Two ways to overcome boundaries in hydrology

Nans Addor*

* Climatic Research Unit, School of Environmental Sciences, University of East Anglia, Norwich, UK (n.addor@uea.ac.uk)

In this presentation, I will discuss two kinds of boundaries, boundaries between catchments and boundaries between scientists and decision makers. I will argue that both kinds can be overcome. First, I will discuss some recent progress in large-sample hydrology. Using a new data set of hundreds of catchments, I will illustrate that information at the catchment scale can be generalised to the continental scale. Although the boundaries of catchments are well defined, and streamflow describes what happens within those boundaries, catchment attributes, such as their topography, land cover, soil and geology can be used to explore hydrological similarity and to extrapolate beyond those boundaries. I will show how this is particularly useful for hydrological modelling. Second, I will discuss how, in the context of adapting to climate change impacts, it is key to overcome existing boundaries between researchers and decision makers. I will present the outcomes of a workshop-seminar series I co-organised at the University of Zurich. It is based on the premise that interdisciplinary and iterative dialogue can help to improve the understanding of and adaptation to climate change impacts, in particular on hydrological systems. We conducted an opinion survey among the participants before and after the event. We found that the event stimulated new perspectives on research products and communication processes, which suggests that similar events may contribute to the midterm goal of improving support for decision making, by overcoming boundaries between researchers, decision makers, and students.