Heading towards an integrated life cycle impact assessment method quantifying biodiversity damages from water use

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Application recommendations for practitioners given current state-of-the-art (Kounina et al. 2012)

Midpoint level assessment
• Use all midpoint methods and perform a sensitivity analysis to interpret results
• Interpret results in parallel with damage oriented impact assessment indicators

Endpoint level assessment
• Human health: combine indicators of all cause-effect chains, i.e., malnutrition or infectious diseases related to water deprivation of a defined quality class for agriculture, fisheries and domestic use for human health
• Ecosystem quality: the scope of methods developed so far is complementary → use all ecosystem quality indicators simultaneously
• Resources: not sufficiently developed to provide significant results
Problem setting and objectives

Problem setting:
- To which extent are current characterization models and indicators towards ecosystem quality AoP compatible and can simply be added?
- Are there any overlaps?
- Are there any gaps?

Objectives:
- Refine the framework allowing consistent comparison of methods along the cause-effect chain to ecosystem quality.
- Review of models to highlight and understand individual structural hypotheses.
- Identify potential overlaps to avoid inconsistencies and missing pathways.
- Analyze the magnitude of differences between similar pathways and propose solutions to extend modeling capabilities to global modeling.