Special Issue

Carbon Cycle and Climate Change: Adaptation and Mitigation in Land Ecosystems

Message from the Guest Editors

The approval of the 1.5 °C warming target by the Glasgow Climate Pact in COP26 rises the importance of the adaptation of negative emission technologies. By now, the only efficient mechanism which the humanity possess for the removal of the CO2 from the atmosphere is to rely on natural C sinks. Sequestration of carbon in land ecosystems is thus one of the major climate mitigation options. It requires the conservation of carbon stocks, vegetation and soil, and their potentiation through appropriate management strategies. In this sense, mitigation and adaptation capacities are intimately linked. Climate change and anthropogenic pressure impact land ecosystems, affect the carbon uptake and carbon emissions as well as the sink–source relationships in terms of carbon transfer, often weakening the capacity of the system to store carbon. On the other hand, sustainable soil and forest management, the restoration of degraded lands, sustainable agricultural practices, agroforestry, extension and management of urban green, and the protection and restoration of peatlands and wetlands can help the ecosystems to withstand the accelerated environmental variation.

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Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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