety of subjects related agroforestry with a regional focus do not fit well into the thematic mode and style

of disciplinary journals. We, the congress organizers, felt the need for a book to encompass the above topics and outputs of the congress. This book was developed to meet that need.

This volume is organized into three parts: an Introduction part consisting of the summaries of six keynote speeches at WCA2, followed by two parts of thematic chapters grouped as “Global Perspectives” (seven chapters) and “Regional Perspectives” (11 chapters). Finally, there is a Conclusion chapter, in which we, the editors, present some forward-looking thoughts about the pathways and directions to be pursued for realizing the promise of agroforestry in the future.

We want to record our deep sense of gratitude and respect to Nobel Laureate Professor Wangari Maathai, who unfortunately passed away in September 2011 before this book was finalized. She was a tireless champion of tree planting and natural resource conservation, and we were fortunate to have her with us during the congress and to witness her inspiring keynote address calling for accelerated efforts of everyone to turn the tables on the path of environmental destruction that the world is following today.

All other chapters were specifically commissioned for the book. We requested the lead organizers of the various WCA2 symposia to each prepare a comprehensive chapter, with the input and cooperation of other presenters in their respective symposia. These required updating and expansion of contents, to make each chapter a state-of-the-art review on the subject. Additionally, we requested a group of leading professionals currently spearheading significant agroforestry-related initiatives worldwide to contribute similar comprehensive chapters on the developments in their domain of activities. We are very pleased that many of these professional leaders could undertake the task in spite of their busy work schedules. The chapters in these two major parts, all of which were rigorously peer-reviewed by high-caliber professionals in the respective fields, deal with issues of a global nature or regional focus, as their headings indicate. The specific regions of focus included parts of Africa, the Amazon basin, and other parts of Latin America, South Asia, Japan, Latin America, Canada, Europe, and the United States. The chapters cover a range of aspects related to agroforestry development within those regions. A total of 98 professionals representing institutions located in 27 countries contributed as authors, and 41 from institutions in 23 countries served as reviewers. Accounting for some authors who also served as reviewers, a total of 130 professionals from institutions in 33 countries around the world contributed to the book as chapter authors and reviewers. With the inclusion of chapters from both the developing countries and the industrialized temperate regions, the book presents a global picture of the status of agroforestry. Thus, although the book originates from WCA2, it does not constitute the proceedings of the congress or any of its sections; instead, it contains a solid body of the current state of knowledge on the various themes and activities in agroforestry worldwide compiled by distinguished leaders in their respective areas of expertise.

The tedious task of putting together such a book would not have been possible without the cooperation and support of a number of collaborators. First of all, we thank the chapter authors, who, in spite of being extremely busy with their crowded schedules, showed the highest level of commitment and professionalism in coping

with repeated requests for revisions and improvement following rigorous peer review of their manuscripts. The reviewers (list attached) did a splendid job of providing insightful comments and valuable suggestions, often at very short notice, which helped enhance the professional quality of the chapters. We also thank the publishers and other copyright holders of the original publications for permission to reproduce some of the tables and figures as indicated in the respective chapters. Once again, we sincerely thank all the authors, reviewers, and others who directly or indirectly supported and cooperated with us in bringing out this publication.

Gainesville, Florida, USA  
Nairobi, Kenya

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# Contents

## Part I Introduction

<b>Agroforestry, Climate Change and Habitat Protection</b> .....	3
Wangari Maathai	
<b>Agroforestry for an Evergreen Revolution</b> .....	7
M.S. Swaminathan	
<b>Environmental Resilience and Agroforestry</b> .....	11
Richard Leakey	
<b>Climate Change and Agroforestry</b> .....	13
Rajendra K. Pachauri	
<b>Agroforestry and the Transition to the Future</b> .....	17
Achim Steiner	
<b>Agroforestry and the Future of Global Land Use</b> .....	21
Dennis Garrity	

## Part II Global Perspectives

<b>Climate Change Mitigation: A Low-Hanging Fruit of Agroforestry</b> .....	31
P.K. Ramachandran Nair	
<b>Segregate or Integrate for Multifunctionality and Sustained Change Through Rubber-Based Agroforestry in Indonesia and China</b> .....	69
Meine van Noordwijk, Hesti Lestari Tata, Jianchu Xu, Sonya Dewi, and Peter A. Minang	

