

Interactive comment on “Estimation of evapotranspiration by FAO Penman–Monteith Temperature and Hargreaves–Samani models under temporal and spatial criteria. A case study in Duero Basin (Spain)” by Rubén Moratíel et al.

Anonymous Referee #3

Received and published: 5 September 2019

The article reports a complete work on the estimation of reference evapotranspiration using Hargreaves and Temperature Penman-Monteith FAO56 equations, introducing calibration in both models. On the basis of the subject matter, the paper falls within the general scope of the Natural and Earth System Sciences Journal. Overall the paper was fairly well written, and it is interesting to the Journal readers. The abstract is sufficiently informative. The introduction is well elaborated and documented by numerous and significant references. Materials and methods include a detailed description of the measurements and methods used in the work. Finally, results are sound and justified

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by the outputs presented in the paper (tables and figures). We advise to introduce some recommendations that would improve the manuscript. Considering that the main source of information is a meteorological database, a detailed explanation of the quality control procedures and validation of the meteorological data used in the study would be necessary. In addition, the model calibration section is too concise, and it would be necessary to detail the procedure properly. It would be advisable to include, in addition, an indicator of the performance of the models such as the relative error, ratio between the root mean square error and the average value of the measured variable. The authors do not adequately assess the good behaviour of the Hargreaves-Samani equation in its original version. In many cases, the improvement obtained after the calibration of the model is very small. It is advisable to quantify the improvement that occurs in each of the models after calibration. Finally, a weakness of the paper is that it presents too many results and in many cases a lack of discussion and comparison with other results of similar works. I recommend a Discussion section independent of the Results.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-250>, 2019.