The Role of Uncertainty in PUB Benchmark Assessment

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Hydrologic predictions in ungauged basins remain highly uncertain in many cases and research into approaches to reduce this uncertainty has been a community focus over recent years. The Prediction in Ungauged Basins (PUB) initiative is at the heart of this activity with its aim at reducing the uncertainty of hydrologic predictions at ungauged locations. An important benchmark of the current state of success so far will be a need to assess what the current predictive uncertainty actually is, and especially how it varies with all aspects of the environmental application, e.g. the basin location and characteristics or the model and data used. In this presentation we will discuss two things. First, we will discuss the critical role of uncertainty for benchmarking PUB for both current and future objectives of the initiative. How can predictive uncertainty and its reduction be used as an assessment tool within PUB, and what research is still outstanding to achieve a common uncertainty framework for assessment? Second, we will review the main results of a recent workshop on the diagnostic evaluation of environmental models, which provides a specific example of how assessment can be performed.