Hydrol. Earth Syst. Sci. Discuss., 4, S1881–S1882, 2008
www.hydrol-earth-syst-sci-discuss.net/4/S1881/2008/

Hydrology and Earth System Sciences Discussions

Interactive comment on "Modelling groundwater-dependent vegetation patterns using ensemble learning" *by* J. Peters et al.

S. Manfreda (Editor)

manfreda@unibas.it

Received and published: 9 January 2008

The paper entitled "Modelling groundwater-dependent vegetation patterns using ensemble learning" by Peters et al. deals with a topic of great interest that deserve to be part of this special issue on "Climate-soil and vegetation interactions in ecological-hydrological processes".

The first referee provided and enthusiastic review of the paper raising only minor points that in my opinion can be easily addressed by the authors. Nevertheless, I agree with the referee regarding the limited consideration given to the hydro-ecological interactions in the model construction.

- The analysis show clearly that the most important variable for the prediction of vegetation composition is the ground water depth (Fig. 8). In this regard, the authors did not use all the available information like the series of ground water depths (at the piezometers). What is the effect of ground water depth fluctuation in time? This would be very interesting to study using for instance not only the mean depth, but also the variance.

- The fact that the model can not be easily generalise is an expected result. In fact, the model is strongly dependent on the specific ecosystem analysed and the selected independent variables. Here, the challenge would be the selection of a set of independent variables (vector **x**) able to produce an appropriate prediction in different sites.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 4, 3687, 2007.