

Special Issue

Altitudinal Gradients and Forest Response: Climate, Hydrology, and Isotope Variability of Temperate Forest Ecosystems

Message from the Guest Editors

The temperate climatic regions are characterized by a diverse variety of broadleaved, mixed, and coniferous forests with a highly varying species dominance. Predominantly, temperate forest regions are characterized by a distinct seasonal cycle triggered by the respective latitude, elevation, and oceanic influence. Range shifts of temperate tree species have increasingly been reported, either in latitude or altitude. Mostly, changes in climate, such as generally rising temperatures, changes in seasonality, and enhanced drought frequencies, have been attributed as the main driving factors behind these shifts. This Special Issue, therefore, focuses on studies dealing with forest response to climate change in temperate forest regions across the globe. We welcome contributions dealing with the use of different methods and approaches in the context of altitudinal (dependent) adaptations, tree-line dynamics, and responses and shifts of temperate tree species, mainly but not only focusing on the climate, hydrological, and stable isotope variability recorded by and in trees.

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