



Swedish University of Agricultural Sciences
Department of Aquatic Sciences and Assessment, Uppsala

Postdoc in aquatic biogeochemistry

- Trace metals in the environment

SLU develops the understanding and sustainable use of biological natural resources. This is achieved through research, teaching, environmental monitoring and assessment and information extension.

SLU has 3 000 employees, 4 200 undergraduate and postgraduate students.

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The Department of Aquatic Sciences and Assessment (www.ma.slu.se) has a unique national responsibility for assessing the condition of Swedish surface waters with respect to both water chemistry and the aquatic biota. The mission of the department is to provide the knowledge about human impacts on aquatic ecosystems that society needs to achieve its environmental goals for surface waters. This mission involves the design and implementation of long-term surveillance programs across a range of spatial and temporal scales, studies of the chemical and ecological processes underlying environmental change, as well as the knowledge and tools needed to interpret environmental data and assess management alternatives.

Work description: Trace metals such as Cu, Zn, Pb and Cd have natural background concentrations that are controlled by the mineralogy, land use and hydrology in the catchment. Due to anthropogenic impact concentrations of trace metals may increase to levels where biota is affected. The role of organic carbon as a mobiliser of metals is especially important for explaining the temporal and spatial variation of the concentrations.

Two decades of water chemistry time series for lakes and streams together with climate data, are available for exploring the control of background concentrations of trace metals. The transport of metals is governed by a number of factors such as DOC, pH, bedrock mineralogy and land-use. Both the temporal and spatial variation may be captured by quantitative approaches using landscape biogeochemical models on different scales. Experience with metal speciation software is therefore important. From this, conclusions can be drawn on how climate change and associated land use changes will affect metal concentrations.

We are seeking a post-doctoral researcher who will use the time series of trace metals from the national environmental monitoring of lakes and streams to explore trends and address the control of climate and landscape parameters on the temporal and spatial variation in trace metal concentrations.

Applicants should hold a PhD in aquatic geochemistry or equivalent. Experience of time series analysis and metal speciation software, as well as insight in modeling and assessment tools is a merit.

To be appointed as a postdoc, applicants should have been awarded her/his PhD no more than three years ago at the time of application. Applicant awarded a PhD degree more than three years ago can be appointed as a researcher. The position is full-time and will be granted for a period of two years, starting as soon as possible.

SLU is an equal opportunity employer.

Further information:

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*We welcome your application marked with **ref no 1976/09**. The application should be written in English. Applications should include a letter of intent, a CV with publication list, relevant publications, and a 2-page description of research ideas*

*Please submit your application to the Registrar of SLU, P.O. Box 7070, S-750 07 Uppsala, Sweden or registrator@slu.se no later than **August 17, 2009**.*

