>> SYNTHESIZE MOUNTAINS OF KNOWLEDGE <<

Submitted Abstract

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Abstract

Powerful geographic information systems (GIS) are becoming increasingly important for supporting spatial planning through geodata-based analyses. When these applications are designed in such a way that they are tailored to concrete planning and decision-making processes, they are referred to in the literature as "planning support systems" (PSS). In the field of land use planning, there are numerous scientific studies that propose a model application of PSS. In contrast to "regular" geospatial analytical tools, PSS may also feature a normative dimension by proposing concrete planning specifications based on methods of multicriteria decision analysis (MCDA). This paper focuses on the question of how qualitative (biotope connectivity and functional connectivity), structural (landscape fragmentation and structural connectivity) and quantitative (minimum area sizes) nature and biodiversity conservation concerns can be included in PSS at a supra-local planning level (e.g. regional planning). This shall contribute to the understanding of how the ecological component of a supra-local open space network can be scientifically analysed in GIS and prepared for a concrete application in spatial planning practice. This also includes the analysis of existing planning instruments, how they already take into account ecological connectivity and how they incorporate it into their methodology for delimiting certain (priority) areas. In addition to a discussion of available data, selected indicators are spatially modelled and presented for regional cases from the Bavarian and Austrian Alps. The presentation is structured according to the following guiding questions:

Which databases, geodata and indicators are available/suitable?

How can the selected indicators be modelled comprehensively and weighted against each other?

How can the results be coordinated with other spatial planning concerns (e.g. settlement expansion for residential and commercial purposes) in regional planning procedures?

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