

# Postdoctoral researcher position in C and GHG response of temperate agricultural systems to farming practices and climate, ULiège (Belgium)

The TERRA Teaching and Research Center of the University of Liège invites applications for a 3-year fully funded postdoctoral fellowship for the investigation on C and GHG response of agricultural systems to management practices and climatic conditions.

## Context

The research will be conducted in the framework of the MRV4SOC project (“Monitoring, Reporting and Verification of Soil Organic Carbon and Greenhouse Gas Balance”) funded under the HORIZON-MISS-2022-SOIL-01-05 call. This program supports the implementation of key actions of the European Commission on sustainable carbon cycles and carbon farming and the upcoming regulatory framework on carbon removals certification.

MRV4SOC aims at designing a comprehensive and robust approach accounting for changes in as many C pools as possible (above-ground biomass, below ground-biomass, litter, dead wood, soil organic carbon, and harvested wood products), fully aligned with national GHG reporting and in 9 land use/land cover classes throughout Europe and under different C farming practices. This project will be mainly based on already available field and remote sensing data that will be gathered and used for parametrization/improvement/testing of established process-based biogeochemical models that will serve to design a result-based carbon market and help in upscaling agricultural emissions to the national level.

Within the MRV4SOC, the TERRA ULiège team is in charge of the analysis of the datasets from the ICOS agricultural sites and the comparison of the carbon fluxes and storages on these sites in relationship with abiotic factors and agricultural practices (soil work type, fertilization strategy, plant variety...). The outputs of this work will be used to calibrate and validate a global ecosystem model. This last will allow the spatio-temporal upscaling leading to quantification of the impact of these practices at continental scale and for future climatic conditions.

The specific tasks of the postdoc include:

- Collection and harmonization of GHG fluxes, C contents, environmental drivers and management activities from agricultural sites within the project, including ICOS ecosystem stations and other Demonstration Sites, to feed the modeling efforts with the ORCHIDEE model.
- Scientific exploitation of this dataset for GHG budgeting, quantification of management effects on SOC sequestration and resilience towards extreme climatic events. This exploitation should lead to publications in peer review journals.

## Qualifications and skills

We welcome applications from scientists having a PhD degree in environmental agronomy or atmospheric sciences or similar. Experience with ecosystem flux tower research will be an asset. We look for a highly motivated researcher with excellent written and oral communication skills in English, an ability with handling of large datasets (e.g. good programming skills are mandatory) and interaction with other team members.

## Eligibility

The applicant must have obtained its PhD at most 10 years before the starting date of the fellowship and not have resided or exercised its main activity (employment, studies, etc.) in Belgium for more than 24 months during the last 3 years immediately preceding the start date of the fellowship.

## Salary conditions

The gross and net monthly salaries are around 3350 and 3000€, respectively (tax-free scholarship).

## The Institution and the working environment

The candidate will be hosted at the BIODYNE research axis of ULiège on the Gembloux Agro-Bio Tech Faculty campus located at Gembloux, Belgium, 40 km South of Brussels. Additional information regarding ULiège and GxABT can be found at <https://www.uliege.be> and <https://www.gembloux.uliege.be>. The candidate will work under the supervision of [Prof. Bernard Heinesch](#) and [Prof. Bernard Longdoz](#).

## Interested?

The application should be sent in one single PDF including a motivation letter, a curriculum vitae (mentioning your study grades and publication), and the names and contact details of two referees. Review of applications will begin on **May 15, 2023**, and will continue until the position is filled. The ideal start date is July 1 (negotiable). Applications should be sent to both [bernard.heinesch@uliege.be](mailto:bernard.heinesch@uliege.be) and [bernard.longdoz@uliege.be](mailto:bernard.longdoz@uliege.be) (and indicating 'Postdoc Fellowship MRV4SOC' as subject).