

LAND USE AND SOIL DEGRADATION IN STUDINET CATCHMENT (MOLDAVIAN TABLELAND)

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Abstract

Studinet catchment is situated in the eastern part of Romania (Tutova Rolling Hills), having a surface of about 9669 hectares. In this area, the components of both the natural system and of the anthropic one have stimulated accentuated erosion, especially during the last two centuries. The exploitation of GIS techniques and the use of aerial photos allow the diachronic analysis of large land surfaces. Departing from the digital elevation model (DEM) and from the derived thematic maps constructed with the help of the TNT mips software, we have conducted a complex analysis of land use in relationship with the erosion factors (superficial deposits, the length and declivity of slopes, the vegetal cover and its typology). We have proceeded to the analysis of the aerial photos (2005), the database being completed by statistical information and field surveys integrated in the same unitary geographic informational system. We have obtained some indices that would express the actual degradation of the soils a in the present state of land use.

Key words: land use, degradation, GIS

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