ISARA - Engineer School in Agriculture, Food Science, Rural Development and Environmental Sciences - is a private, non-profit university dedicated to higher education (BSc and MSc programs), research and extension in agriculture, food and environmental studies with a campus in Lyon and Avignon.

Since 2008 ISARA Lyon is committed promoting Agroecology and Sustainable Food Systems in research and education. The research team, internationally recognized in Agroecology and Organic agriculture, is looking for a project position in the field of agroecology and landscape ecology:

Post-doc
Simulation modelling for ecosystem service providers in agricultural landscapes

In the research unit Agroecology and Environment which deals with agroecology, agronomy, ecology, and landscape ecology, and which carries out different interdisciplinary national and international research projects, you will participate in the European research project ECOSTACK (Stacking of ecosystem services: mechanisms and interactions for optimal crop protection, pollination enhancement, and productivity) (www.ecostack-h2020.eu). ECOSTACK is a Horizon 2020 project involving 24 partners in Europe in a 5-year project.

Your work will contribute in simulation modelling the integration of agricultural management, landscape characteristics, organism ecology and behaviour, using the spatially explicit agent-based Animal, Landscape and Man Simulation System (ALMaSS) to predict impacts of selected management strategies on ecosystem service providers and agriculture in selected landscapes in France. ALMaSS is a well-established modelling system which has been used to answer policy questions regarding the effect of changing landscape structure or management on key animal species in Danish landscapes. ALMaSS is an open source project (https://gitlab.com/ChrisTopping/ALMaSS_all). It belongs to the class of agent based models but is unique in terms of a comprehensive and dynamic landscape simulation. When parameterized for selected species and landscape types, ALMaSS scenarios combined with multi-criteria decision making form a powerful tool for land management planning, indicating the best strategies for minimizing impact of agriculture on specific species and biodiversity in general.
Your work will be focused on defining French agricultural systems (including their spatio-temporal heterogeneity) within the ALMaSS and quantifying of synergistic/antagonistic effects of proposed management on functional biodiversity and the environment. These will include integration of spatial and non-spatial data on land use/cover characteristics, agricultural registers, and crop management.

You will actively participate in meetings and interdisciplinary work within the research unit, with project participants at ISARA and other ECOSTACK partners, as well as in other common activities at ISARA.

<u>PROFILE:</u>

Graduated with a PhD in landscape ecology, geography, biology or agroecology you have a good expertise in landscape analysis & modelling, Geographical Information Systems including ArcGIS software, and data management. At least basic programming skills (Python or C++) are mandatory. You have a very good working knowledge of English; French will be of advantage.

Your enthusiasm and strong involvement in project work with multiple partners (including training and working visits) will be needed. You have the capacity to work autonomously and interdisciplinary with other researchers at ISARA and within the Ecostack project.

<u>Length of contract and start:</u> 14 months, starting September 2019
<u>Salary:</u> commensurate with qualifications and experience

Please send your application (CV, cover letter, degrees, publication list) to:
<div align="center">recrutement@isara.fr</div>

For further information you may contact Alexander Wezel, Research Director of ISARA (awezel@isara.fr; 0033 427 85 85 84)