Special Issue

Advanced Technologies in Agricultural Water-Saving Irrigation

Message from the Guest Editor

With global water scarcity intensifying and agricultural water consumption accounting for over 70% of freshwater use, advancing water-saving irrigation technologies has become critical for sustainable food security and environmental resilience. This Special Issue, Advanced Technologies in Agricultural Water-Saving Irrigation, aims to consolidate cutting-edge research and innovative practices that enhance water-use efficiency, optimize crop yields, and reduce environmental impacts in agriculture. We invite submissions addressing theoretical breakthroughs, technological innovations, and practical applications. Topics of interest include, but are not limited to, the following:

- Smart irrigation systems (e.g., IoT-based automation, AI-driven decision support);
- Precision agriculture (soil moisture sensors, remote sensing, and variable-rate irrigation);
- Drought-resistant crop breeding and water-efficient agronomy;
- Water–energy–food nexus optimization;
- Recycled and non-conventional water resources (e.g., treated wastewater, brackish water);
- Policy frameworks and socio-economic assessments for technology adoption.

Guest Editor

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Deadline for manuscript submissions

closed (20 October 2025)

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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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