Special Issue

Sustainable Aquaculture Waste and Wastewater Management in a Circular Bioeconomy

Message from the Guest Editors

As global demand for aquaculture products increases, aquaculture now supplies >50 % of global fish, yet ~75 % of feed N and P is lost to effluent. Untreated discharge causes eutrophication and ecosystem degradation; circular recovery of these nutrients is therefore vital for sustainable, economical production. Adopting holistic, integrated approaches to waste management and advancing technologies for solids and ammonia removal will support sustainable production and enhance resource efficiency.

This Special Issue seeks to advance sustainable aquaculture by promoting innovative approaches to wastewater and waste management based on circular economy principles. We welcome research on treatment technologies, nutrient recovery strategies, integrated system designs, and practical cases as follows:

Novel technologies for aquaculture waste and wastewater treatment
Aquaculture waste revalorization
Integration of bio-based treatment methods to promote the circular bioeconomy
Innovative aquaculture systems, including aquaponics, biofloc, algae, and BSFL
Sustainable management practices for waste and wastewater in aquaculture
Techno-economic/life cycle assessments of circular aquaculture systems

Guest Editors

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Deadline for manuscript submissions

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Message from the Editor-in-Chief

Environmental issues are quickly becoming central political, economic and academic topics of the twenty-first century. A large number of modern challenges are directly or indirectly caused by complex interactions between environmental issues. Such issues require interdisciplinary research, knowledge and insights to understand and, ultimately, for solutions to be found. Through the journal Environments, we strive to create a platform for meaningful discourse by accepting contributions from a wide range of fields. We sincerely hope you will consider publishing your distinguished work in this highly-accessible, peer-reviewed journal.

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.2 days after submission; acceptance to publication is undertaken in 3.4 days (median values for papers published in this journal in the first half of 2025).

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