

BayCEER Kolloquium

Lectures in Ecology and
Environmental Research

Winter 2022



UNIVERSITÄT
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Donnerstag/Thursday

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12:15 in H6, GEO



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Streamflow generation processes: controls, flow pathways and links to solute export

Our water resources are under pressure from a multitude of stressors. In addition to unsustainable use of freshwater and an increasing demand, observations suggest that global change is changing the water cycle, i.e. affecting flow pathways and hydrologic connectivity, storage and release of water, residence times in different environmental compartments and the resilience of watersheds to disturbances. In order to understand the current and future effects of global change on our water resources and hydrological processes, we need to know more about the partitioning of water in our landscapes and how water moves towards stream channels, i.e. about streamflow generation. This presentation highlights research work at the hillslope to headwater catchment scale that investigates flow pathways and sources of streamflow, controls and thresholds for streamflow generation processes, the relevance of hydrologic connectivity and its consequences for solute export. Global change is forecast to impact the processes of the water cycle very differently for different regions. We therefore need the small-scale process knowledge to model water fluxes within regional and global earth system models correctly and to develop locally adapted water management and protection strategies.

Bayreuth Center of Ecology
and Environmental Research

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