Special Issue

Application of Hydrological Modelling to Water Resources Management

Message from the Guest Editors

This Special Issue emphasizes the application, rather than the further development, of both conventional and ad-vanced hydrological models to water resources challenges. Submissions are invited that illustrate the operationalization of data-driven, physically based, conceptual, lumped, distributed, deterministic, and stochastic models. Of particular interest are studies that integrate these models with artificial intelligence, machine learning, deep learning, optimization problems, and probabilistic frameworks to enhance model-informed decision making. The scope includes, but is not limited to, applications related to flood and drought management, climate change impact assessment, reservoir and inter-basin operation, water allocation, and the water–energy nexus (e.g., optimizing hydropower or floating photovol-taic reservoir systems).

Through original research articles, review pa-pers, regional case studies, and comparative analyses, this Issue aims to identify knowledge gaps, showcase best prac-tices, and offer strategic insights for scalable, resilient, and just water resources management under changing climatic conditions.

Guest Editors

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Deadline for manuscript submissions

20 December 2025

About the Journal

Message from the Editor-in-Chief

In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

Editor-in-Chief

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