



## **Dealing with Epistemic Uncertainty in Water Quality Models**

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Epistemic uncertainty is ubiquitous in the application of water quality models, from the specification of inputs, the representation of runoff generation, the mobilisation of nutrients, sediments and other pollutants in different pathways, in the values of the many parameters required to run a model, and even in the data with which model outputs can be compared. Some data in fact might be disinformative if used for model calibration and validation or evaluating whether a model is producing the right results for the right reasons. Here, the effect of epistemic uncertainty on the application of water quality models to the Morland Demonstration Test Catchment in Cumbria, England is explored using a GLUE limits of acceptability approach. The first results from testing the SWAT model in predicting runoff, phosphorus and sediment concentrations within this framework will be presented.