

Combating landscape fragmentation - land use planners' views on using network based connectivity analysis in conservation

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For many species living in urban and suburban landscapes the potential habitat is often very fragmented which according to metapopulation theory can lead to species extinctions. Although land use planners often have a range of tools at hand when they assess ecological values of green areas in a landscape context, it is less common that they have access to easy-to-use tools where effects of landscape fragmentation are taken into account. Recently, network analysis has been proposed as a user-friendly and credible method to assess the ecological impact of landscape fragmentation. The method is suggested as being particularly suitable for land use planners since it can assess the importance of individual green areas in terms of their contribution to upholding the connectivity of the landscape. In order to elaborate this potential benefit further, we present an interview-based study of ecologists employed by municipalities in the Stockholm region in Sweden. All interviewees had at least a basic understanding of the network perspective. We report the opinions and expectations of municipal ecologists on network analysis as tool for analyzing and communicating ecological values of green areas. What benefits and limitations do they see in using network analysis for ecological assessment? Have they got access to other methods for quantifying the consequences of landscape fragmentation? Preliminary results indicate that a majority of the interviewees thinks that the network approach would be a valuable tool in the planning process since it delivers pedagogic, credible and quantitative assessments of landscape fragmentation. Hence, the benefit of the network approach seems to be significant if put into practice in land use planning, by identifying the impacts of landscape fragmentation. However, the need for acquiring empirical grounded estimates of species dispersals capabilities in an urban context was stressed by many of the interviewees.