



## **CO<sub>2</sub> flux studies of different hemiboreal forest ecosystems**

Alisa Krasnova (1,2), Dmitrii Krasnov (1), Steffen M. Noe (1), Veiko Uri (1), Ülo Mander (2), Ülo Niinemets (1), and Kaido Soosaar (2)

(1) Estonian University of Life Sciences, Tartu, Estonia , (2) University of Tartu, Estonia

Hemiboreal zone is a transition between boreal and temperate zones characterized by the combination of climatic and edaphic conditions inherent in both zones. Hemiboreal forests are typically presented by mixed forests types with different ratios of deciduous and conifer tree species. Dominating tree species composition affects the functioning of forest ecosystem and its influence on biogeochemical cycles.

We present the result of ecosystem scale CO<sub>2</sub> eddy-covariance fluxes research conducted in 4 ecosystems (3 forests sites and 1 clear-cut area) of hemiboreal zone in Estonia. All 4 sites were developing under similar climatic conditions, but different forest management practices resulted in different composition of dominating tree species: pine forest with spruce trees as a second layer (Soontaga site); spruce/birch forest with single alder trees (Liispõllu site); forest presented by sectors of pine, spruce, birch and clearcut areas (SMEAR Estonia site); 5-years old clearcut area (Kõnnu site).