Record Nr. UNINA9910777921703321 Old-Growth Forests [[electronic resource]]: Function, Fate and Value / **Titolo** / edited by Christian Wirth, Gerd Gleixner, Martin Heimann Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, 2009 **ISBN** 1-282-33117-5 9786612331176 3-540-92706-9 [1st ed. 2009.] Edizione Descrizione fisica 1 online resource (517 p.) Collana Ecological Studies, Analysis and Synthesis, , 0070-8356;; 207 Disciplina 577.322gerDNB Soggetti **Ecology** Plant ecology Forestry **Ecosystems** Conservation biology Geobiology **Ecology** Plant Ecology Conservation Biology/Ecology Biogeosciences Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and indexes. Old-Growth Forests: Function, Fate and Value - an Overview -- Old-Nota di contenuto Growth Forest Definitions: a Pragmatic View -- Old Trees and the Meaning of 'Old' -- Aboveground Processes -- Ecophysiological Characteristics of Mature Trees and Stands - Consequences for Old-Growth Forest Productivity -- The Imprint of Species Turnover on Old-Growth Forest Carbon Balances - Insights From a Trait-Based Model of Forest Dynamics -- Functional Relationships Between Old-Growth Forest Canopies, Understorey Light and Vegetation Dynamics --Biosphere-Atmosphere Exchange of Old-Growth Forests: Processes and

Pattern -- Woody Detritus its Contribution to Carbon Dynamics of Old-

Growth Forests: the Temporal Context -- Belowground Processes --Aboveground and Belowground Consequences of Long-Term Forest Retrogression in the Timeframe of Millennia and Beyond -- Rooting Patterns of Old-Growth Forests: is Aboveground Structural and Functional Diversity Mirrored Belowground? -- Soil Carbon Accumulation in Old-Growth Forests -- Is There a Theoretical Limit to Soil Carbon Storage in Old-Growth Forests? A Model Analysis with Contrasting Approaches -- Biomes -- Old-Growth Forests in the Canadian Boreal: the Exception Rather than the Rule? -- Biomass Chronosequences of United States Forests: Implications for Carbon Storage and Forest Management -- Temperate and Boreal Old-Growth Forests: How do Their Growth Dynamics and Biodiversity Differ from Young Stands and Managed Forests? -- Old-Growth Temperate Rainforests of South America: Conservation, Plant-Animal Interactions, and Baseline Biogeochemical Processes -- Tropical Rain Forests as Old-Growth Forests -- Human Dimensions -- Detecting Intact Forests from Space: Hot Spots of Loss, Deforestation and the UNFCCC -- Impacts of Land Use on Habitat Functions of Old-Growth Forests and their Biodiversity -- Old-Growth Forests in the Context of International Environmental Agreements -- Synthesis -- Old-Growth Forests: Function, Fate and Value – a Synthesis.

## Sommario/riassunto

Many terms often used to describe old-growth forests imply that these forests are less vigorous, less productive and less stable than younger forests. But research in the last two decades has yielded results that challenge the view of old-growth forests being in decline. Given the importance of forests in battling climate change and the fact that old-growth forests are shrinking at a rate of 0.5% per year, these new results have come not a moment too soon. This book is the first ever to focus on the ecosystem functioning of old-growth forests. It is an exhaustive compendium of information that contains original work conducted by the authors. In addition, it is truly global in scope as it studies boreal forests in Canada, temperate old-growth forests in Europe and the Americas, and global tropical forests. Written in part to affect future policy, this eminently readable book is as useful for the scientist and student as it is for the politician and politically-interested layman.