

## SEDIMENTATION DYNAMICS IN A KARSTIC ENVIRONMENT

### Context and objectives

Colmation of the Allaine river changes surface water groundwater interactions along the river and is a threat to stream ecology. There is an ongoing discussion to what extent agriculture as well as a military training area where heavy tanks are used contribute to the production of fine sediments and thus colmation along the river. The CHYN has been mandated to provide a better understanding on the origin and consequences of the fine sediments. An important task in this context is to evaluate the efficiency of the installed retention basins on the military training area. You will be directly involved in this project and will employ and interpret numerous field approaches at the interface of karst hydrology, hydrogeology and hydraulics.

### Research approach and methodology

The production of fine sediments is increased through heavy vehicles in the military training area. To reduce the environmental impact, several sedimentation basins have installed to reduce the sediment flux towards the river. However, the area they drain is not known accurately. Estimating the hydrological catchment of the basins through detailed water balance studies will allow overcoming this important knowledge gap. In a second step a range of tracer tests will be carried out to establish and quantify the hydraulic connection between the arms-place and the Allaine river.

### Partners and collaboration

The project will be supervised by Prof. P. Brunner and Dr. Michiel Pronk. Given the timeline of the project, first experiments will have to be carried out in June/July.

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