Encarnación V. Taguas

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The type of scientific work we are offering

As a potential host of STSM, we can offer the following research lines:

1. Measurements of erosion processes in commercial olive orchards to evaluate the dominant processes and to provide management guidelines.
2. Modeling erosive and hydrological processes in commercial olive orchards for taking management decision.

With the first line of work, we are interested in the description and in the analysis of the real challenges associated to soil erosion in olive tree farms. Different spatial scales are examined. We try to characterize the variability of environmental conditions as well as the contribution of different sources of sediments (sediment budget) to provide efficient and economical management alternatives. The following papers can illustrate our interests:

E.V. Taguas; J.A. Gómez. 2015. Vulnerability of olive orchards under the current CAP (Common Agricultural Policy) regulations on soil erosion: A study case in Southern Spain. Land Use Policy. 42, pp. 683 - 694.

E.V. Taguas, J.L. Ayuso, R. Pérez J.V. Giráldez, J.A. Gómez. 2013. Intra and inter-annual variability of runoff and sediment yield of an olive micro-catchment with soil protection by natural ground cover in Southern Spain. Geoderma 206, 49-62.

E. V. Taguas, Y. Yuan, A. Peña, J.L. Ayuso. 2010. Prediction of ephemeral gullies by the Compound Topographic Index in an olive orchard microcatchment in Andalusia (Spain). Agrociencia 44: 409-426.

E. V. Taguas, E. Guzmán, G. Guzmán, T Vanwalleghem, José A. Gómez.. 2015. Characteristics and importance of rill and gully erosion: a case study in a small catchment of a marginal olive grove (in press). Cuadernos de investigación Geográfica.

With the second line of research, we try to model the erosive and hydrological processes to complete the information derived from the measurements through the use of longer dataseries or through the implementation of different scenarios. In addition, we explore different calibration techniques to provide suitable tools for technicians.

E.V.Taguas, J.A. Gómez, Pietro Denisi, L. Mateos. 2015. Modelling the rainfall-runoff relationships in a large olive orchard catchment in Southern Spain. Water Resources Management. DOI: 10.1007/s11269-015-0946-6.

E.V. Taguas, Y. Yuan, F. Licciardello, J.A. Gómez. 2015. Curve Numbers for olive orchard catchments: a case study in Southern Spain. Journal of Irrigation & Drainage Engineering (in press)

E.V. Taguas, Y. Yuan, R. Bingner, J.A. Gómez. 2012. Modeling the contribution of ephemeral gully erosion under different soil managements: a case study in an olive orchard microcatchment using AnnAGNPS model, Catena 98, 1-16.

E. V. Taguas, C. Moral, R. Pérez, J.L. Ayuso, J.A. Gómez. 2011. Modeling the spatial distribution of water erosion within a Spanish olive orchard microcatchment using the SEDD model. Geomorphology 133, 47-56.

Possible duration of STSM

5 working days and up to six months.

The best time to host STSM in this Institutions.

Summer months are not advisable. In August, the University is closed. If we are free, there are no limitations.