

Leibniz Centre for Agricultural Landscape Research (ZALF, Germany)

& Aarhus University (Denmark)

We are looking for motivated master student who is interested in coupling soil chemistry with greenhouse gas fluxes in the DFG project "Methane Dynamics of Kettle Holes in a Postglacial Agricultural Landscape – Microbial Ecology & Biogeochemistry (MeDKet).

The aim of MeDKet is to gain deep insights into the soil and plant microbiota in kettle holes to explain net methane surface fluxes. These small but very abundant wetlands of the northern hemisphere play a not understood role for global methane emissions. Kettle holes are often impacted by agricultural land use with unknown effects on methane emissions. For this purpose, joint field and laboratory experiments are done. To supplement the main objectives of MeDKet, the master thesis should unravel the chemical characteristics of plant litter and soil organic matter in the different soil layers at an experimental kettle hole site. This approach is an important prerequisite for elucidating the biogeochemical drivers of CH₄ formation and oxidation. The investigations are conducted both on soil and water samples using established and advanced analytical methods, e.g. colorimetric approaches and size-exclusion chromatography in combination with organic carbon and organic nitrogen detection (SEC-OCD-OND)

We are offering a position and supervision of a

Master Thesis Project (Masterarbeit) "Peat in Kettle Holes" (f/m/d)



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Your tasks:

- Literature research
- Collection of plant, soil & water samples from kettle holes & their chemical analysis
- Evaluation & processing of the analysis results
- All work steps are accompanied by experienced scientists in MedKet working group, laboratory work will be conducted at ZALF and Aarhus University

Your qualifications:

- A background in environmental sciences, especially soil science, chemistry or agriculture and experience in laboratory analysis is desirable.
- Very good command in English
- Committed to travel and to contribute sampling campaigns
- Driving license

We offer:

- a collegial and open-minded working atmosphere in a dynamic research institutions
- Dependent on chosen working place a tight collaboration with partners in MedKet (ZALF, U Aarhus, ZALF, U Bonn)
- There is the possibility of accommodation in the scientific meeting centre of the ZALF and financial support through the provision of a position as a scientific assistant during the activities for the master's thesis.

Women are particularly encouraged to apply. Applications from severely disabled persons with equal qualifications are favored. It is generally possible to work in the position on a part-time basis. Please send your application preferably online. Please apply **ONLY** by e-mail, create a PDF document (one PDF file, max. 5 MB; packed PDF documents, archive files like zip, rar etc. Word documents cannot be processed and therefore cannot be considered!) with the usual documents, in particular CV, proof of qualification and certificates..

If you have any questions, please do not hesitate to contact us:

Prof. Dr. Steffen Kolb, (Kolb@zalf.de) principal investigator in the MedKet project at ZALF, Head of WG Microbial biogeochemistry (ZALF) or **Dr. Dominik Zak**, (doz@ecos.au.dk), collaborator in the MedKet project & expert in wetland biogeochemistry at Aarhus University and guest scientist at Leibniz-Institute of Freshwater Ecology and Inland Fisheries.