<b>Integrating Climate Change Adaptation and Mitigation Through Agroforestry and Ecosystem Conservation .....</b>	<b>105</b>
Johanna Matocha, Götz Schroth, Terry Hills, and Dave Hole	
<b>High-Carbon-Stock Rural-Development Pathways in Asia and Africa: Improved Land Management for Climate Change Mitigation .....</b>	<b>127</b>
Peter A. Minang, Meine van Noordwijk, and Brent M. Swallow	
<b>Tree Domestication in Agroforestry: Progress in the Second Decade (2003–2012).....</b>	<b>145</b>
Roger R.B. Leakey, John C. Weber, Tony Page, Jonathan P. Cornelius, Festus K. Akinnifesi, James M. Roshetko, Zacharie Tchoundjeu, and Ramni Jamnadass	
<b>Policy Support for Large-Scale Adoption of Agroforestry Practices: Experience from Africa and Asia .....</b>	<b>175</b>
Oluyede C. Ajayi and Frank Place	
<b>Multifunctional Agriculture and Opportunities for Agroforestry: Implications of IAASTD .....</b>	<b>203</b>
Roger R.B. Leakey	
<b>Part III Regional Perspectives</b>	
<b>The Future of Temperate Agroforestry in the United States .....</b>	<b>217</b>
Shibu Jose, Michael A. Gold, and Harold E. Garrett	
<b>Agroforestry Research and Development in Canada: The Way Forward .....</b>	<b>247</b>
Naresh V. Thevathasan, Andrew M. Gordon, Robert Bradley, Alain Cogliastro, Percy Folkard, Robert Grant, John Kort, Lavona Liggins, Francis Njenga, Alain Olivier, Chris Pharo, George Powell, David Rivest, Tom Schiks, David Trotter, Ken Van Rees, Joann Whalen, and Lisa Zabek	
<b>Past, Present, and Future of Agroforestry Systems in Europe .....</b>	<b>285</b>
M.R. Mosquera-Losada, G. Moreno, A. Pardini, J.H. McAdam, V. Papanastasis, P.J. Burgess, N. Lamersdorf, M. Castro, F. Liagre, and A. Rigueiro-Rodríguez	
<b>Agroforestry for Mine-Land Reclamation in Germany: Capitalizing on Carbon Sequestration and Bioenergy Production .....</b>	<b>313</b>
Ansgar Quinkenstein, Dirk Freese, Christian Böhm, Penka Tsonkova, and Reinhard F. Hüttl	
<b>The Satoyama Landscape of Japan: The Future of an Indigenous Agricultural System in an Industrialized Society .....</b>	<b>341</b>
Kaoru Ichikawa and Gregory G. Toth	

<b>South Asian Agroforestry: Traditions, Transformations, and Prospects</b> .....	359
B. Mohan Kumar, Anil Kumar Singh, and S.K. Dhyani	
<b>Agroforestry in the Amazon Region: A Pathway for Balancing Conservation and Development</b> .....	391
Roberto Porro, Robert P. Miller, Marcos R. Tito, Jason A. Donovan, Jorge L. Vivan, Ralph Trancoso, Rudi F. Van Kanten, Jorge E. Grijalva, Bertha L. Ramirez, and André L. Gonçalves	
<b>Mainstreaming Agroforestry in Latin America</b> .....	429
Eduardo Somarriba, John Beer, Julio Alegre-Orihuela, Hernán J. Andrade, Rolando Cerda, Fabrice DeClerck, Guillermo Detlefsen, Maybeline Escalante, Luis A. Giraldo, Muhammad Ibrahim, L. Krishnamurthy, Víctor E. Mena Mosquera, Jairo R. Mora-Degado, Luis Orozco, Mauricio Scheelje, and José J. Campos	
<b>Land Health Surveillance: Mapping Soil Carbon in Kenyan Rangelands</b> .....	455
Tor-Gunnar Vågen, Finn A. Davey, and Keith D. Shepherd	
<b>Gender and Agroforestry in Africa: Who Benefits? The African Perspective</b> .....	463
Evelyne Kiptot and Steven Franzel	
<b>Incentive Mechanisms for Smallholder Agroforestry: Opportunities and Challenges in the Philippines</b> .....	497
Delia C. Catacutan, Rodel D. Lasco, and Caroline D. Piñon	
<b>Agroforestry Research and Development: The Way Forward</b> .....	515
P.K. Ramachandran Nair and Dennis Garrity	
<b>Index</b> .....	533



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