

Impact of Heavy Metals on Aquatic Ecosystem [†]

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Abstract: This critical analysis review and bibliometric assessment examines the multifaceted effects of heavy metals on aquatic ecosystems. This paper aims to examine and critically analyze different aspects related to the presence of heavy metals in aquatic environments through a thorough review of the existing literature. The review evaluates the changing scientific discourse on the ecological effects of heavy metal contamination, covers the worldwide distribution of research, and highlights significant trends and hotspots. To shed light on the advantages and disadvantages of current research practices, a critical evaluation of the methodologies used in pertinent studies is also carried out. This critical review aims to guide future research endeavors and inform environmental management strategies by providing a nuanced understanding of the current knowledge landscape, research gaps, and emerging themes in heavy metal impact studies. The thorough examination offered here advances knowledge of the complex interactions between heavy metal pollution and aquatic environments, offering important new perspectives to academics, decision-makers, and environmental professionals.

Keywords: heavy metals; aquatic ecosystem; bioaccumulation; toxicity.

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Conflicts of Interest

None.