Special Issue

Forests and Cold Temperatures: Understanding and Managing Freezing Stress under Climate Change

Message from the Guest Editors

Due to their lasting effects and repeated occurrence. freezing temperatures are detrimental to regeneration, tree growth, and forest sustainability. Understanding changes in cold hardiness in relation to spring warming will help with developing models predicting possible frost damage based on the timing of freezing temperatures. Since resistance to frost varies among species and populations due to different phenology and cold hardiness, assisted migration could help minimize the risk of frost damage while maximizing forest growth and productivity. However, much about frost resistance and changes in frost frequency and severity under climate change remains unclear, which limits the use of tree physiology (cold hardiness) and phenology in assisted migration decisions and the development of silvicultural systems to reduce damage. This Special Issue will be transdisciplinary and is intended to bridge tree physiology, forestry, and climatology studies using field observations, experiments, modelling and remote sensing for understanding and managing freezing stress under climate change across temperate and boreal forest ecosystems.

Guest Editors

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Deadline for manuscript submissions

closed (21 December 2023)



Forests

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Impact Factor 2.5 CiteScore 4.6



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Message from the Editor-in-Chief

Forests (ISSN 1999-4907) is an international and cross-disciplinary, scholarly forestry journal. The distinguished editorial board and refereeing process ensures the highest degree of scientific rigor and review of all published articles. Original research articles and timely reviews are released online, with unlimited free access. Our goal is to have Forests be recognized as one of the foremost publication outlets for high quality, leading edge research in this broad and diverse field. We therefore invite you to be one of our authors, and in doing so share your important research findings with the global forestry community.

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