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Monitoring of Soil-Plant-Atmosphere patterns and processes in an artificial catchment

W. Schaaf (1), W. Gerwin (2), D. Biemelt (3), M. Veste (2), and A. Fischer (4)

(1) Brandenburg University of Technology, Soil Protection and Recultivation, Cottbus, Germany (schaaf@tu-cottbus.de), (2) Brandenburg University of Technology, Research Center for Landscape Development and Mining Landscapes, Cottbus, Germany, (3) Brandenburg University of Technology, Hydrology and Water Resources Management, Cottbus, Germany, (4) Technische Universität München TUM, Geobotany, Dept. of Ecology and Ecosystem Management, Freising, Germany

The artificial catchment ´Chicken Creek´ is the main research site of the Transregional Collaborative Research Center (SFB/TRR 38). Funded by the Deutsche Forschungsgemeinschaft, the SFB/TRR 38 has gathered more than 50 scientists from BTU Cottbus, TU Munich and ETH Zurich to study the patterns and processes – and their interaction – of the initial phase of ecosystem development in an artificial catchment.
The catchment was constructed in 2003 to 2005 in the Lusatian lignite-mining area close to Cottbus, Germany. It has an area of 6 ha including a small lake and is mainly composed of a 2-4 m layer of sandy to loamy Quaternary overburden sediments above a 1-2 m clay layer that seals the total catchment area at the bottom. No restoration, planting or other reclamation measures were carried out.
To support the scientific objectives of the whole project an intensive monitoring program is carried out in the catchment since the end of the construction works including grid soil sampling, meteorological stations, weirs, groundwater wells, vegetation and soil fauna monitoring, precipitation and soil solution sampling, and aerial photo documentation.
The presentation will present the the construction process of the catchment, monitoring installations and first results of the monitoring program.