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The Carbon and Nitrogen Cycle in Peatlands

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Message from the Guest Editor

Dear Colleagues,

Peatlands have the highest carbon (C) storage capacity per unit area of all terrestrial ecosystems and accumulated 20–30% of the world's estimated global soil carbon pool, sequestering and holding large quantities of anthropogenically released CO₂ and presenting a huge C sink for atmosphere CO₂. Low temperatures, short growing season, and partly water-saturation limit decomposition of organic matters result in an accumulation of organic matter in soils. However, how will these ecosystems respond to a warming climate? The vast stores of organic carbon in these ecosystems make this a question of global significance. C cycling in these ecosystems is tightly linked to the cycling of nutrients. Because peatlands are nitrogen (N)-limited ecosystems, the process of organic matter decomposition and nutrient availability strongly constrain ecosystem C gain through primary production. [...]

For further reading, please follow the link to the Special Issue Website at:

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Message from the Editor-in-Chief

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