

Applying a Systematic Conservation-Planning Tool with Real Data of Canton Aargau



A part of the conservation area Auenschachen near Brugg AG; Photo: L.Götz

Master thesis

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Abstract

Systematic conservation planning is a contemporary issue. Since its origins in the early 1980s, a lot of research has been done in this field. One research sector has dealt with computerbased planning tools. From there, Marxan as a systematic conservation-planning tool has emerged. This tool operates as a decision support tool by finding optimal reserve systems given certain, defined constraints. However, while Marxan is possibly the most widely used systematic conservation-planning tool, it almost has rarely been applied in Switzerland. Hence, this master thesis was a first attempt to use a systematic conservation-planning tool with real plant and animal species data on a cantonal scale.

Several important conclusions arise from this study. First, Marxan's selection of conservation areas is reasonable and comprehensible. Second, having adequate input data is a critical issue. Third, applying Marxan as optimization software is only a part of the comprehensive concept of systematic conservation planning. Finally, this concept is holding a big potential for future planning processes in Switzerland.