HELMHOLTZ CENTRE FOR ENVIRONMENTAL RESEARCH – UFZ

Biomass and Bioenergy Systems

The Helmholtz Centre for Environmental Research – UFZ builds up a new Department of Biomass and Bioenergy Systems. In this department systems analysis of the energetic use of biomass as well as microbiological research into biogas synthesis from agricultural wastes and renewable resources will be executed. This research will be organised in close cooperation with the German Biomass Research Centre – DBFZ and several UFZ departments.
In order to establish **the biosystem analysis working group** of the department several positions are to be occupied as soon as the financial means are finally approved by the Helmholtz Association and as soon as it is convenient for the best candidates. This will be in close cooperation with all UFZ departments working on land-use change and environmental assessment and system analysis. The aim of the working group is to analyse and assess biomass production and bioenergy use patterns for specific spatial conditions und to come up with recommendations to optimise bioenergy processes in practice. The main goals of the research activities are to (i) analyse of the relevant drivers and create scenarios, (ii) investigate the effects on the relevant environmental goods, (iii) develop a consistent assessment model, (iv) compile instruments for a sustainable bioenergy use. The research activities are clustered in two sub-groups, for one of them the candidates are recruited now, for the second one this will be during the next eight months.

The following positions for two scientists/post-docs and three PhD candidates are offered for a duration of three years (renewal of scientist positions are possible).

Environmental modeller (f/m) – scientist / post-doc
- Code 40/2010 -

The candidate is expected to develop methods and tools (model landscapes, indicators) for analysing spatial effects of biomass production on the environment and integrating them in lifecycle assessments of bioenergy systems. Experience with spatiotemporal environmental modelling and impact assessment, the generation of model landscapes, the derivation of spatial indicators, and computer programming is ultimate.

Modeller for decentralised energy supply systems (f/m) – scientist / post-doc
- Code 41/2010 -

The person is expected to develop models and scenarios for decentralised energy supply systems with focus on regional resource availability and energy demand. Experience with energy technologies and energy scenarios, the generation of model concepts for bioenergy and other renewables, organisation of regional governance, and computer programming is required. Familiarity with LCA methods is advantageous.

Environmental modeller (f/m) – PhD position
- Code 42/2010 –

This PhD project will focus on the simulation of existing and potential new biomass production systems. We are seeking a candidate with a background in agronomy, ecology, geography or related fields to adapt and modify existing computer models addressing questions related to biomass productivity and matter fluxes. Experiences in environmental modelling and some computer programming (e.g. C++, Java, Python) are required.

Environmental or agrarian economist (f/m) – PhD position
- Code 43/2010 -

The PhD project aims to model the influence of socio-economic drivers such as policy instruments and markets on bioenergy-related land use decisions and to assess the resulting transregional land use patterns. Skills in environmental or ecological economics, agrarian economics or regional economics, computer programming as well as interest in ecological-economic modelling in an interdisciplinary project framework are required. Experience with agent-based modelling is advantageous.

Drivers of bioenergy production and transregional effects:
conducting a case study within Brazil
- Code 44/2010 -

The aim of the PhD project is to conduct a case study to analyse the impact of European legislation on bioenergy production on Ecosystem Services in other regions of the world. It focuses on land use change and its impacts on specific landscape patterns, habitats, and ecosystems will be analysed. Certain regions within Brazil will be used as a case study. The successful candidate will have a MSc or MA (or equivalent) in a relevant scientific discipline (agro-economics, political sciences, landscape sciences, conservation biology). Familiarity with issues of global impacts of bioenergy production on ecosystems and ecosystem services and with EU policies on bioenergy production is desired, a very good regional expertise of Brazil required.

Successful candidates are highly motivated to contribute to the bioenergy systems analysis efforts of the new team at UFZ. All team members will closely cooperate and interact with an existing group of about 30 interdisciplinary oriented scientists at UFZ and DBFZ. Furthermore, high team competence, very good written and oral communication skills in English and commitment to solution-oriented interdisciplinary research are mandatory characteristics of the new team members.

For further information please contact:
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For Scientist positions: The positions will be located in Leipzig. Salary will be according to the appropriate civil service level (TVöD).

For PhD positions: The positions will be located in Leipzig. Salary will be according to the appropriate German civil service level 13 (50%) (TVöD). The PhD students participate in the newly established Graduate School HIGRADE (http://www.ufz.de/index.php?en=11429).

The positions will be located in Leipzig.

Women are explicitly encouraged to apply to increase their share in science and research. Physically handicapped people will be favoured if they are equally qualified.

Please send your complete application documents (curriculum vitae, certificates, description of scientific development and teaching experience, list of publications) with reference to the appropriate Code number to Helmholtz Centre for Environmental Research – UFZ, Personalabteilung, PF 50 01 36, 04301 Leipzig, Germany or by E-Mail to application@ufz.de.