Post-doctoral scientist
Life Cycle Assessment and simulation modelling

INRA Platform for MulticritEria AssessmeNt of Sustainability (MEANS),
Soil, Agro and hydroSystem research group, Rennes, France

Work context

INRA, the French National Institute for Agricultural Research, aims to improve the environmental, social and economic performances of agriculture and favour healthy and sustainable food systems. The INRA research group Soil, Agro and hydroSystem (SAS) is dedicated to the assessment of environmental impacts of agricultural production systems.

The development of methods for multicriteria assessment of agri-food systems is a major strategic goal for INRA. Among these methods, Life Cycle Assessment (LCA) is the reference method for assessing environmental impacts. INRA recently launched MEANS, a software and database platform for multicriteria sustainability assessment of agri-food systems. The objectives of the platform are:

- Develop user-friendly multicriteria assessment tools and associated databases for agri-food systems
- Support users and train future users

In its first phase, multicriteria assessment of environmental impacts using LCA will be the main goal for the platform.

Job description

We seek a post-doctoral scientist to link pre-existing biotechnical and economic simulation models to predict spatio-temporal dynamics of pollutant emissions and the effects of markets in LCA. The work will focus initially on biotechnical models to predict dynamics of nitrogen emissions, which strongly contribute to major impacts such as climate change (N_2O), eutrophication (NO_3) and acidification (NH_3). Later, economic models will be used to analyse relations between prices and environmental impacts of agricultural products. The animal-feed industry, which is strongly affected by fluctuating prices of feed ingredients, could constitute an initial case-study.

The scientist will be part of the MEANS software and database platform within the INRA SAS research group. We offer a dynamic and stimulating working environment and a subject which lies at the centre of scientific debate and social concerns. The scientist will work in close association with INRA researchers working on environmental assessment and biophysical and economic modelling. Furthermore, the scientist will collaborate with the INRA platform RECORD, which aims to facilitate the development, sharing and use of simulation models developed to study agroecosystems.

Requirements

- Doctorate in agronomy or economics
- Skills in simulation modelling and programming
- Knowledge in environmental sciences is appreciated
- Capacity for and interest in team work
- The position is open to French and non-French citizens who have spent less than 12 of the past 36 months in France
- Good verbal and written communication skills in English required; knowledge of French appreciated
- Duration: 24 months; monthly salary: 2200-3050 Euros, depending on experience

Any questions can be addressed to hayo.vanderwerf@rennes.inra.fr. Candidates should send a CV, publication list and cover letter before May 1, 2012