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Hydrology and Earth System Sciences Discussions

Interactive comment on "Calibration of a crop model to irrigated water use using a genetic algorithm" *by* T. Bulatewicz et al.

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The study is a first step to incorporate bio-socio-economic sectors in a dynamic system to efficiently handle irrigation water use. Massive parallel computing was used to calibrate the Environmental Policy Integrated Climate (EPIC) model for irrigated water use of various crops. The integrated study provided a framework for future model

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development and implementation for sustainable water usage.

Comments

1. A flowchart is suggested to be included which can clearly illustrate the features of the integrated model and relate the maximum entropy estimation versus the genetic algorithm used in the proposed model. 2. The model uncertainty needs to be addressed. 3. The section 6.3 predictability of the model is actually more like the model verification. Thus “model verification” is a more suitable title for section 6.3. 4. The authors need to discuss how to translate all the information generated from the model to useful knowledge which can assist local farmers, engineers and decision-makers to efficiently operate and manage the irrigation water use.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 2367, 2009.