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In search of hydrologic functional units in the real world: interdisciplinary monitoring design.

Hydrologic functional units (also known as hydrologic response units or hydrotopes) are used as a basis for many hydrological models and are usually delineated with a simple GIS analysis. Despite the fact that this is a commonly applied concept, few studies exist on the determination of hydrologic response units in the real world. The here presented study is part of ongoing research within the DFG research unit CAOS (Catchments As Organized Systems) and aims at identifying functional units in the field. This ambitious endeavor is based on an interdisciplinary monitoring design involving a large number of sensor clusters, but also includes tracer studies, remote sensing, geophysical exploration and meteorological and ecological investigations. Research is focused on the Attert catchment in Luxemburg.