Job vacancy at the Johann Heinrich von Thünen-Institute

The Thünen Institute of Climate-Smart Agriculture of the Johann Heinrich von Thünen Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries in Braunschweig (Germany) invites application for a

PhD position (f/m/d)

with 65 % of the regular weekly working time in the research project 'Changing surface heights in peatlands – shrinkage or peat mineralization?'. The position is limited to four years and to be filled at the earliest opportunity. The position is directed to applicants who, in addition to their employment, wish to pursue their own academic career, in particular their doctorate. In this context, the Thünen Institute for Climate-Smart Agriculture cooperates with various universities. The employment is limited in time in accordance with §2 (1) sentence 1 of the Wissenschaftszeitvertragsgesetz.

Peat and organic soils are compressible. This leads to pronounced volume changes and oscillating peatland surfaces by physical (shrinkage, swelling and soil compaction) and biological processes (peat mineralization and peat growth). Peat mineralization leads to carbon dioxide (CO_2) emissions and makes drained peatlands to hot spots of CO_2 emission. In contrast, peat growth is associated with sequestration of CO_2 carbon from the atmosphere. The aim of this research project is to analyze and model processes that result in surface height changes of organic soils and to differentiate between shrinkage and swelling on the one side and peat mineralization and -growth on the other side. The project is part of a comprehensive monitoring program on organic soils for the national reporting of greenhouse gas emission.
The position is based in a working group at the Thünen Institute of Climate-Smart Agriculture conducting research on national and international level in the area of organic soils. We offer a comprehensive job dealing with a current research topic that includes field work, laboratory experiments and challenging data analysis.

Detailed tasks:

- Quantification of shrinkage and swelling of different organic soils with laboratory experiments
- Parameterization of a model describing shrinkage for organic soils and prediction of shrinkage and swelling on the basis of pressure heads, soil moisture and relevant soil properties
- Measurement of surface height changes in selected German peatlands
- Data analysis and implementation of the parameterized shrinkage model to field sites
- Writing scientific publications

Requirements:

- University degree (Univ.-Diplom or M.Sc.) in the field of geoecology, hydrology, agriculture, environmental or soil science or related subjects
- Profound knowledge in soil physics or soil science
- Technical skills and understanding
- Profound knowledge of common computer software and knowledge of a programing language, preferably R or Python; Experience with models or multivariate statistics are beneficial
- Knowledge of peatlands or greenhouse gas emissions from soils is beneficial
- Willingness to conduct physically demanding field work during field trips over several days
- Team spirit, flexibility, high motivation and the ability to work independently
- Scientific curiosity and willingness to work on a doctoral thesis
- Excellent communication and writing skills in English, German language skills are desirable
- Driving license

The salary is based on the collective agreement for civil service (TVÖD). Depending on the fulfilment of personal and tariff requirements the salary accounts for 65 % of level E13 TVöD.

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The Thünen Institute supports gender equality at work and encourages female candidates to apply for this position.

Equally qualified applicants with disabilities will be given preferential treatment. Only a minimum physical aptitude is expected from them.

For further inquiries please contact Dr. Ullrich Dettmann (ullrich.dettmann@thuenen.de, +49 531-596 2663).

Applications with the usual documentation (CV, cover letter, certificates) including the keyword **‚Geländehöhenänderung Moor'** shall be sent (preferably by email as one pdf file) until **31.08.2019** to

ak@thuenen.de
Johann Heinrich von Thünen-Institut
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Information on Artikel 13 DSGVO: www.thuenen.de/datenschutzhinweis-bewerbungen.

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