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Nota di contenuto	Linking land use and the carbon cycle / Derek T. Robinson [and others] -- An introduction to carbon cycle science / Galina Churkina -- The contribution of land use and land-use change to the carbon cycle / R.A. Houghton -- An economic analysis of the effect of land use on terrestrial carbon storage / Robert Mendelsohn -- Remote sensing for mapping and modeling of land-based carbon flux and storage / Nancy H.F. French [and others] -- Atmospheric observations and inverse modeling approaches for identifying geographical sources and sinks of carbon / Anna M. Michalak -- Limitations, challenges, and solutions to integrating carbon dynamics with land-use models / Tom P. Evans [and

	others] -- Modeling for integrating science and management / Virginia H. Dale and Keith L. Kline -- Carbon emissions from land-use change : model estimates using three different data sets / Atul K. Jain, Prasanth Meiyappan, and Tosha Richardson -- A system to integrate multiscaled data sources for improving terrestrial carbon balance estimates / Jordan Golinkoff and Steven W. Running -- Simulating biogeochemical impacts of historical land-use changes in the U.S. Great Plains from 1870 to 2003 / William J. Parton [and others] -- Carbon signatures of development patterns along a gradient of urbanization / Marina Alberti and Lucy R. Hutyra -- Managing carbon : ecological limits and constraints / R. Cesar Izaurralde, Wilfred M. Post, and Tristram O. West -- Effects of wildland fire management on forest carbon stores / Matthew D. Hurteau -- Soil carbon dynamics in agricultural systems / Cynthia A. Cambardella and Jerry L. Hatfield -- U.S. policies and greenhouse gas mitigation in agriculture / Carol Adaire Johes, Cynthia J. Nickerson, and Nancy Cavallaro -- Opportunities and challenges for offsetting greenhouse gas emissions with forests / Timothy Pearson and Sandra Brown -- Opportunities and challenges for carbon management on U.S. public lands / Lisa Dilling, Richard Birdsey, and Yude Pan -- Design and planning of residential landscapes to manage the carbon cycle : invention and variation in land use and land cover / Lauren Lesch Marshall and Joan Iverson Nassauer -- Forests, carbon, and the global environment : new directions in research / David L. Skole [and others] -- Ecosystem sustainability through strategies of integrated carbon and land-use management / Dennis Ojima [and others] -- Perspectives on land-change science and carbon management / Daniel G. Brown, Derek T. Robinson, and Nancy H.F. French.
Sommario/riassunto	As governments and institutions work to ameliorate the effects of anthropogenic CO2 emissions on global climate, there is an increasing need to understand how land-use and land-cover change is coupled to the carbon cycle, and how land management can be used to mitigate their effects. This book brings an interdisciplinary team of fifty-eight international researchers to share their novel approaches, concepts, theories and knowledge on land use and the carbon cycle. It discusses contemporary theories and approaches combined with state-of-the-art technologies. The central theme is that land use and land management are tightly integrated with the carbon cycle and it is necessary to study these processes as a single natural-human system to improve carbon accounting and mitigate climate change. The book is an invaluable resource for advanced students, researchers, land-use planners and policy makers in natural resources, geography, forestry, agricultural science, ecology, atmospheric science and environmental economics.