



Edition No: 1

2023 . XLIX, 837 p. 178 illus., 157 illus. in color.

Series

Advances in Global Change Research

ISBN 978-3-031-15988-6

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Boreal Forests in the Face of Climate Change

Sustainable Management

- This book is open access, which means that you have free and unlimited access
- · Offers a set of tools to help achieve sustainable forest management
- Explores a new conceptual framework for climate change evaluation and sustainable boreal forest management
- Expert perspectives from biodiversity, ecophysiology and integrated forest ecology topics

This open access book explores a new conceptual framework for the sustainable management of the boreal forest in the face of climate change. The boreal forest is the second-largest terrestrial biome on Earth and covers a 14 million km2 belt, representing about 25% of the Earth's forest area. Two-thirds of this forest biome is managed and supplies 37% of global wood production. These forests also provide a range of natural resources and ecosystem services essential to humanity. However, climate change is altering species distributions, natural disturbance regimes, and forest ecosystem structure and functioning. Although sustainable management is the main goal across the boreal biome, a novel framework is required to adapt forest strategies and practices to climate change. This collaborative effort draws upon 148 authors in summarizing the sustainable management of these forests and detailing the most recent experimental and observational results collected from across the boreal biome. It presents the state of sustainable management in boreal forests and highlights the critical importance of this biome in a context of global change because of these forests' key role in a range of natural processes, including carbon sequestration, nutrient cycling, and the maintaining of biodiversity. This book is an essential read for academics, students, and practitioners involved in boreal forest management. It outlines the challenges facing sustainable boreal forest management within the context of climate change and serves as a basis for establishing new research avenues, identifying future research trends, and developing climate-adapted forest management plans.



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