



Forest covered experimental catchment at the eastern foothills of the Alps

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At the eastern foothills of the Alps next to border of Austria and Hungary, an experimental basin is located namely *Hidegvíz Valley*, which is one of the main valley of the Sopron Hills. The whole (6 km²) catchment is fully forest covered and a part of the area is nature reserve.

The research project was established by lecturers and research scientists of University of West Hungary at the end of 1980's. It provides an opportunity for foresters, environmental- and geoscientists to do interdisciplinary research. Our experiments are going on different spatial and temporal scale. The main experiment station is located at the outlet of the catchment, where can be found an open-air automatic hydrometeorological station. There are several experimental forest plots, some of them are instrumented with micro-climate stations. Following experiments are going on the plots: canopy and litter interception, soil moisture, tree growth, sap flow, and ground water level. We follow with attention forest management activities and phenological changes. Gauging stations are settled some sub-catchments and the main catchment outlet. Beside continuous hydrograph records, the sediment yield and some physico-chemical parameters of streamwater are measured also. Digital measurement techniques and methods are applied e.g. high frequency data sampling is used in case of water level sensors.

The goals of the experimental basin project are the followings: better knowledge and quantification of forest hydrological cycle elements, forest vegetation (in different tree species and ages) and forest management activities effects on stream flow regime, gain data for hydrological modelling.