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**Thema**

Kommission I: Bodenphysik und Bodenhydrologie

Bodenerosion

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**Titel**

Land management effects on catchment-scale soil erosion processes and sediment connectivity in lowland agricultural landscapes

**Abstract**

Greatest challenge of recent agricultural land management is to cover increasing production demand under accelerating soil degradation and climate change. Land management is combination of land use management (including soil cover), and landscape structure (or landscape design) management. In Chernozem region in South-West Carpathian Foreland, important land management changes took place in mid-20<sup>th</sup> century, including increase of field size, tillage intensification and decrease in cultivated areas. This study evaluates effect of these land management changes on soil erosion and sediment connectivity patterns. Extensive database of soil profiles (>800 drillings), and soil patterns from remote sensing, modelled water and tillage erosion patterns (WATEM/SEDEM) and connectivity patterns. Structure of narrow elongated fields before 1950 have supported less erosive management, and field size and current agricultural management increased sediment connectivity and soil erosion.