

**Postdoc position (UNIVERSITÄT KARLSTAD)**

**Bewerbungsfrist: 28.02.2017**

**Post-doctoral Research Fellow in Ecology of River Restoration: Dam Removal and fish-friendly Turbines**

Karlstads universitet / Fakulteten för hälsa, natur- och teknikvetenskap / Institutionen för miljö- och livsvetenskaper - Karlstad University takes pride in combining active external cooperation with academic excellence. Karlstad University has around 16 000 students and a staff of over 1 200 members. Democratic principles, equality and diversity are cornerstones of the University. We value the enriching presence of diverse backgrounds and competencies among students and staff.

**Description**

The Faculty of Health, Science and Technology has an opening for one full-time post-doctoral research fellow at the Department of Environmental and Life Sciences in the field of river ecology focus on the rehabilitation efficiencies of dam removal and fish-friendly turbines. The River Ecology and Management Research Group (NRRV), a research group within the Department of Environmental and Life Sciences at Karlstad University, conducts both basic and applied research in rivers, lakes and the surrounding landscape. The group is interested in the sustainable use of natural resources in watersheds, working for solutions to environmental problems that benefit both society and nature. Areas of research addressed by the research group include river connectivity and the effects of hydropower, aquatic-terrestrial interactions, winter ecology under global climate change, endangered species, conservation biology, and social-ecological research relating to river regulation and fisheries (<https://www5.kau.se/en/river-ecology> ; <http://www.nrrv> Many research topics are conducted in collaboration with stakeholders from industry, administrative agencies, interest organizations and landowners as well as with the group's extensive intern research network. The group was recently selected as a 'Strong Research Environment' by Karlstad University, and has received directed funding to further develop its research profile. This postdoctoral position is part of the strategy to develop the group, focusing on one of the core interests of the research group, and includes collaboration with group members.

**Duties**

The main duty of the position is to conduct research on the effects of dam removal and the installation of fish-friendly turbines on river connectivity and ecology. Intact river connectivity is essential for many organisms in running water, and especially so for organisms that move between different habitats to complete their life cycle, such as many migratory fish species. Many rivers are modified through dams such as hydroelectric power plants. Dams disconnect river stretches and habitats, thereby reducing dispersal and migration possibilities for fish, benthos and plants, with negative effects individuals, populations and communities. The post-doctoral candidate will be expected to evaluate the effects of complete dam removal and installation of fish-friendly turbines as measures to improve connectivity in rivers. The project "Expanding the river rehabilitation toolbox: dam removal and fish-friendly turbines" is a joint initiative between NRRV (Karlstad University), the hydropower companies Sydkraft Hydro-power AB and Power House AB, and the recreational fisheries company Sveaskog AB, and is funded by the Knowledge Foundation /KK-stiftelsen ([http://www.kks.se/om/SitePages/In\\_English.aspx](http://www.kks.se/om/SitePages/In_English.aspx)). The project will be carried out in the river Mörrumsån (Blekinge County, Sweden), where a hydroelectric power dam will be removed, and in the river Emån (Kalmar County, Sweden) where a fish-friendly turbine will be installed. Investigations will be based on empirical work in the field and the laboratory, using a before-and-after-approach to evaluate effects of remedial measures on fish behavior and community composition, composition and diversity of benthos and riparian vegetation, as well as changes in habitat characteristics. The postdoctoral fellow will have the opportunity to complement the project with data from other dam removal sites in Sweden.

The successful candidate will join a strong and motivated research team to carry out the following tasks:

- Conducting high quality research and producing results
- Coordinating research projects and delivering outputs
- Providing guidance to PhD and MSc students
- Disseminating results through scientific publication
- Assisting in teaching duties
- Participate in the organization of scientific conferences and workshops

