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Hydrology and Earth System Sciences Discussions

Interactive comment on "Identifying erosive periods by using RUSLE factors in mountain fields of the Central Spanish Pyrenees" *by* M. López-Vicente et al.

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Answer to the comments of the Editor, Dr. Nunzio Romano.

The main objective of the paper “HESSD 4, 2111–2142, 2007” is to identify the different erosive periods that occur along the year in a typical Mediterranean agroecosystem by calculating and analyzing the monthly variations of the rainfall and runoff erosivity factor, soil erodibility factor and cover management factor of the RUSLE model. The authors of the above paper agree with the suggestion of the Editor and have considered all the recommendations of Referee #1 such as appears in the Author Comment “Answer to the comments of the Referee #1” submit-

ted on November 7th, 2007. This letter includes the spatial analysis of the variations of the rainfall and runoff erosivity factor from data of three weather stations. It also includes the assessment of monthly and annual soil erosion after consideration of the LS topographic factor of the RUSLE model. In the above paper we have considered the effect of the current tillage practices of the study area as representative of the typical Mediterranean rain fed productive croplands. We have not measured variations in soil bulk density because this property is not included in the RUSLE model. In accordance with the suggestion of the Editor we will include in the revised manuscript information related to field calibration of the ThetaProbe equipment that was used to estimate soil water content. In spite of the changes in the proportion of small aggregates due to changes in soil water content, the RUSLE model only considers great variations in soil aggregates that modify the type of aggregate. Moreover and following the suggestion of the Editor, we would like to submit a revised manuscript with additional data of soil erosion measurements obtained with 137Cs on an ongoing research in the same study area. These data will be used to validate the annual erosion rate calculated with the RUSLE model. Finally, the revised manuscript will be revised to improve its style to fit the standards of the HESS journal.

With kind regards,

Dr. Manuel López-Vicente.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 4, 2111, 2007.

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Interactive Comment