# **Special Issue**

# Climate Change Impact on Plant Ecology

## Message from the Guest Editors

Global climate varies naturally over time scales from decades to thousands of years and longer. These natural variations can originate from internal fluctuations that exchange energy, water, and carbon among the atmosphere, oceans, and land, and from external influences, including variations in the energy received from the sun and the effects of volcanic eruptions. Human activities can also influence climate by altering atmospheric CO2 concentrations, and other greenhouse gases including aerosols and the reflectivity of Earth's surface by changing land cover. Viewing forests as complex adaptive systems can provide insights into ecosystem processes and hierarchical interactions. The main purpose of this Special Issue is to define methodological approaches aimed at evaluating the impacts of climate change on the structural and functional processes of forests throughout the crossscale interactions. A special focus is on elaboration of conceptual models and predictive algorithms on the effects of climate change on functional processes—such as carbon assimilation and plant respiration—and keeping of ecosystem services and biodiversity.

#### **Guest Editors**

Dr. Marcello Vitale

Department of Environmental Biology, Sapienza University of Rome (UNIROMA1), Piazzale Aldo Moro, 5, I-00185 Rome, Italy

Dr. Alessio Collalti

Forest Modelling Lab., Institute for Agriculture and Forestry Systems in the Mediterranean, National Research Council of Italy (CNR-ISAFOM), Via Madonna Alta 128, 06128 Perugia, Italy

#### Deadline for manuscript submissions

closed (30 June 2021)



# Climate

an Open Access Journal by MDPI

Impact Factor 3.2 CiteScore 5.7



mdpi.com/si/44909

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

mdpi.com/journal/climate





# **Climate**

an Open Access Journal by MDPI

Impact Factor 3.2 CiteScore 5.7



## **About the Journal**

## Message from the Editor-in-Chief

### Editor-in-Chief

Dr. Timothy G. F. Kittel

Institute of Arctic and Alpine Research, University of Colorado Boulder, Boulder, CO 80309-0450, USA

### **Author Benefits**

### **High Visibility:**

indexed within Scopus, ESCI (Web of Science), GeoRef, AGRIS, and other databases.

## **Journal Rank:**

JCR - Q2 (Meteorology and Atmospheric Sciences) / CiteScore - Q2 (Atmospheric Science)

## **Rapid Publication:**

manuscripts are peer-reviewed and a first decision is provided to authors approximately 21.6 days after submission; acceptance to publication is undertaken in 3.9 days (median values for papers published in this journal in the first half of 2025).

