



## **NW German peatland, 16 years after rewetting: still a source of greenhouse gases?**

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Peatland ecosystems cover only 3 % of the Earth's land surface but store up to 30 % of the global carbon (C) pool. They act as a major long-term C sink as long as they remain undisturbed. However, almost 60 % of peatlands in Europe have been drained. The drainage, e.g. in order to extract the peat, leads to a shift in C dynamics that turns those ecosystems to a strong source of greenhouse gasses. Rewetting of peatlands therefore potentially aims at global warming mitigation.

The "Uchter Moor" in NW Germany (52° 30' N, 8° 49' E) is an oligotrophic raised bog where peat has been cut through the past centuries until today. The actual site, within the peatland, was rewetted around the year 2000, with *Eriophorum vaginatum*, *Molinia caerulea* and *Eriophorum angustifolium* being the dominant species. In 2016, 16 years after rewetting, an eddy covariance setup was established to monitor the flux of the five most important greenhouse gases: H<sub>2</sub>O, CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O and O<sub>3</sub>.

We show the results as well as the annual greenhouse gases' balance and its implications on the global warming potential of the site 16 years after rewetting.