



Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

**Department of Forest Ecology and
Management**

Advertisement for Post-Doc position

2023-09-08

Post-Doc Stipend to explore rewetting effects on the greenhouse gas balance of historically drained peatland forests in boreal Sweden

About 10 million hectares of natural peatlands in Fennoscandia have been drained during the past century with the aim to increase timber production. These drainage activities have largely affected soil biogeochemistry and vegetation dynamics with consequences for several key ecosystem services, including reduced benefits for climate and biodiversity. At present, there is a high interest and activity level within the governmental agencies and forest stakeholders to restore these disturbed ecosystems back towards a more natural state via rewetting measures. However, these activities currently lack well-developed policy support as well as a comprehensive empirical assessment of synergies and tradeoffs among these different ecosystem services under drained and rewetted conditions.

To fill these knowledge gaps, a multi-disciplinary research project bridging science and management is being launched at a recently established study site to explore questions related to climate impact (WP1), biodiversity (WP2) and policy (WP3) for drained and rewetted boreal peatland forests.

Here, we are seeking a Post-Doctoral researcher to explore rewetting effects on the greenhouse gas (GHG) balance of drained peatland forests (WP1).

Project description

This work will be carried out at the Bullmark experimental rewetting infrastructure located near Umeå, Northern Sweden. The Post-Doc will analyze data from a unique GHG measurement program in a drained boreal peatland forest undergoing rewetting in 2024. The experimental set-up combines ecosystem-scale eddy covariance (EC) and spatially extensive plot-scale chamber measurements of CO₂ and CH₄ fluxes, soil environmental variables, vegetation composition and biomass. Together with similar data from adjacent drained, rewetted and natural sites, this will enable direct evaluations of rewetting effects on the GHG dynamics and balances of drained peatland forests in boreal Sweden.

The Post-doc candidate will join a vibrant research group including several Post-docs and PhD students conducting research on issues related to biogeochemistry, biodiversity and hydrology in drained and restored boreal landscapes, as well as related policy support questions. This will offer ample opportunities for cross-collaborations and career development.

Project website: <https://www.slu.se/peatre>

For further information please contact: Järvi Järveoja
(Jarvi.Jarveoja@slu.se; <https://www.slu.se/en/ew-cv/jarvi-jarveoja/>)

Qualifications

The candidate must have:

- A PhD awarded in the fields of environmental sciences, physical geography or any other closely related subject
- Demonstrated experience with EC data and micrometeorological theory and/or the chamber technique, including data processing and interpretation
- The ability to independently conduct field work, which also requires a driver's license valid in Sweden
- Be fluent in English to be able to write, communicate and interact in an English-speaking environment
- Documented experience in writing and publishing scientific articles

Experience in any of the following is considered as an additional merit: Carbon cycle research in the boreal landscapes (i.e. forests, peatlands), EC flux footprint modelling, handling and processing of large data sets and/or skills in GIS.

Place of work: The Post-doc will be based at the Forestry Faculty of the Swedish University of Agricultural Sciences (SLU), Department of Forest Ecology & Management (FEM), in Umeå, Sweden.

Employment status: This is a 2 year stipend (scholarship) Post-doc awarded through the Kempe Foundation.

Starting date: Negotiable, ideally between January and April 2024.

To apply: Please send a CV, publication list, PhD diploma, copies of up to three relevant publications and a motivation letter (max. 2 pages) outlining previous research, current research interests and other activities of relevance for the position. Names and contact information of at least two reference persons are also required. All application documents should be written in English.

Please submit your application in electronic form to:
Järvi Järveoja (Jarvi.Jarveoja@slu.se)

Reviewing of applications will begin on **October 2, 2023** and will continue until a suitable candidate is found.

Information about the FEM department:

<https://www.slu.se/en/departments/forest-ecology-management/>

Information about living and working in Sweden:

https://pub.epsilon.slu.se/16119/17/stephan_k_stephan_j_190506.pdf

https://sites.google.com/view/slu-postdocs/useful-info/sweden#h.p_4gO5IPVuAQgB