

Interactive comment on “Uncertainty in soil physical data at river basin scale” by P. van der Keur and B. V. Iversen

P. van der Keur and B. V. Iversen

Received and published: 18 October 2006

Anonymous Referee #1 (hessd-3-S740_p.pdf) Received and published: 17 August 2006

Comment 1 The manuscript is well structured and pleasant to read and addresses the interesting issue of uncertainty in soil physical data at river basin scale.

Comment 2 This happens to be a review article as no new experimental work by the authors is presented. Therefore to be informative towards potential readers the word “review” should be used in the title of the manuscript.

→ review is added to title

Comment 3 The authors describe the different sources of uncertainty (e.g. model un-

certainty, uncertainty in soil physical and chemical properties, effects of various spatial and temporal scales) and they classify this uncertainty in 3 different categories. However, what is really lacking in this manuscript is what the authors themselves promise in the fourth line of their introduction: “providing guidance for the assessment of uncertain soil data targeted towards practitioners within hydrological modeling”. From a real good review article it can be expected that authors not only analyze the different sources of uncertainty but that in addition to this, they also provide a synthesis of all the important aspects related to uncertainty and that they design a logical framework (or a decision support system) that provides guidance for the assessment of uncertainty. So far the authors focused on the analysis and the synthesis is largely missing. It is recommended that the authors seriously improve their synthesis section. Without such a synthesis section this manuscript is insufficient innovative.

→ Yes, we agree. Text is now added in section 9 under 'summary and conclusions' where is explained in what way the present paper provides guidance for assessment of uncertainty:

'The present paper provides guidance by classifying uncertainty in soil physical properties following the scheme proposed by Brown (2004) which groups uncertainty according to category, type, methodological quality and longevity. Furthermore, spatial support aspects have been reviewed and discussed and autocorrelation length scales for a broad range of soil physical- and geochemical properties are provided as well as suggestions for variogram models required for geostatistical analyses.'

and

'Decisions-makers who use the results of hydrologic modelling studies to assess the effects of various measures need guidance from modellers on how uncertainty affects hydrologic simulations and what the implications are for policymaking. Through a review process on uncertainty of soil physical properties and by providing information on their spatial structure within an adopted classification system, the present paper

[Full Screen / Esc](#)[Printer-friendly Version](#)[Interactive Discussion](#)[Discussion Paper](#)

provides guidance and support for the assesment of uncertainty towards practitioners within hydrological modelling.'

Comment 4 What means WFD at the third line from the bottom on page 7?

-> Water Framework Directive. Extra text is added

Comment 5 At the middle of page 13 a reference is made to Finke et al. (1996). However this paper is not listed in the references. Please correct and verify that all other references are correct.

-> done

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 3, 1281, 2006.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper