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Research on Nutrient Dynamics in Surface Water Using Water Quality Models and State-of-the-Art Monitoring

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Message from the Guest Editors

Nutrient processes are intrinsically connected to the global health of freshwater and coastal marine environments. Water quality models are increasingly being used as research tools for understanding complex nutrient dynamics in surface water bodies. Models can approximate processes that cannot be directly measured and inform future planning through scenarios of environmental change. Water quality models are increasingly coupled with hydrological models and can assess large-scale climate and operational management impacts on nutrient transport from catchment areas to oceans. Supporting these models are new advancements in data collection and innovative modelling tools. Sensor-based monitoring systems (such as deployable lakes and ocean buoys) provide the opportunity to observe nutrient transformations during short timescales or in real-time. New modules and subroutines are expanding the capabilities of packaged water-quality models to study in-depth nutrient processes. New integrated methods of monitoring, analysis, and modelling will continue to advance our knowledge of nutrient processes, and, in this context, we invite you to submit a contribution to this Special Issue.



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Special Issue



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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.

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