PhD Student: 
Ecological modeling in environmental life cycle assessments

Institute for Water and Wetland Research, Faculty of Science, Radboud University

Water has been identified as the major environmental issue of the 21st century. Many parts of the world will experience increasing fresh water shortage, while other parts will have a higher incidence of flooding. The water crisis for human society as well as for natural ecosystems. The research focus of the Institute for Water and Wetland Research (IWWR) is the natural environment, in particular aquatic ecosystems and wetlands. Many of these environments have been substantially altered by human impact. The changes have resulted in stress responses of all living biota and impose major challenges to individuals, populations and the ecosystem as a whole. The IWWR studies the mechanisms of adaptation to these changes of microorganisms, plants and animals at the level of the molecule, the cell, the organism and the ecosystem. The tight coupling of fundamental scientific research to application, distinguishes the IWWR from other national and international institutes on water research. The novel applications for current water problems are developed from innovative fundamental insights in molecular, physiological and ecological processes.

Radboud University Nijmegen is strategically located in Europe, and is one of the leading academic communities in the Netherlands. A place with a personal touch, where top-flight education and research take place on a beautiful green campus in modern buildings with state-of-art facilities.

The Department of Environmental Science is embedded in the Institute for Water and Wetland Research, Faculty of Science, Radboud University. Its mission is (1) scientific research into environmental issues, (2) education at BSc/MSc/PhD level and (3) service to society for regional management and national and international policy. We aim to understand and assess biological responses to combined physical-chemical pressures. Our efforts concentrate on:

- interactions of multiple stressors (physical reconstruction and chemical pollution in particular) with ecosystems and human health
- theoretical concepts (models) developed in interaction with practical cases (laboratory experiments and field surveys)

Our group currently consists of 6 tenure staff members, 3 post-doctoral researchers, and 15 PhD students.

The Department of Environmental Science is looking for a PhD student to be employed within the EU funded project LC-IMPACT (Development and application of environmental Life Cycle Impact assessment Methods for imProved sustAinability Characterisation of Technologies).

The scientific research you will perform will involve method development in life cycle impact assessment modelling. Your research includes concentration-response modelling of impacts of, for example, eutrophication, acidification and ozone formation on biodiversity, and performing statistical analyses on retrieved model outputs. The developed models and methods will be applied for the quantification of environmental impacts of products. You will report on the research by means of manuscripts submitted to international peer reviewed scientific journals and in a doctoral dissertation.

**Expected qualifications of the position of PhD Student:**

You have a Master’s degree in natural science or engineering, such as environmental science, environmental engineering, chemistry, biology, or a related field. You must have an active interest in solving environmental problems and be motivated to obtain a PhD. Affinity with computer models, and/ or multivariate analysis is desirable.

The salary will be between EURO 2.042 and 2.612 gross per month on a full-time basis, depending on qualifications and experience.

You will be appointed as a PhD student for a period of four years. Your performance will be evaluated after 18 months. If the evaluation is positive, the contract will be extended by 2.5 years.

The application can be sent to the following address, until 16 November 2009:

Radboud University, Personnel Department, Vacancy number: 62.48.09
PO Box 9010, 6500 GL Nijmegen, The Netherlands

More information:

For more information on the vacancy you can contact:
**Dr. Mark Huijbregts, Tel: +31 (0) 24 3652835, E-mail: m.huijbregts@science.ru.nl**

Additional information

[http://www.ru.nl/environmentalscience](http://www.ru.nl/environmentalscience)