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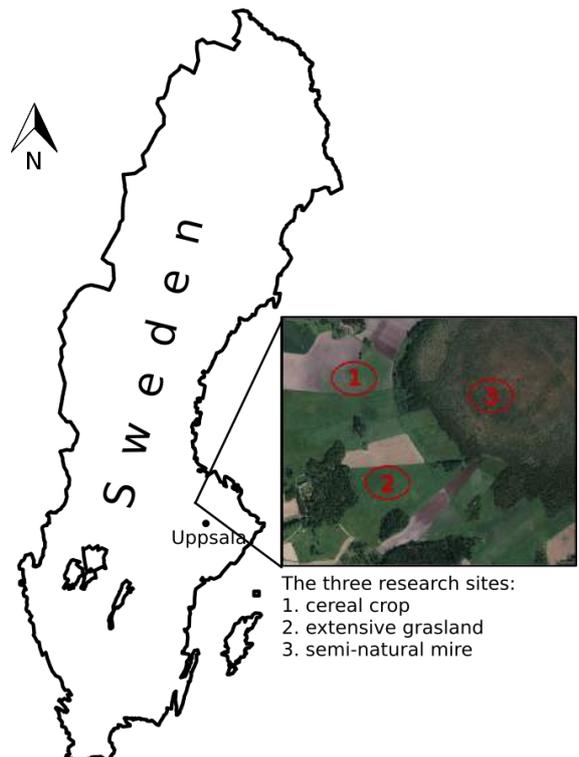
## Internship position: Greenhouse gas flux measurements on organic soils

**Background:** Organic soils contribute with 6-8 % to the national greenhouse gas (GHG) emissions in Sweden. Agricultural management practices significantly influence the GHG fluxes between soils and the atmosphere. The main controlling factors for carbon dioxide and methane fluxes are light, temperature and humidity, whereas nitrous oxide fluxes are less well understood. Within a PhD project we are investigating how management of organic soils influences GHG fluxes with specific interest on the driving variables for nitrous oxide emissions.



**Research site:** The research site is located outside of Uppsala, Sweden, on two adjacent fields with peat soils under different agricultural management and one neighbouring non-managed semi-natural mire. Here we are measuring GHG fluxes with three different methods, the static chamber, eddy covariance and relaxed eddy accumulation method.

**Role of the student:** We are searching for a highly motivated student who will assist at our regular field campaigns but also independently conduct GHG flux measurements using the static chamber technique. A variety of soil and meteorological measurements shall also be taken. The student will be given the opportunity to analyse his/her own data and compare it to eddy covariance and relaxed eddy accumulation data.



The three research sites:  
1. cereal crop  
2. extensive grasland  
3. semi-natural mire

**Required skills:**

- high motivation to work in the field
- theoretical knowledge of carbon and nitrogen fluxes in ecosystems
- basic knowledge in soil sciences
- driver's license

**The research group and university:** The student will be part of the System Ecology group lead by Prof. Dr. Thomas Kätterer at the Swedish University of Agricultural Sciences (SLU). He/she will be working closely together with Hannes Keck who is a PhD student of Dr. Achim Grelle, Prof. Dr. Thomas Kätterer, Dr. Katharina Meurer and Dr. Sabine Jordan. Our group is studying biological processes as states and flows of energy and elements in peatland ecosystems with a strong focus on carbon and nitrogen dynamics in organic soils.

The University is a young and dynamic university that attracts many international students and researchers every year. Our department is located on the Ultuna campus in Uppsala, a lively student city with beautiful surroundings and a long history in natural sciences.

**Learning outcome:** After the internship the student will be able to independently plan and conducting field campaigns for GHG measurements. In small lectures, a hands-on workshop and during practical fieldwork he/she will have learned the theoretical essentials of the most common greenhouse gas flux measurement techniques (static chambers and eddy covariance).

**Time frame:** 8 to 12 weeks, starting in June 2019.

**Applications:**

Please submit your applications via the DAAD RISE programme until December 15<sup>th</sup> (link below). Using this programme will give you the chance for a scholarship that covers costs of living, travels and insurance during the stay.

<https://www.daad.de/rise/de/rise-weltweit/praktikum-finden/was-bewerber-wissen-muessen/>