## Similarities and differences among ten global water models in modelling water use

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Human activity affects river flows and water-related hazards (Veldkamp et al., 2018). Global water models are indispensable tools for the assessment and prediction of water availability and demand under climate change. Through analysis of historical simulations and future projections, we can gain insights about past and current trends, and plan for efficient future water use. This study evaluates ten models that follow a common protocol and contribute with simulations for the global water sector of the Inter-Sectoral Impact Model Intercomparison Project phase 2b (ISIMIP2b). We analyze the equations used by the models to model the water use. We identify and present similarities and differences among them regarding: (1) how human activity is parameterized by global water models; (2) what are the water withdrawal sources, (3) what are the sinks of the return flows, (4) how many reservoirs are included in the models; (5) what type of reservoirs are included; (6) if and how the reservoir operations are included; (7) how land use, land management and land cover change are represented in the models.

## **Reference:**

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