

Interactive comment on “Spatio-temporal analysis of the urban-rural gradient structure: an application in a Mediterranean mountainous landscape (Serra San Bruno, Italy)” by G. Modica et al.

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The paper presents a rational exposition and a clear tale, introducing an innovative methodological approach to landscape topic and its related transformation issues, and giving a relevant contribution to the research in the field of spatio-temporal analysis of urban-rural gradient. Land Use/Land Cover (LULC) changes are particularly relevant if we consider valorization strategies of landscape, with particular attention to negative effects on ecosystem functionality. The evaluation of LULC, considering both present status and trends of change, is relevant for science-oriented resource management,

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policy-making and planning process, in relation to a complex meaning of landscape, where a heterogeneity of tangible and intangible values is present. The objectives of the study are well articulated and investigated, considering the LULC transformations during a long time (a fifty-year period) in a specific area using different spatial techniques, comparing the settlement growth with the urban planning tools implemented in the selected case-study area, examining the relationship between selected indicators and tools (urban-rural gradient, landscape metrics and demographic and physical variables), analyzing the evolution of urban-rural gradient composition and its configuration related to landscape changes. The spatial and temporal analysis of LULC transformations can help to identify the main trends of landscape evolution and can be a useful support in sustainable land-use planning in order to select and analyze positive and negative effects of anthropic pressure. In order to clarify the methodological process elaborated it could be useful to introduce a graphic scheme able to represent the different steps followed, the purpose of each one and the adopted tools.

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