

Research Project

Evasion of mercury from peatlands: A significant factor in the recovery of boreal fish from mercury pollution?

Project funded by own resources

Project title Evasion of mercury from peatlands: A significant factor in the recovery of boreal fish from mercury pollution?

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Organisation / Research unit

Departement Umweltwissenschaften / Umweltgeowissenschaften (Alewell)

Project start 01.01.2010

Probable end 31.12.2012

Status Completed

International efforts to alleviate the problem of mercury in the environment are focused on reducing Hg deposition. However, it seems doubtful that these efforts will lessen the burden on Swedish fish, since so much Hg has already accumulated in the superficial organic soils of peatlands. But Hg can evade as a gas. Without knowing the land-atmosphere exchange of Hg from peatlands we cannot predict how effective efforts to cut Hg emissions will be in achieving a timely reduction in the pool of Hg in these peatlands and ultimately the loading of MeHg from peatlands to surface waters. Here we propose the first study to define the land-atmosphere exchange from a boreal mire. We aim to test the hypothesis that current estimates of the time it will take for reduced Hg emissions to translate into lower Hg levels in boreal fish are far too long because the exchange of Hg between the peat surface and the atmosphere has been ignored. This test will be made by I) The first quantification of seasonal land-atmosphere exchange of Hg over a boreal peatland II) The first long term application of the relaxed eddy accumulation technique for Hg III) Defining the influence of warming and changed moisture regimes, as well atmospheric pollutants on Hg evasion to the atmosphere from a peatland.

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Other funds

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ID	Kreditinhaber	Kooperationspartner	Institution	Laufzeit - von	Laufzeit - bis
411056	Fritsche, Jo- hannes	Kevin Bishop	Sveriges Lantbruksuniver- sitet	01.01.2010	31.12.2012
411057	Fritsche, Jo- hannes	Mats Nilsson	Sveriges Lantbruksuniver- sitet	01.01.2010	31.12.2012