

UNIVERSIDAD POLITÉCNICA DE MADRID

Marie Skłodowska Curie Action –Postdoctoral Fellowship 2024 (MSCA-PF-2024)

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Department /Institute /Centre Name	Escuela Técnica Superior de Ingeniería Agronómica, Alimentaria y de Biosistemas (ETSIAAB) / Departamento de Producción Agraria
Address	Pº Juan XXIII, 11, 28040 Madrid
Province	Madrid
Research Area	Environment and Geoscience (ENV) Life Sciences (LIF) Chemistry (CHE)
Brief description of the Centre/Research Group	The Department of Agricultural Production (DAP) includes four different research units and three specialized laboratories, involving 17 researchers, with 240 publications, contributing to 49 doctoral thesis and 70 bachelor degrees. More info here: <u>https://portalcientifico.upm.es/es/ipublic/entity/16139</u> The soil science unit of the DAP focuses on the effects of soil and agricultural management on soil health with emphasis on soil C storage, nutrient cycling (N and P) and soil physical properties. In the last decades, several research projects developed by the DAP have evaluated the effect of soil conservation practices on degraded soils. Different collaborative studies have been developed during the last years by the Department of Agricultural Production (UPM) in collaboration with international partners such as Wageningen University and Research (WUR), Karlsruhe Institute of Technology (IMK-IFU), Agroscope and Centro Internacional de Agricultura Tropical (CIAT), focused on soil C stocks, GHG emissions and soil health in alone grasslands and silvonastoral systems. These projects have
	included the exchange of students and have yielded several scientific publications. For the past 5 years the unit has been the proponent of 8 research projects, highlighting the current EJP Soil funded CARBOGRASS project (2023-2026).



Project description	The overall objectives of this proposal are: to assess the potential of improved grassland management on soil C, nitrogen (N) cycling and soil health across the globe; to analyze how changes in environmental conditions and management affect CS in grasslands; to provide standardized, high quality datasets on grassland soil C/N cycling and management and environmental induced soil C stock changes, allowing to benchmarking ecosystem models and the tailored application of such assessment tools to various grassland systems in different regions; to develop a framework of methods (incl. models) allowing to identify the potential of different grassland management options to enhance restoration of soil C stocks while improving grassland productivity and livelihoods. In more detail, the research project is focused on the evaluation of the soil C stocks and soil properties at several paired Dehesa sites with contrasting management (extensive and continuous management vs rotational grazing with higher stocking rate). We are assessing how different management practices affect soil C stocks and soil health, aiming to reduce the soil degradation of a paradigmatic Dehesa region. The sites are located in different commercial farms in the South and West of Spain to evaluate how the different management practices interact with climate and soil properties.
Applications: documents to be submitted and deadlines	CV with key skills for the project and other complementary merits. Letter of Motivation.
	Deadline: 30 th April 2024