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RESOURCE

The Use of System Dynamics Simulation in Water Resources Management

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Description / Abstract

In this paper the use of system dynamics as a methodology with which to address dynamically complex problems in water resources management is discussed. Problems in regional planning and river basin management, urban water management, flooding and irrigation exhibit important short-term and long-term effects, and are often contentious issues with high potential for conflict. We argue that system dynamics combined with stakeholder involvement provides an appropriate methodology to address these issues effectively. We trace the theoretical and practical evolution of system dynamics in these areas over the past 50years. From this review of the literature and selected case studies we identify and discuss a number of best practices and common pitfalls in applications of system dynamics simulation.

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