



BULGARIAN-SWISS COOPERATION PROGRAMME
БЪЛГАРО-ШВЕЙЦАРСКА ПРОГРАМА ЗА СЪТРУДНИЧЕСТВО

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 forementioned 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

www.snf.ch

www.mon.bg



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