

BayCEER Kolloquium

Lectures in Ecology and
Environmental Research

Winter 2022



UNIVERSITÄT
BAYREUTH

Donnerstag/Thursday

17.11.2022

12:15 in H6, GEO



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Water ages in the hydrologic cycle

How long does a drop of water spend inside a catchment? It could be a few seconds, but also many years that pass between the moment a raindrop touches the ground and the moment it leaves via evaporation, transpiration, streamflow or with the groundwater. It all depends on the flowpath the raindrop is taking on its journey through the catchment. Some paths are real expressways while others seem perpetually congested. This has important consequences both for the hydrologic response of a catchment (floods and droughts) as well as for questions of solute transport, pollution and nutrient availability.

In this presentation I would like to give you a sense of how fast water moves on its way over land, through soils and through bedrock, in plants and in streams. Also, I will explain which factors control whether water from a certain rainfall event is likely to be flushed out quickly or become very old inside of a catchment.

