



## Freshwater Quality Assessment: Development and Measurements of Biomarkers in Invertebrates

Guest Editor:

**Dr. Eric Gismondi**

Laboratory of Animal Ecology  
and Ecotoxicology (LEAE) -  
Freshwater and Oceanic  
Sciences Unit of ReSearch  
(FOCUS), Chemistry Institute,  
University of Liège, 4000 Liège,  
Belgium

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### Message from the Guest Editor

Freshwater ecosystems are among the most threatened habitats on Earth, due to anthropogenic impacts resulting in a loss of biodiversity. Although monitoring of chemical and ecological status is a fundamental tool for assessing the quality of the environment, they provide information on the presence of pollutants that is not sufficient to analyze the pollution impacts on organisms. Consequently, biomarker use is of interest in the evaluation of the quality of freshwater environments.

Many biomarkers are already developed, well-established, and used on aquatic vertebrates to assess the freshwater environment's quality. Therefore, this Special Issue is seeking original, unpublished papers on the development and use of biomarkers on invertebrates. Additionally, specific emphasis will be on: (i) the influence of confounding factors (biotic and abiotic), (ii) the knowledge of natural variations of the considered biomarkers, and (iii) their specific response for certain pollutants families and their time- and dose-dependent responses, which still make it difficult to use biomarkers in the field.





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### **Prof. Dr. Sergio Ulgiati**

1. Department of Science and  
Technology, Parthenope  
University of Naples, Centro  
Direzionale, Isola C4, 80143  
Napoli, Italy  
2. State Key Joint Laboratory of  
Environment Simulation and  
Pollution Control, School of  
Environment, Beijing Normal  
University, No. 19 Xijiekouwai  
Street, Beijing 100875, China

## Message from the Editor-in-Chief

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*Environments* Editorial Office  
MDPI, St. Alban-Anlage 66  
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