This book presents and analyzes some of the most challenging aspects in maintaining forest health. Deforestation is a very important issue in the evolution of the environment. Forests are disappearing and the causes are well-documented. The authors are recognized experts in their fields and they present the results of studies developed in Africa, Latin America and Asia. The effects of using household fuelwood consumption, including those of resettlements and refugees, as well as the need for direct investments in the forest sector are studied. Some studies on the trends and drivers of deforestation, plant coverage, forest regeneration and tree trunk diameter estimations were developed using quantitative methods. In the various chapters of the book, the authors present studies wherein the effect of the actions of man on both deforestation and in reforestation politics is considered. It is divided into two sections; the first one deals with the analysis of causes and the effects of deforestation; the second section is mainly related to a large variety of quantitative studies of deforestation. The contents of the contributions of this section are concerned with quantifying different deforestation issues. Each chapter elaborates using concrete studies, insights, models and methods; they provide results for real problems. It is remarkable that they also provide methodologies which can be used in similar research.
SECTION 1. Deforestation: Analysis of Causes and Effects

Chapter 1. Globalization and Deforestation: An Examination of the Environmental Effects of Direct Investment in the Forest Sector in Cameroon
(Richard S. Mbatu, Department of Environmental Science, Policy and Geography, University of South Florida St. Petersburg, St. Petersburg, Florida, USA)

Chapter 2. The Environmental Impacts of Resettlements and Refugees on the Forest Resources of Southwestern Ethiopia
(Mekuria Argaw and Tamrat Kassa, Addis Ababa University, Center for Environmental Science, Addis Ababa and others)

SECTION 2. Quantitative Studies of Deforestation and Related Themes

Chapter 3. The Trends and Drivers of Deforestation: A Cross-Country Seemingly Unrelated Regression Analysis for the REDD+ Policies
(Richard J. Culas, School of Agricultural and Wine Sciences, Charles Sturt University, Australia)

Chapter 4. Study of the Coverage of Plants and the Evaluation of Deforestation
(Sira Allende, Carlos Bouza and Amita D. Chakraborty, Universidad de La Habana, Cuba and others)

Chapter 5. Mathematical Modelling of Malaria Using Differential Equations
(Nita H. Shah and Jyoti Gupta, Department of Mathematics, Gujarat University, Ahmedabad, Gujarat, India)

Chapter 6. A Meta-Analysis Study of Deforestation due to Grazing
(Carlos Bouza and Jose F. Garcia, Universidad de La Habana, Cuba and others)

Chapter 7. A Dynamic Landscape of Forest Regeneration in a Deforesting Forest Frontier
(Sean Sloan, Department of Resource Management and Geography, The University of Melbourne, Melbourne, Victoria, Australia and others)

Chapter 8. Tree Trunk Diameter Estimation in Rain Forest Ecology: Analysis and Optimal Control
(R. Dorville, A. Omrane and E. Robo-Petit, Laboratoire CEREGMIA, IUFM de Guyane, Cayenne, France, and others)

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