

Special Issue

Application of Artificial Intelligence Monitoring and Big Data Analysis in Marine Resource Management

Message from the Guest Editor

This study explores the key drivers and transformation pathways of smart marine ranching under the digital intelligence era. We retrieved reports on the digitalization of ocean ranches from four major official media outlets (e.g., Xinhua, People.cn, CCTV). After a process of screening and supplementation, 329 high-quality texts were selected for grounded theory analysis to extract key influencing factors. Necessary Condition Analysis (NCA) and fuzzy-set Qualitative Comparative Analysis (fsQCA) were then applied to ten national marine ranches that were rated “excellent” for four consecutive years up to 2024. The results identify essential enabling conditions and reveal three transformation paths. This study offers both theoretical insight and policy-oriented strategies for promoting digital marine governance and sustainable development. This Special Issue will focus on marine ranching as a typical coastal ecosystem and fishery resource management object. Its research goals aim to serve smart fisheries, sustainable marine resource development, as well as ecological protection and governance optimization.

Guest Editor

Dr. Juying Wang

College of Management, Ocean University of China, Qingdao 266100, China

Deadline for manuscript submissions

25 February 2026



Water

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 6.0



mdpi.com/si/247879

Water

Editorial Office

MDPI, Grosspeteranlage 5

4052 Basel, Switzerland

Tel: +41 61 683 77 34

water@mdpi.com

mdpi.com/journal/

[water](https://mdpi.com/journal/water)





Water

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 6.0



[mdpi.com/journal/
water](https://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)