Special Issue

Monitoring and Assessment of Carbon Storage in Ecosystems

Message from the Guest Editors

Carbon storage in soils is key for the development and functioning of terrestrial ecosystems as it contributes to the mitigation of climate change effects as well as to the adaptation of ecosystems to climate extremes and, hence, to their resilience. More recently, the additional CO2 release from natural and managed ecosystems, as an indirect effect of anthropogenic CO2 emissions, has come into focus.

This Special Issue will provide a survey on the carbon sequestration potentials of major biomes such as tundras, boreal coniferous forests, tropical rainforests, savannas, and all forms of wetlands, as well as grasslands and arable land. The specific vulnerability of these systems to climate change and inappropriate land use will be discussed considering the losses of soil carbon and related impacts on soil fertility, water and nutrient cycling, and on biodiversity. Also, climate change-induced soil degradation processes, as the natural feedback loop of increasing greenhouse gas concentrations in the atmosphere, will be addressed. In this context, specific options for restoring soil functions to increase the resilience of such systems will be described.

Guest Editors

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Deadline for manuscript submissions

closed (25 May 2025)

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Environmental issues are quickly becoming central political, economic and academic topics of the twenty-first century. A large number of modern challenges are directly or indirectly caused by complex interactions between environmental issues. Such issues require interdisciplinary research, knowledge and insights to understand and, ultimately, for solutions to be found. Through the journal Environments, we strive to create a platform for meaningful discourse by accepting contributions from a wide range of fields. We sincerely hope you will consider publishing your distinguished work in this highly-accessible, peer-reviewed journal.

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