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Peri-Urban Transformations in Agricultural Landscapes of Perugia, Italy

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Author(s)

Marco Vizzari

ABSTRACT

Urban fringes represent very complex landscapes because of their proximity and mutual dependency with cities and rural areas. These landscapes may be considered as transition entities characterized by fuzzy boundaries. An uncontrolled development of urban sprawl and land use changes in these areas may determine negative impacts on all natural, economic and social components. Thus, urban fringes assume a key-role in modern landscape analysis, planning and management. Landscape analysis of these interfaces, as this study shows, can be effectively supported by GIS spatial modelling. The Settlement Density Index (SDI), developed through GIS spatial analysis techniques, expresses punctually the territorial gradients generated by the presence of settlements and allows the identification of the urban fringes in the two periods under investigation. These areas are then characterized and analyzed quantitatively using detailed land use data. The comparison of the diachronic information highlights the transformations of peri-urban landscapes that appear mainly related to the modifications of spatial configuration of urban areas and to the changes of agricultural systems.

KEYWORDS

Landscape Analysis, Density Analysis, Urban Fringes, GIS, Land Use Transformations, Morphological Spatial Pattern Analysis

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