

# **RESEARCH ON SOIL DEGRADATION RESULTING FROM SHEET AND GULLY EROSION PROCESSES. CASE STUDY – THE RAUL ALB HYDROGRAPHIC BASIN, DAMBOVITA COUNTY, UP TO THE POINT IT MEETS BARBULETU STREAM**

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## **Abstract**

The research works focused on the upper hydrographic basin of the Raul Alb creek up to the point it meets Barbuletu stream, covering an area of 4 034 ha and aimed at establishing the degree of soil degradation as a result of the complex action of sheet and gully erosion. Following the pedological study, seven soil types have been identified, each with several subtypes, which fall into five large soil classes. Regosols account for 51.00% of the catchment area, followed by eutric cambisols, 18.70%, rendzic leptosols 11.55% and phaeozems 11.00%. The fluvisol, anthrosol and luvisol total 7.75% of the entire basin. The class of Entisols is present in 56.10% of the area, followed by Mollisols 22.55% and Inceptisols 18.70% of the analysed area. The Entisol class (eroded phases) is to be found in 2.26% of the area, whereas the Alfisols account only for 0.39% of the hydrographic basin. In terms of sheet erosion, slightly eroded lands represent 48.26% of the total of 4 034 ha investigated, followed by the moderately eroded ones, 43.97%, whereas 2.27% of soils are strongly and excessively eroded and only 5.50% are not affected by sheet erosion. Deep water erosion is represented by rills, gullies and ravines. Gullies can be found in 35 of the 43 units of identified soils, ravines are present in 2 soil units and only 5 soil units are not affected by gully erosion.

**Key words:** hydrographic basin, pedological study, soil, sheet erosion, gully erosion