

Special Issue

Sediment Transport in River Flows and Fluvial Hydraulics for Sustainable Development

Message from the Guest Editors

Sediment transport plays a fundamental role in shaping river morphology, influencing ecosystem functioning, and determining the sustainability of hydraulic infrastructures. As rivers adapt to both natural changes and human-induced pressures, understanding sediment dynamics becomes increasingly important for effective water and environmental management.

This Special Issue welcomes original research articles and critical reviews on the following (non-exhaustive) topics:

- Sediment transport dynamics in mountain vs. lowland river systems;
- The role of aquatic vegetation in modifying flow and sediment deposition;
- The impact of biogenic structures, such as beaver dams, on sediment storage and channel morphology;
- Eco-hydraulic modeling of sediment transport under varying vegetation densities;
- Sediment-management strategies for river restoration and nature-based solutions;
- Influence of land use, climate change, and hydropower infrastructure on sediment regimes;
- Field and laboratory techniques for measuring sediment transport in vegetated or obstructed channels;
- Coupled hydrodynamic–sediment-transport modeling in complex river networks.

Guest Editors

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Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in Sustainability, an international open access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full articles) and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

Editor-in-Chief

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