Application of decision trees to analyze the ecological impact of invasive species in Polder lakes in Belgium

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Polder lakes in Belgium are stagnant waters that were flooded by the sea in the past. Over the years, the salinity of these systems decreased. Several of these systems are colonized by invasive species (often related to fish stocking). The aim of this study was to analyze the ecological impact of invasive macroinvertebrates on native species and to assess to what extend physical-chemical variables affected the presence of invasive species. For this, decision trees were constructed, relating the abiotic lake characteristics to the presence of macroinvertebrates (both invasive and non-invasive). The major advantages of the use of single-target decision trees are the transparency of the rule sets and the possibility to use relatively small databases, since these specific systems were hardly monitored until present.

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