



Permafrost Peatlands under Rapid Climate Warming (2nd Edition)

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Message from the Guest Editor

Permafrost peatlands are the most important reservoirs of organic carbon on the planet. The current melting of these peatlands is releasing carbon that has accumulated in the permafrost for thousands of years. This emission occurs mainly in the form of greenhouse gases (CO₂ and CH₄). Understanding these processes is crucial for predicting catastrophic climate scenarios and their global consequences for humanity.

Articles on all aspects of the behavior of carbon between soil, water and the atmosphere are welcome in this Special Issue. Of particular interest are works devoted to the fate of greenhouse gases as a result of the impact of climate change and human activities on aquatic ecosystems of high latitudes and mountain peatlands, including both anthropogenically modified and untouched areas, as well as the socio-economic consequences of these changes. Papers on field, experimental, and modeling studies related to gas emission and uptake fluxes, carbon, nutrients and metals in permafrost peatlands may focus on climate warming, permafrost thaw, floods, fire and vegetation regime change, though other contexts are also of interest.





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Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

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