Special Issue

Physiological Responses and Functional Traits of Woody Plants Under Drought and Heat Stresses

Message from the Guest Editors

Characterized by increased water scarcity, drought frequency, and rising temperatures, climate change alters the physiological performance of trees, with profound impacts on both natural and urban ecosystems. Drought and heat stress can impair tree growth, trigger crown defoliation, and eventually result in tree mortality. Crucial factors that enable the survival of woody plants in a challenging environment include soil-to-root conductance, the resistance of water transport to xylem embolism formation, dehydration tolerance, cuticular water losses, and the availability of carbon pools. While some tree species are weakened by environmental stress, others with greater adaptive capacity can thrive, leading to a shift in species composition over time. This Special Issue aims to compile cutting-edge research and comprehensive reviews that explore the physiological, biochemical and morphological characteristics that confer tolerance or, by contrast, vulnerability to heat and drought stress conditions in woody species. Its scope encompasses both pot experiments conducted in controlled and semi-controlled environments and field studies carried out in natural and urban forests.

Guest Editors

Dr. Francesca Alderotti

National Research Council of Italy (CNR), Institute for Sustainable Plant Protection, Sesto Fiorentino, Florence, Italy

Dr. Ermes Lo Piccolo

Department of Agriculture, Food, Environment and Forestry, University of Florence, Florence, Italy

Deadline for manuscript submissions

31 August 2026

Forests

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 4.6

mdpi.com/si/247508

Forests
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
forests@mdpi.com

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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

Prof. Dr. Giacomo Alessandro Gerosa
Department of Mathematics and Physics, Catholic University of Brescia, I-25121 Brescia, Italy

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