

Special Issue

Sustainable Management of Georesources: From Mining and Mine Tailings to Waste Recycling

Message from the Guest Editors

This issue aims to highlight cutting-edge research on the sustainable extraction, processing, and utilization of georesources, with a strong emphasis on reducing the material and carbon footprint of mining operations. It will encompass multidisciplinary research and innovations across the following areas:

Climate-smart mining practices and circular economy frameworks;

Sustainable extraction and processing of critical minerals and metals;

Geotechnical stability and seismic resilience of TSFs;

Advanced monitoring, modeling, and risk assessment methods for TSFs;

Tailings reprocessing and valorization of mining waste;

Integration of low-carbon technologies and energy-efficient solutions in mining;

Innovations in waste recycling, e-waste processing, and critical element recovery;

Digital technologies, automation, and AI applications in georesource management;

Life cycle analysis (LCA), techno-economic

assessments (TEA), and policy perspectives;

Sustainable mine closure, rehabilitation, and post-mining land use strategies.

We welcome contributions from researchers, engineers, and decision-makers to explore solutions that enable sustainable resource use and minimize environmental liabilities.

Guest Editors

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Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in Sustainability, an international open access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full articles) and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

Editor-in-Chief

Prof. Dr. Steve W. Lyon

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