

Postdoc position (UNIVERSITÄT BOZEN)

Bewerbungsfrist: 28.07.2010

The Faculty of Science and Technology at the Free University of Bozen-Bolzano advertises a Post-Doc position within the project Sustainable water management and wetland restoration in settlements of continental Central Asia (SuWaRest)

Duration: 2 years (with the option of prolongation for another year after positive evaluation)

Head of the project: Prof. Dr. Stefan Zerbe (Free University of Bozen-Bolzano)

General project description: Due to climate change and scenarios of subsequent decreasing water resources in Central Asia, land-use adaptation, sustainable use of water, and the restoration of degraded ecosystems has strongly to be put forward in the next decades. In our project, we focus on settlements in Inner Mongolia, China. With an international and interdisciplinary research team, we follow the water fluxes into, through, and out of these settlements. We investigate water management with particular regard to the ecosystem services (e.g. purification of water) and restoration of wetlands within the settlements, in particular reed (*Phragmites australis*) stands, the water quality, the potential use of wetland plants, e.g. for local energy production, and the perception and value of water as a resource for the multicultural society in Central Asia. We apply a broad range of methodology with regard to vegetation and landscape ecology, environmental physics, environmental microbiology, and environmental ethics. In conclusion, we want to derive comprehensive recommendations for water management in Central Asian settlements taking biological/ecological, engineering and sociological aspects into account. SuWaRest is an interdisciplinary and international junior research group with 4 Ph.D. students and a Post-Doc scientist and a cooperation between the Free University Bozen, Italy, University Greifswald, Germany, and the Chinese Research Academy of Environmental Sciences (CRAES), China. The project is funded by the Kurt-Eberhard-Bode foundation within the Stifterverband für die Deutsche Wissenschaft (Germany).

Work description for the Post-Doc position: The Post-Doc scientist will (1) work out a comprehensive survey on wetlands in the settlements under investigation by characterizing site and vegetation, (2) identify the restoration potential of wetland habitats in the settlements, with particular regard to reed (*Phragmites australis*) stands, (3) analyze the inorganic compounds of the wetland waters which come in, go through, and leave the settlements, (4) will characterize the reed stands by analysing the biomass and the nutrient content, and (5) develop a management scheme for the application of reed stands for water purification. Wetlands within the settlements will be characterized by phytosociological means as well as the groundwater depth and the salinization of the habitat will be measured. The water quality of the wetland habitats will be assessed. Biomass and nutrient content of reed stands under different site conditions and human impact will be analysed. Additionally, the Post-Doc will be in charge of project coordination and in particular the initiation and preparation of interdisciplinary publications in international journals, in close cooperation with all Ph.D. students.

Preconditions:

- Excellent Ph.D. with a focus on landscape ecology, vegetation ecology, or related research fields.
- Experiences in ecological field work, lab analyses, and statistics, applying a broad range of methodology
- Experience in project management
- Experience in interdisciplinary research
- Experience in research on the international level, preferably in East and/or Central Asia
- Experience in supervision of student works
- Good knowledge of English

For further information and formalities of application, please see the website <http://www.unibz.it/de/organisation/vacancies/research/assegnidiricerca/ViewVacaObject.customhandler?objId=6563> or contact Prof. Stefan Zerbe (stefan.zerbe@unibz.it).

Deadline for application is 28.07.2010.

The application has to be sent to Free University of Bozen-Bolzano, Personal Office, Galleria Europa 15, C.P. 276, I-39100 Bolzano, Italy