

Special Session
on
Participatory and Coupled Socio-Economic and Biophysical
Modelling for Water Resources and Environmental Management
at
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Session Organizers:

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Scope and Objectives:

Effective policies, leading to sustainable management solutions for land and water resources, require a thorough understanding of the interactions and feedbacks between socio-economic and biophysical processes. However, the complex nature of these interactions, combined with limited stakeholder engagement, often hinders the representation and dynamic modeling of the interactions and feedbacks between biophysical and socio-economic processes in water and environmental systems.

This session will explore new approaches to facilitate the representation and dynamic modeling of the interactions and feedbacks between biophysical (e.g., hydrological and related environmental processes) and socio-economic processes in water and environmental systems. Topics within this theme will include: approaches to identify and meaningfully engage key stakeholders in the development and use of models (i.e., participatory models); approaches to improve the inclusiveness of participatory models (e.g., with respect to traditionally underrepresented or marginalized stakeholders); socio-hydrological models; system dynamics models; approaches to dynamically couple socio-economic and biophysical models; and uncertainty assessment of participatory and coupled socio-economic and biophysical models. Research studies on the above topics (and other related topics) in all areas of water resources and environmental management are welcome to provide a forum for discussing recent advances in the development and application of participatory modeling, as well as coupled socio-economic and biophysical modeling.