



PhD position



Description

1 PhD position is available at the Laboratory of Plant Ecology, Faculty of Bioscience Engineering, Ghent University, Belgium.

In the framework of the VEGECLIM project (BELSPO – Belgian Science Policy; STEREO programme)
Research area: biogeochemical modeling, data assimilation, carbon cycling, tropical forests.

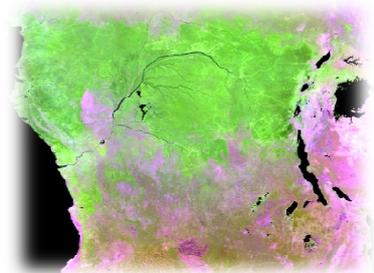
Project description

The VEGECLIM project is a collaboration between the Geomatics Research team (UCL), the laboratory of Plant Ecology (UGent) and the Laboratoire des Sciences du Climat et de l'Environnement (Paris). The project will integrate 10-year SPOT-Vegetation time series (satellite data) in the state-of-the-art global vegetation model ORCHIDEE to improve our understanding of the terrestrial carbon cycle and allow us to forecast its evolution. The project will provide quantitative estimates of the carbon stocks and fluxes in Africa and more particularly in central African forests.

The ORCHIDEE model takes climate variables as drivers together with a number of ecosystem parameters to calculate the carbon, water and nitrogen cycles in different soil and vegetation pools. The model parameters will be optimized for the Amazon basin and Central Africa by dynamically assimilating in the model all the available remote sensing and carbon-flux data. For the Amazon basin, both SPOT-Vegetation and in-situ carbon flux data will be assimilated to optimize the model parameters. For Africa, only remote-sensing data will be used due to the scarcity of in-situ measurements. Finally, the optimized ORCHIDEE model will be coupled with a cellular-automata land-cover change model to predict the evolution of the African carbon stock under different climate-change and deforestation scenarios.

Profile of the candidate

- Master degree in Civil Engineering or Physics (or equivalent) with strong interest for ecosystem science, or Master degree in Bio-Engineering (or equivalent) with strong interest for computer modeling
- Experience with simulation codes and programming is a must
- Fluent in programming languages
- Good knowledge of English
- Motivated to do a PhD in the field of ecosystem modeling
- Team player with good communication skills



Offer

- A contract as full-time PhD student within UGent (4 years).
- Starting date: 1 January 2010
- During the first year the successful candidate will work for several months at the LSCE (Laboratoire des Science du Climat et de l'Environnement) near Paris. This is a world leading institute in the scientific field of global change and climate research.
- Collaboration in a young, dynamic international scientific team.

Contact

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Send CV and application letter (deadline: 20 November 2009) to:

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