



## **Soil and hydrology sciences need laboratory and field experiments in the classroom. An example from the SEDER (Soil Erosion and Degradation Research Group) from the University of Valencia**

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The use of experimental stations and long-term measurements in the field and in the laboratory contributed to large datasets and key information to understand the soil system and the hydrological cycle (Neal et al., 2011; García Orenes et al., 2012; López-Garrido et al., 2012; Kröpfl et al., 2013; Nadal-Romero, 2013; Taguas et al., 2013; Zhao et al., 2013). However, teaching in high schools and colleagues require simple experiments to help the students to understand the soil and water resources and management. We show here the experiments and measurements we conduct within the teaching program of the Soil Erosion and Degradation Research Group at the University of Valencia to help the students in the understanding of the soil and hydrologic processes.

The experiments and measurements developed are the following: (i) Water Drop Penetration Time (WDPT) to determine the soil water repellency; (ii) Leaves water retention capacity measured in the field; (iii) soil infiltration capacity measured with simple ring infiltrometers; (iv) measurement of the soil bulk density; and (v) measurement of the soil water content. Those experiments and measurements are applied to agriculture, rangeland and fire affected soils.

### Acknowledgements

To the “Ministerio de Economía and Competitividad” of Spanish Government for finance the POSTFIRE project (CGL2013- 47862-C2-1-R). The research projects GL2008-02879/BTE, LEDDRA 243857 and PREVENTING AND REMEDIATING DEGRADATION OF SOILS IN EUROPE THROUGH LAND CARE (RECARÉ)FP7-ENV-2013- supported this research.

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