Special Issue

Water Quality of Recirculating Aquaculture Systems

Message from the Guest Editor

Recirculating aquaculture systems (RAS) are increasingly used for commercial fish production. Good water quality is crucial for successful production since it affects the fish growth and health.

One challenge in RAS is the tendency toward the formation of off-flavor-inducing compounds which easily accumulate in fish flesh. This is connected with the source of inlet water and the rate of water reuse. There can be unwanted compounds even in the inlet water, and in the case of surface water, the quality can vary due based on the time of year.

Effective particle removal is highly important in RAS. Solid particles increase oxygen consumption, nutrient input, and can serve as a place of growth for biofilms and microbes that produce off-flavors. Additionally, they can harbor pathogens and damage gills, creating unwanted effects on fish health. Furthermore, biofilters transform toxic nitrogen species into less toxic forms but can also act as hotspots for microbes that potentially produce off-flavor compounds.

This issue aims to collect the most recent findings and technical solutions for improving the overall water quality in RAS.

Guest Editor

Dr. Petra Lindholm-Lehto

Natural Resources Institute Finland, Helsinki, Finland

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

mdpi.com/journal/water

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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.

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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

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