



The Silviculture Institute of Freiburg University offers - pending final approval by the funding agency - a PhD position to carry out research on

## **The effect of tree species diversity on phosphorus availability and cycling**

within the Chinese-European joint NSFC-DFG Research Unit BEF China (FOR 891) "*The role of tree and shrub diversity for production, erosion control, element cycling, and species conservation in Chinese subtropical forest ecosystems*" [www.bef-china.de](http://www.bef-china.de).

The position is anticipated to start in April 2011 and can be filled for three years. Payment is subjected to the German standard tariff (up to 65% TVL13).

The PhD position will be integrated in the research group of Prof. Jürgen Bauhus at the Institute of Silviculture ([www.waldbau.uni-freiburg.de/](http://www.waldbau.uni-freiburg.de/)) and the PhD student will be co-supervised by Prof. Michael Scherer-Lorenzen, Geobotany, Faculty of Biology, at Freiburg University. The project will investigate to what extent availability and cycling of phosphorus may be influenced by tree species diversity in the subtropical forests of southeastern China. The maintenance of soil fertility through species diverse forests might be an important ecosystem service in tropical regions with their large areas of forest plantations. Given the large range of biologically available soil P compounds, and the variety of mechanisms by which plants can access P, we assume that co-existing plant species partition soil organic P to reduce competition. This research will examine in particular the relationships between tree species diversity and the proportion of soil P in available fractions and P nutrition. This project will greatly benefit from the multidisciplinary environment of the research group, where other researchers will investigate relationships between tree diversity and productivity, N cycling, herbivory etc.

The successful candidate for this position will be responsible for the analyses of P in soil fractions and plant tissues, the conduct of field collections and a greenhouse experiment, and the further development of methods to characterize soil P fractions based on spectral properties.

We are looking for a highly motivated and cooperative person with a Master or Diploma degree (or equivalent) in Soil Science, Biology/Ecology, Forestry or Environmental Sciences. Applicants should have a background in soil chemistry, nutrient cycling, and forest ecology/dynamics. Experience in analytical chemistry (processing of plant and soil samples) is particularly welcome. The applicant should be able to independently plan and undertake field sampling, and process the samples in an accurate and strictly reproducible manner. Good statistical background and experience with appropriate software is expected. The candidate should be willing to stay prolonged periods in the field, under sometimes harsh subtropical conditions in China. Fluency in English is indispensable. The doctoral thesis shall be prepared as a series of English manuscripts to be published in international journals.

The University of Freiburg aims to increase the proportion of women in academic positions and therefore welcomes in particular applications by females. Disabled persons with equal qualifications will be preferably employed.

Applications must include a motivation letter, CV, copies of certificates, copies of publications or a thesis, and names and contact details of two academic referees. Please submit applications until the 04. February 2011 as a single PDF file to [juergen.bauhus@waldbau.uni-freiburg.de](mailto:juergen.bauhus@waldbau.uni-freiburg.de).

Further information will be provided by Prof. Dr. J. Bauhus (Tel. +49 761-2033678, Email: [juergen.bauhus@waldbau.uni-freiburg.de](mailto:juergen.bauhus@waldbau.uni-freiburg.de)) or Dr. Martin Kohler (Tel. +49 761-2033673, Email: [martin.kohler@waldbau.uni-freiburg.de](mailto:martin.kohler@waldbau.uni-freiburg.de)).