Special Issue

Flood Inundation Modeling and Mapping: Application of Hydrodynamic Models, Remote Sensing and Machine Learning Tools

Message from the Guest Editors

It is widely recognized that floods are one of the deadliest natural disasters on earth. Improved knowledge of flood frequency, duration, and inundation is a prerequisite for disaster management, infrastructure development, and environmental integrity. With recent advancements in computational methods and computing facilities, flood indicators are now estimated more accurately and efficiently. We invite original research articles that contribute to the continuing efforts to understand complex hydrological and hydraulic processes and accurately estimate the frequency, duration, inundation areas, and wetland connectivity of floods. This Special Issue also welcomes manuscripts on uncertainty analysis and the application of flood modeling to support decision making.

Guest Editors

Dr. Fazlul Karim

CSIRO Land & Water, Commonwealth Scientific and Industrial Research Organisation, Canberra, Australia

Dr. Catherine Ticehurst

CSIRO Land & Water, Commonwealth Scientific and Industrial Research Organisation, Canberra, Australia

Deadline for manuscript submissions

10 September 2025

Water

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 6.0

mdpi.com/si/218197

Water
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
water@mdpi.com

mdpi.com/journal/water

Water

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 6.0

mdpi.com/journal/water

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

Dr. Jean-Luc PROBST
Centre de Recherche sur la Biodiversité l'Environnement (CRBE) UMR CNRS/UPS/INPT/IRD, Centre National de la Recherche Scientifique (CNRS), University of Toulouse, Campus ENSAT, Auzeville Tolosane, Toulouse, France

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, GEOBASE, GeoRef, PubAg, AGRIS, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Water Resources) / CiteScore - Q1 (Aquatic Science)

MDPI