Special Issue

Variations in Forest Water-Use Efficiency in the Anthropocene: From Leaf to Global Analyses

Message from the Guest Editors

Forests play a central role in controlling Eearth's climate, hydrology and biogeochemical cycles. Understanding how global change drivers (including intensification of extreme climate events, increase in atmospheric CO2, land use change and nitrogen deposition) influence the trade-off between photosynthesis and transpiration is paramount for a holistic perspective on future forest function and climate mitigation potential. Water-use efficiency (WUE)—the ratio of photosynthesis to transpiration—is a key physiological metric that lies at the core of ecosystem functioning, as it explicitly links the water and carbon cycles.This special issue aims to collect original papers exploring variations in WUE and their underlying mechanisms in response to global change drivers across scales (tree, ecosystem, biome and global), using multiple tools (leaf gas exchanges, stable carbon isotopes in plant materials, sap flow, eddy covariance, remote sensing data and modelling) and approaches, including manipulation experiments, long-term cross-site monitoring approaches or meta-analyses. Contributions in the form of reviews or perspectives are also welcome.

Guest Editors

Prof. Dr. Rossella Guerrieri

Prof. Dr. Kim Novick

Prof. Dr. Teresa E. Gimeno

Deadline for manuscript submissions

closed (24 January 2021)

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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.

Editor-in-Chief

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