

## Special Issue

# Impact of Biochar on Soil Ecosystems

### Message from the Guest Editors

This Issue focuses on the deployment of organic amendments such as biochar to offer a sustainable solution to various ecosystem dysfunctions by restoring soil health and maintaining ecological sustainability. Biochar can maintain nutrient balance, improve water holding capacity, and reshape microbial communities. It can also adsorb heavy metals and other pollutants, reduce their bioavailability, mitigate environmental contamination, sequester carbon in soil and reduce greenhouse gas emissions.

To promote and harness biochar's potential to promote sustainable agriculture and environmental conservation, the Issue aims to explore the intricate mechanisms underlining biochar's application and different ecosystem components.

Topics include the effects of biochar on the following: Soil nutrient transformation; Soil enzyme activity and microbial diversity; Soil quality and soil health; Mitigating greenhouse gas emissions and carbon sequestration; Preparations, characterizations, and applications of various feedstock sources, along with their agricultural and environmental implications...

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### Guest Editors

Dr. Rubab Sarfraz

Prof. Dr. Christopher Rensing

Dr. Azhar Hussain

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### Deadline for manuscript submissions

1 October 2025



## Sustainability

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### Editor-in-Chief

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