

Special Issue

Remote Sensing for Aquatic Environments: Applications, Innovations, and Future Perspectives

Message from the Guest Editor

This Special Issue highlights the vital applications and key challenges of remote sensing in aquatic environmental monitoring. It details how satellite, aerial, and drone technologies are used to map essential indicators like chlorophyll-a, suspended sediments, harmful algal blooms, and pollutants across oceans, coasts, and lakes. This capability provides invaluable, large-scale data for ecosystem assessment and management. The topics covered in this Special Issue include the following:

- Satellite-based detection of water quality parameters (e.g., turbidity, CDOM, nutrients).
- Monitoring harmful algal blooms (HABs) and eutrophication dynamics.
- Tracking thermal pollution and sea surface temperature anomalies.
- Mapping coastal habitat changes (e.g., mangroves, seagrasses, coral reefs).
- Observing oil spills, marine debris, and other pollution events.
- Integration of multi-sensor and multi-platform data (satellite, UAV, in-situ).
- Overcoming limitations in spatial, temporal, and spectral resolution.
- Validation and calibration using in-situ measurements.
- Bridging the scale gap between satellite data and ecological processes.
- Machine learning and AI for data analysis and parameter retrieval.

Guest Editor

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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.

Editor-in-Chief

Dr. Jean-Luc PROBST

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