Subalpine forest development in Bulgarian Mountain Forests under climate change

Starting Date 01.01.2013
Duration 36 Months
Discipline Mountain Ecosystems

Main Goals

➢ Study the natural dynamics of representative coniferous forests in the Bulgarian Mountains
➢ Analyze the response of mature trees from several coniferous species to climate extremes
➢ Study the xylogenesis and main factors controlling it in two Balkan endemic Pine species (P. peuce and P. heldreichii)
➢ Analyze the response and performance of young trees to different levels of drought in a controlled experiment
➢ Study mycorrhiza in the aforementioned experiment and natural conditions

Activities

➢ We study the disturbance regimes of Picea abies-dominated forests in Parangalitsa, Bistrishko branishte and Beglika reserves and Pinus peuce and Pinus heldreichii-dominated forests in Pirin National park
➢ We study the response of trees to climate extremes, climate variation and xylogenesis by various dendrochronological techniques
➢ We started a controlled experiment with drought treatment of saplings and make continuous physiological measurements and mycorrhizal studies

Expected results

➢ Get deeper knowledge of the growth and functioning of subalpine forests in the Bulgarian mountains in the situation of on-going climate changes

Swiss Coordinator
Peter Bebi
Mountain Ecosystems Unit
WSL Institute for Snow and Avalanche Research SLF
bebi@slf.ch
www.slf.ch

Bulgarian Coordinator
Stefan Yurukov
Dendrology Department
University of Forestry
E-Mail Address: syurukov@abv.bg
http://dendrochronologybg.net

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