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MEASUREMENTS OF INTERRILL SOIL EROSION UNDER DIFFERENT LAND USE IN SLOVENE ISTRIA

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"Little research has been done on soil erosion in Slovenia" says the evaluation of the implementation of the United Nations Convention to Combat Desertification in Slovenia (2005). In April 2005 the researchers at the Anton Melik Geographical Institute and the Faculty of Civil and Geodetic Engineering began measuring interrill soil erosion with intention to deepen the knowledge about soil erosion. The measurements take place in the Marezige village in the Dragonja river basin, which belongs to the submediterranean climate region where flysch parent material predominates. Eight 1-m^2 erosion plots are set up on locations with different land use types: on bare soil in a young olive grove (2), in an overgrown meadow (2) and in the forest (4). The erosion plots in the forest are placed on soil with two different slopes. The measurement results show that few major erosive events are responsible for the greater part of the eroded soil. Interrill soil erosion in the overgrown meadow and in the forest is strongly related to the vegetation period when the most intensive erosive events occur. Interrill soil erosion in the first year (May 2005–April 2006) was estimated at 90.1 t/ha on bare soil, and 118.2 t/ha in the second year (August 2006–July 2007), despite the lower cumulative rainfall amount. Our two-year measurement data show that the annual denudation rate on the bare soil surface in the olive grove is between 9 and 11 mm. It should be stressed that interrill soil erosion only was measured, and not total, rill and interrill soil erosion.