



A candidate model for PUB benchmark assessment based on cross-cutting themes

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Idea are being sought for possible models for the PUB benchmark assessment. I present a model for consideration, previously tried at the Perth PUB meeting held in 2004. In this model, the assessment could be organized around particular areas of hydrological prediction: flood hydrology, drought hydrology, rainfall variability, evaporation and land-atmosphere exchanges, sediments and erosion, impact of land use/cover change, and water quality and ecosystem health. In each case, groups carrying out the assessment exercise, could address the following questions/issues: What are the societal needs for the predictive objective? What is the societal understanding of the importance of the predictive objective and how can this understanding be improved? What methods, models and techniques have previously been used to achieve the predictive objective in ungauged basins? Which of these methods performs best, under what circumstances and why? What data are essential (i.e. bare minimum) for implementing the methods listed? What additional data would improve the implementation of these methods? Can any of the methods listed be integrated to improve prediction? Based on the assessment of this group, list the key objectives of a PUB working group that would evaluate, integrate and improve predictive capability? What are the “success factors” for such a group? What other scientific communities do we need to further engage with? etc. The current PUB themes (theory, classification, models, process understanding, measurements, uncertainty techniques etc.) will remain as cross-cutting themes, providing a link between the needed predictions and the required scientific advances. I will present some results from the Perth PUB meeting, as examples, to illustrate how the benchmark assessment might proceed.