143. Jahrgang (2026), Heft 1, S. 1–2

Austrian Journal of Forest Science
Centralblatt für das gesamte Forstwesen

Editorial note to Special Issue on „Sustainable and livable development of mountainous areas - Protection of the natural environment"

Marina Chavenetidou[1], Mathias Neumann[2]

Sustainable development, especially in forested mountainous regions, requires a careful balance between socio-economic growth and environmental protection. The preservation and optimal utilization of the mountain ecosystems is essential for the wellbeing of the local communities, ensuring at the same time the protection of the environment.

This Special Issue aims to disseminate the results from papers presented at the 22nd National Forestry Conference of Greece, which took place at 28/9/2025-1/10/2025 at the region of Ioannina, Greece. The title of the conference was „Sustainable and livable development of mountainous areas - Protection of the natural environment" and the papers selection was based on the reflection of the Conference theme, as well as on the relevance of their subject to the scope of the Austrian Journal of Forest Science. The conference contributes decisively to scientific research in the field of Forestry, the protection of the natural environment and the sustainable management of Greek forests, emphasizing the strengthening of mountain populations and improving livelihoods in mountainous areas. The special issue includes four papers.

The paper entitled **„Incorporating natural risk into Faustmann forest economic models based on a comparative review for *Fagus sylvatica* forests"** by Mpekiri and Papaspyropoulos analyzes three forest economic models under conditions of natural risk on *Fagus sylvatica* forests. Due to their increased vulnerability to natural hazards, models that incorporate biological particularities are necessary. Special emphasis is placed on the ecological and economic characteristics of *Fagus sylvatica* and on the challenges of its management in a changing environment.

[1] Department of Forestry and Natural Environment, Aristotle University of Thessaloniki, Greece
[2] Department for Ecosystem Management, Biodiversity and Climate, BOKU University, Vienna, Austria

The second paper, **„Regression-based estimates for sectional stem volume of Scots pine (*Pinus sylvestris* L.) in Greece considering the mean diameter reduction factor"** by Fallias and Diamantopoulou studies the development of a reliable system for estimating the total stem volume of Scots pine (*Pinus sylvestris* L.) trees, by building models for estimating the mean diameter reduction factor. The proposed prediction system of total stem volume aims to contribute to optimal sustainable forest management through accurate volumetric measurement of stand woody volume, using only the diameter of the stump.

The paper with the title **„Variability of vessel diameter, growth ring width and wood density in Paulownia (*Paulownia tomentosa*)"** by Koutliani *et al.* examines the interaction relationships between the microscopic structure of the wood, specifically the size of the vessels, density and the width of the growth rings in samples from a five-year plantation. According to the results of the research, the vessels decisively influence the quality of the wood of *Paulownia tomentosa*, as it is an annular-porous species with a semi-diffuse-porous appearance during the first years of its growth.

The last paper, **„Comparative evaluation of the forestry sector of the bioeconomy in Greece (2008–2023)"** by Tsiaras aims to evaluate Greece's performance in the bioeconomy over the period 2008-2021 focusing on the forest sector, using data from the European Union, such as turnover, value added and employment. According to the results of the study, Greece is significantly underperforming, compared to the European average in the forest sector of the bioeconomy, since the economic crisis of 2008 and pandemic Covid-19 in 2019 have significantly affected the Greek economy.