

Postdoctoral position

Analysis of multiple services delivered by European ecosystems

The **EU FP7 project VOLANTE** seeks to identify road maps to sustainable futures for Europe. The sustained provision of ecosystem services, and trade-offs implied by alternative land use choices are key components of this prospective analysis.

To support such an analysis, VOLANTE will develop a tool box for the quantification and the spatial analysis of ecosystem service provision by ecosystems, and of how this provision is translated into actual supply depending on demand. An important aim of such a tool box is to understand the contribution to ecosystem service provision and supply of different land use, abiotic, biotic and human factors. Trade-offs and synergies in the provision of different ecosystem services will be identified and their mechanistic causes will be investigated based on the detailed understanding of the role of these different factors.

A postdoctoral position is open for two years initially at the CNRS Alpine Ecology Laboratory (LECA^[1]) in Grenoble, France, to support the development of this work which will be conducted in close collaboration with VOLANTE partners across Europe. The fellow will be under the supervision of Dr. Sandra Lavorel and will work in close collaboration with Dr. Wilfried Thuiller and their teams.

The **specific tasks** to be carried out by the postdoctoral scientist will consist of:

- The construction of a GIS platform under open-source software (e.g. R, GRASS), where different methods to model ecosystem services will be implemented. These methods will be sourced from project partners and from relevant literature.
- The comparative analysis of different methods available to model given ecosystem services.
- The analysis of hot and cold spots of ecosystem services provision across Europe and the identification of their determinants.
- The development and implementation of methods for the analysis of trade-offs and synergies among services, and for the identification of their underlying factors.

Required experience and ability:

- A PhD in ecology or geography and an associated international publication record
- In depth understanding of processes determining the distribution of biodiversity and ecosystem functioning
- Understanding of land use effects on ecosystems
- Advanced skills in GIS and spatial analysis
- Advanced skills in statistics, including proficiency in programming under R
- Ability to analyse combinations of abiotic, biotic and socio-economic variables, including through qualitative methods of data analysis
- Ability and strong motivation to work interactively as part of an interdisciplinary team, both locally and with the VOLANTE partners
- Excellent written and oral communication skills in English
- Ability to travel to international meetings and to visit project partners as required

Desirable experience:

- Familiarity with the topic of ecosystem services
- Experience in multi-partner research

Starting date: 1 April 2011 or earlier depending on availability

Salary: 1926.20 € / month gross salary. Under French legislation salaries are fixed based on the number of years of experience post PhD and are non-negotiable.

Applications including a description of relevant experience and motivation, a detailed Curriculum Vitae and contact details for two referees should be sent to: sandra.lavorel@ujf-grenoble.fr.