

Special Issue

Microbial Ecology and Biotechnology for Sustainable Groundwater Resource Management

Message from the Guest Editor

Groundwater is a vital global resource, yet it is increasingly threatened by contamination and over-exploitation. Microbial communities play a crucial, yet often overlooked, role in groundwater quality, pollutant attenuation, and overall ecosystem health. This Special Issue focuses on leveraging the principles of Microbial Ecology and innovative Biotechnology to ensure the sustainable management and remediation of groundwater resources. We aim to consolidate advanced research that explores microbial functions, community dynamics, and engineered biotechnological solutions for monitoring, protecting, and restoring groundwater quality and quantity. By bridging fundamental microbial science with applied engineering, this issue aims to offer critical insights into developing effective, sustainable, and ecologically sound strategies for this essential yet hidden resource.

Guest Editor

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Editor-in-Chief

Prof. Dr. Steve W. Lyon
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