

## POST-DOCTORAL POSITION

18-24 months, starting ASAP  
Salary: €2150 (before taxes)

### “Elaboration of local-scale climate and land-use scenarios to assess the impacts of global change on soil erosion”

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**Research project:** “MASCC: Mediterranean Agricultural Soils Conservation under global change”: <http://mascc-project.org>

**Host institution:** IRD <https://en.ird.fr/ird.fr>

**Host laboratories:**

Centre for Ecology, Evolution, and Environmental Changes (CE3C), Faculty of Sciences, University of Lisbon:  
<http://ce3c.ciencias.ulisboa.pt/team/CCIAM>

Laboratory for Soil-Agrosystem-Hydrosystem Interactions Studies (LISAH), Montpellier SupAgro:  
<https://www.umr-lisah.fr/?q=content/eq-erosion>

**Supervision:**

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### DESCRIPTION

The MASCC research program aims to address mitigation and adaptation strategies to global change by assessing current and future development of Mediterranean agricultural soil vulnerability to erosion in relation to simulated land use, agricultural practices and climate change. The MASCC project gathers researchers and study sites from six Mediterranean countries: France, Morocco, Tunisia, Italy, Spain and Portugal and will be implemented throughout six WPs. The postdoc will work within WP2 'Elaborating scenarios based on a shared experience of mitigation strategies'. He/she will develop future climate, land-use and land management scenarios for 2030 and 2050, for 6 studied catchments, based on assessments of agricultural practices done at each site, which can be simulated using the LANDSOIL model (Ciampalini et al., 2016).

In collaboration with supervisors, the candidate will be in charge of:

- i) downscaling plausible future climate scenarios for each site based on an analysis of existing Regional Climate Model forecasts;
- ii) downscaling future land-use evolution narratives from global and regional scenarios, based on historical land-use trends and expert knowledge for each site;
- iii) assessing plausible adaptation options by interpreting the results of reviews and opinion surveys conducted by experts for each site;
- iv) determine a timeline of land-use and adaptation practice adoption, between 2020 and 2050, in collaboration with experts for each site;
- v) parameterization of all scenarios for application within the LANDSOIL model.

The position involves travel obligations. Most of the time will be spent at the University of Lisbon; short stays in Montpellier SupAgro and possibly with the other partners will be discussed with the candidate.

### QUALIFICATIONS

The successful applicant will have completed a PhD in an environmental science field (physical geography, environmental engineering, agronomy, etc.), and demonstrated ability for scientific publication. The ideal candidate will have:

- developed his PhD on the topic of agriculture and erosion;
- strong experience with analysing environmental and socio-economic changes;
- demonstrated ability to work in an international, English-speaking environment;
- additional experience in one or more of these topics: interpreting agronomic field studies, climate data analysis, geographical information analysis, hydrological and erosion modelling, and socio-economic scenario development.

### APPLICATION DOCUMENTS

Applicants must provide the following documents before 16/10/2016:

1. motivation letter and description of how their CV fits the proposed workplan (1-2 pages, in English);
2. Curriculum Vitae including contact information of three references.

Posting Contact Name: Dr. Yves Le Bissonnais ([yves.le-bissonnais@supagro.inra.fr](mailto:yves.le-bissonnais@supagro.inra.fr)) with copy to Dr. João Pedro Nunes ([jpcn@ua.pt](mailto:jpcn@ua.pt))