

## ***Interactive comment on “Regional estimation of daily to annual evapotranspiration with MODIS data in the Yellow River Delta wetland” by L. Jia et al.***

**Z. Vekerdy (Referee)**

vekerdy@itc.nl

Received and published: 9 May 2009

Review of: Regional estimation of Daily to Annual Regional Evapotranspiration with MODIS data in the Yellow River Delta wetland; L. Jia, G. Xi, S. Liu, C. Huang, Y. Yan, and G. Liu

General comments: The paper addresses a very interesting issue, relevant to HESS. It is using novel concepts: satellite image time series (with HANTS gap filling) for the mapping of actual ET over wetlands. It has interesting conclusions, discussing generic issues of wetland hydrology, far beyond the geographic boundaries of the Yellow River Delta (YRD) wetland.

C640

The language of the article is basically clear and understandable, although corrections are still needed. Some suggestions are included in the here-attached pdf file, but a complete linguistic revision is beyond the scope of this review. It is suggested to further improve the text in this respect, especially by establishing a systematic use of past and present tenses (e.g. using past tense for the executed analysis steps, and present perfect for the generic findings).

There are some errors in the referencing and the referred literature list, which are indicated in the attached pdf file.

Specific comments: The title is proper, clearly reflects the content. The abstract is concise and complete, although if some minor (below suggested) modifications are implemented, it might be touched up a little to reflect those. The structure of the article is clear and good.

The described method provides information about the spatial distribution of the daily ET rates. The Authors prove clearly that the high spatial variations (large standard deviation of daily values within a spatial unit) of ET question the usability of Kc factors in the YRD wetlands. This is a very important finding, most probably valid in a much broader geographic context.

The statements about reed Kc (last paragraph on p. 2313) are not based on a broad-enough literature. In the attached pdf document I provide some further references and aspects for consideration.

The conclusions are clearly stated, although it is recommended to add conclusions about the uncertainties involved in the calculations in Section 5, and make the information about the standard deviations of the calculated values consistently presented in Subsection 4.3, where not all the calculated values are presented with their standard deviations. It is especially important, since some of the uncertainties are large, so without correct explanation doubts may be raised.

C641

I strongly recommend to publish this paper after revision.  
The proposed technical corrections are attached in a separate pdf file.  
Please also note the Supplement to this comment.

---

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 2301, 2009.