# Land degradation and soil conservation within the pereshivul mic catchment – Tutova rolling hills

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Spindle–shape like in form the Pereschivul Mic catchment is located in the Tutova Rolling Hills, Southern Moldavian Plateau, and covers 8,031 ha where 17.35 % is under forest. The native vegetative cover was dramatically changed over the last two centuries in the favor of the agricultural land, mainly cropland. The improper human activity such as the up and down hill farming and inadequate road network resulted in a significant development of soil erosion, gullying and sedimentation.
By means of the aerial photos, delivered in 2005 in the scale 1:5000, a number of 305 gullies (24 valley-bottom gullies and 281 valley-side gullies) have been inventoried. By comparing the present state of 8 valley-bottom gullies with the previous one, derived from topographical maps at similar scale it was possible to estimate gullying indicators, such as gully-head advance and areal gully growth. The most significant development has occurred in the Hreasca gully where the mean gully-head advance was 45.3 m yr-1 over the period 1961-1984. The value of gully erosion rate was estimated at 9.8 t ha-1yr-1 that represents almost 56 % of the total erosion within the Pereschiv basin. The high rate of soil and gully erosion triggered a significant sedimentation rate along floodplains. The use of 137Cs technique in the areas of deposition illustrates that since 1986 the mean rate of aggradation was 6.1 cm yr-1 within the lower catchment of Pereschivul Mic. The major effect of the Land Reform Act no. 18/1991 is the revival of the old traditional agricultural system, the upand- down hill farming. In order to deal with an optimum land use significant changes of the land use and implementing conservation practices are required. The case study associated with an area of 1,087 ha within Bartalus area in the Upper Pereschiv catchment is showing that the local combination between strip-cropping and a network of wind-breaks would represent the most efficient practices in cropland.