Impact of Anticipated Land Use Changes on Landscape Functions in German States. (A05-wechsung011852-Oral)

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Abstract:

The impact assessment of land-use change on environmental services as water supply and biodiversity is an important topic in the context of global change scenarios. Here, conceptual considerations, descriptions of a model solution and results of a case study for the regional scale are presented. Land-use was seen as an integrative variable, which depends on natural, as well as on socioeconomic parameters. Economic process have been externalized by using results of economic driven base-scenarios about land-use change at the county level. Tendencies from these scenarios were extracted, expanded to a set of sub-scenarios, and transformed into land-use maps by a land-use model. These land-use maps were evaluated under respect of biodiversity at the ecosystem level and for hydrological processes at the hydrotop level. The results of the evaluation of the single sub-scenarios were summarized to response functions, which describe the sensitivity of landscape attributes toward land-use changes.

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