



Investigation of sediment yield under different flow conditions: an example in humid temperate environment

M. Mercedes Taboada-Castro, M. Luz Rodríguez-Blanco, Laura Palleiro, and M. Teresa Taboada-Castro
Faculty of Sciences, University of A Coruña, A Coruña, Spain (teresat@udc.es)

Knowledge of the suspended sediment load of a river basin is of fundamental importance for devising appropriate water resource management strategies and developing economic activities that depend on such resources. Observations and measurements of sediment transport over large ranges of discharges and environmental conditions are essential for developing and testing sediment transport models. However, suspended sediment transport data are scarce and frequently limited because of technical difficulties inherent in measuring in situ suspended sediment concentrations. In this paper measurements of suspended sediment under different flow conditions were analysed in an agroforestry catchment (16 km²) located in the humid zone of Spain to determine the contribution of event sediment yields to the annual sediment yields. A database has been compiled from observations obtained during 6 years (2004-2010). Most of the suspended sediment yield is transported during runoff events that mainly occur in the autumn and winter. Furthermore, a large percentage of the annual sediment load is generated by a small number of events that occur every year. For this reason is necessary to quantify the suspended sediment load during these episodes since infrequent sampling at a range of discharges may not be reflected adequately the suspended sediment yield in this catchment.