



Monitoring and Assessment of Carbon Storage in Ecosystems

Guest Editors:

Prof. Dr. Reinhard F. Hüttl

Soil Protection and Recultivation,
Brandenburgische Technische
Universität Cottbusdisabled,
Cottbus, Germany

Dr. Uwe Schneider

Soil Protection and Recultivation,
Brandenburgische Technische
Universität Cottbusdisabled,
Cottbus, Germany

Dr. Katrin Schneider

Institute of Meteorology and
Climate Research (IMK-IFU),
Karlsruhe Institute of
Technology, Garmisch-
Partenkirchen, Germany

Deadline for manuscript
submissions:

20 December 2024

Message from the Guest Editors

Dear Colleagues,

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.





an Open Access Journal by MDPI

Editor-in-Chief

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

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.

Author Benefits

Open Access: free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

High Visibility: indexed within [Scopus](#), [ESCI \(Web of Science\)](#), [PubAg](#), [AGRIS](#), [GeoRef](#), and [other databases](#).

Journal Rank: [CiteScore - Q1 \(Ecology, Evolution, Behavior and Systematics\)](#)

Contact Us

Environments Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/environments
environments@mdpi.com
[X@Environ_MDPI](#)