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Soil erosion in Mediterranean environment: The conceptual approach of the EROMED project to assess regional impacts of global change in Italy

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The project entitled “Soil erosion by Water in the Mediterranean Environment” (EROMED) was financed by the Italian Ministry of Universities and Scientific Research (MIUR) in order to identify and quantify soil erosion process dynamics in sensitive Mediterranean landscapes taking into account global change impacts. The main goals of the project are: i) the direct appraisal of the level of erosion hazard reached in some “fragile” environments; ii) the improvement of already equipped test-sites, either as a single slopes and/or medium size catchments (50-100 km^2); iii) the application and validation of “what if?” type models for soil erosion, based on a distributed process based modeling framework; iv) the implementation of a monitoring network of the erosive processes, whose benchmarks could be represented by the chosen test-sites. The study is covering different Italian landscape environments from North to South under diverse typically Mediterranean landuse conditions: (extensive vineyards and olive groves; badlands; pasture and cereal agriculture. In this paper we are going to illustrate the concept of the EROMED project and will present some selected results of the project in process identification and quantitative modeling.