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## Semantically driven meta-modelling: automating model construction in an environmental decision support system for the assessment of ecosystem services flows

### Abstract

ARIES (Artificial Intelligence for Ecosystem Services) is a large-scale project aimed to supporting environmental decision-making by quantifying and spatially mapping the flows of benefits provided by natural systems to humans. Because only ad-hoc models can reflect local conditions with enough detail to support decision making, ARIES needs to specialize its predictive models to a highly diverse set of contexts. This article describes the approach adopted in ARIES to automate the construction of ad-hoc models of variable structure, based on a set of context observations and on rules that encode the expert knowledge that associates model structure to specific environmental, social and economic conditions.



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