

First of all we would like to thank dr. Paül for his helpful suggestions and for his overall appreciation of our work.

Regarding the two aspects pointed up in his comment, we directly respond in this document highlighting which parts of our article we will modify in order to take into consideration his suggestions.

Regarding the first one, we agree with Dr. Paül that it is not obvious from a vegetation approach to refer as Mediterranean landscape speaking about fir and beech forests. Actually there are several works on this issue (e.g. Blasi et al., 2010; Mercurio, 2010; EEA, 2006; Rivas-Martínez et al., 2004; Quezel and Medail, 2003). Following what stated on Blasi et al. (2010), Mercurio (2010), EEA (2006) and Quezel and Medail (2003) and according to the Biogeographical regions identified by the EC Habitat Directive (92/43/EEC), the landscape of Serra San Bruno can be classified as a “Mediterranean” one. Anyway, in order to clarify our point of view, we will add these citations to our paper.

With reference to the second point, the discussion is little more complex. Landscapes are dynamic entities and their form results from the continuous interaction over time between man, with his activities, and the given nature context. Recently, the European Landscape Convention (ELC) has stressed the importance of the sensorial and cultural perception of all landscapes (both the exceptional and the ordinary ones), which should also be considered as a product of social construction. In most cases, landscapes present a rich and complex stratification of human signs and their form reflects the functional use of land, as it is in the case of the agricultural landscape (Sereni, 1961). Thus, an exhaustive landscape analysis should include a recognition of physical-naturalistic, historical-cultural, and social-symbolic landscape presences (with a specific identification of those related to landscape identity) and a subsequent spatio-temporal analysis of the functional relationships (ecological, cultural, and economical) existing between them (Clementi, 2002; Romani 2008; Vizzari, 2011). Within social-symbolic analysis should be considered the perceptual aspects related to local populations.

In this wide context our approach focuses on a methodology, applicable to a specific step of the landscape analysis, aimed at the spatio-temporal identification and quantification of LULC transformations and of the related ecological consequences. The methodology, based on the application of landscape metrics combined with urban-rural gradient analysis, assumes great importance, both in order to give landscape analysis and planning a sound basis and to monitor and evaluate effectively the consequences of past and future transformations. In recent years, the ecological approach to landscape planning has revealed to be particularly successful towards the research of sustainable land use (Forman & Godron, 1981, 1986; Steiner, 1990; 2008; Turner, 1990; Van Lier et al., 1994). To this end, the study of the LULC changes with the application of landscape metrics has been given ever growing importance, both in order to offer landscape planning a sound basis and to monitor and evaluate its effects.

References

- Blasi et al.: The Ecoregions of Italy. A thematic contribution to the National Biodiversity Strategy, Available at www.minambiente.it/export/sites/default/archivio/biblioteca/protezione_natura/ecoregioni_italia_eng.pdf, last access: 20 September 2012, 2010.
- EEA, European forest types, EEA Technical report n°9, Available at www.eea.europa.eu/publications/technical_report_2006_9, last access: 18 September 2012, 2006.
- Forman, R. T. T., & Godron, M. (1981). Patches and Structural Components for a Landscape Ecology. *BioScience*, 31(10), 733–740. doi:10.2307/1308780
- Forman, R. T. T., & Godron, M. (1986). Landscape Ecology. (W. A. Nierenberg, Ed.) *Landscape Ecology*, 17(3), 848. doi:10.2307/2402669
- Mercurio, R.: *Restauro della foresta mediterranea (Restoration of the Mediterranean Forest)*. Clueb, Bologna, Italy, pp. 368, 2010 (in Italian).
- Quezel P., and Medail, F.: *Ecologie et biogéographie des forêts du bassin méditerranéen*. Elsevier, Paris, pp. 576, 2003 (in French).

Rivas-Martínez S., Penas A., and Díaz T.E.: Bioclimatic Map of Europe, Bioclimates, Cartographic Service. University of León, Spain, Available at www.globalbioclimatics.org/form/bi_med.htm, last access: 20 September 2012, 2004.

Sereni E., *Storia del paesaggio agrario italiano*, Laterza, Bari, Italy, pp. XXVII+439, 1961. (also in English, Sereni, E.: *History of the Italian Agricultural Landscape*, Princeton University Press, USA, 408 pp., 1997)

Steiner F.: *The Living Landscape, Second Edition: An Ecological Approach to Landscape Planning*, McGraw-Hill, New York, USA, 2008.

Steiner F.: *The Living Landscape: An Ecological Approach to Landscape Planning*, McGraw-Hill, New York, USA, 1990.

Turner, M. G. (1990). Spatial and temporal analysis of landscape patterns. *Landscape Ecology*, 4(1), 21–30.
doi:10.1007/BF02573948

Van Lier, H.N., Irasma, C.F., Junges, C.R., and De Buck A.J. (Eds): *Sustainable Land use planning*, Elsevier, 360 pp., 1994.

Vizzari, M. (2011). Spatial modelling of potential landscape quality. *Applied Geography*, 31(1), 108–118.
doi:10.1016/j.apgeog.2010.03.001