

Interactive comment on “Evapotranspiration modelling at large scale using near-real time MSG SEVIRI derived data” by N. Ghilain et al.

S. Sinclair (Referee)

sinclaird@ukzn.ac.za

Received and published: 15 November 2010

1 General Comments

An operational evapotranspiration model is presented, which is driven by a combination of MSG SEVIRI derived products (albedo and short/long-wave fluxes) and ECMWF operational forecast variables.

The authors examine the performance of the evapotranspiration model using location specific comparisons between measured and modelled evapotranspiration over Europe, and by comparing the modelled results with those of two other coarser resolution

C3462

modelling systems (GLDAS and ECMWF) over Europe, Africa and portions of South America. The model is shown to have good overall performance when compared with the observed data and to be reasonably consistent with the other model outputs.

In general the paper is a valuable contribution and suitable for publication. The introductory sections and model concepts are clearly explained and the conclusions are well considered. However, I found that the writing style of the section which describes the inter-comparison with GLDAS and ECMWF evapotranspiration (Sect. 5) was not as polished, as a result this discussion can be difficult for the reader to follow. I feel that the paper will benefit if the authors rework the wording of this section so that the presentation of the paper does justice to its content.

2 Specific Comments and Technical Corrections

- Pg. 7088 paragraph starting at line 4 - How is the source (and treatment) of these forecasts different from the ECMWF forecasts of soil moisture and soil temperature mentioned in the following paragraph?
- In the discussion of Fig. 5, it would be useful if the authors could clarify what is meant by “3-h mean image correlation”, it’s not clear which sequence of correlations a mean is being calculated for. My understanding from the figure is that the authors computed a cross-correlation between images for three distinct time-steps each day and plotted these values.
- Pg. 7091 line 19 - “...Table 5.” should read “...Table 3.”
- Pg. 7094 line 21 - The sentence starting “Land cover difference...” is confusing to me. According to the caption for Fig. 6 the ECMWF comparison is in the left-hand panel.

C3463

- Pg. 7097 line 7 - "...activities will demonstrate..." should be "activities can demonstrate...".

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 7079, 2010.

C3464