Applications are invited for a 22 months postdoc position at the Georges Lemaître Centre for Earth and Climate Research of the Université catholique de Louvain (www.uclouvain.be/TECLIM)

The evaluation of forthcoming satellites for mapping topsoil organic carbon in croplands

Forthcoming hyperspectral satellites, such as the German Spaceborne Imaging Spectrometer Mission EnMAP, have the potential for producing high quality mapping of soil properties over spatially extensive areas with a uniform methodology that hitherto was not possible. This project aims to evaluate the potential of these satellites to acquire up-to-date and standardized soil property data.

The successful candidate will develop and evaluate standardized calibration routines using a harmonized spectral library that allows the approach to be transferable across different parts of Europe. The focus will be on soil organic carbon. Since the first hyperspectral satellites will be operational in 3-5 years, we will simulate the soil satellite spectra in adequate conditions (low vegetation cover, low soil moisture) using to a large extent previous airborne hyperspectral campaigns for which the spectra and archived soil samples are available. The ultimate aim of the project is to demonstrate the feasibility of a semi-automated, robust and harmonized calibration for soil organic carbon prediction from hyperspectral satellite systems in areas dominated by croplands.

This is a collaborative research project with the Helmholtz Centre Potsdam (http://www.gfz-potsdam.de) financed by the Belgian federal research policy (Belspo)

Qualifications

Applicants must have a PhD degree in geography, earth sciences, remote sensing or agronomy with an excellent publication record relative to the age of the candidate.

For further information please contact

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Application procedure

Please send a motivation letter, curriculum vitae including the results obtained during your studies and the names and addresses of two referees to Bas van Wesemael before 15 February. Interviews will be held during the last week of February