climate

an Open Access Journal by MDPI

IMPACT FACTOR 3.2

CITESCORE 5.7

Climate Change Impact on Plant Ecology

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)

Message from the Guest Editors

Dear Colleagues,

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 CO_2 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 cross-scale 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.