

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

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<b>Department /Institute /Centre</b>	<b>Name</b>	Department of Natural Systems and Resources. ETSI Montes, Forestal y del Medio Natural
	<b>Address</b>	Calle José Antonio Novais, 10
	<b>Province</b>	Madrid
<b>Research Area</b>		Environment and Geoscience (ENV)
<b>Brief description of the Centre/Research Group</b>		<p>The research activity of the Department of Natural Systems and Resources (<a href="http://www.montes.upm.es/?page_id=4680">www.montes.upm.es/?page_id=4680</a>) at the School of Forestry Engineering and the Environment (ETSI Montes, Forestal y del Medio Natural, <a href="http://www.montes.upm.es">www.montes.upm.es</a>) of Universidad Politécnica de Madrid covers a wide range of topics related to the management, conservation and restoration of forests, protected areas and natural resources, and has produced many key advances in these fields.</p> <p>The Department and School offer a perfect environment for the development of applied research based on a diverse community of senior and junior researchers, access to modern research facilities (labs and high-performance computing), and a wide network of key stakeholders (government bodies, NGOs and private companies) frequently involved in the research projects and dissemination activities.</p> <p>The School also hosts the headquarters of the recently created Research and Innovation Centre for the Conservation of Biodiversity and Sustainable Development (CBSD) of UPM, in which about 80 researchers are involved.</p> <p>In the last 15 years, major advances on landscape connectivity modelling have been developed in the Department of Natural Systems and Resources. Such advances have been widely adopted globally and have contributed to flagship conservation and restoration initiatives in many countries. In Spain, these initiatives include the efforts for the conservation and recovery of the Iberian lynx, the Cantabrian brown bear and their habitats, or the support to the implementation of the Spanish National Strategy of Green infrastructure, among others.</p>
<b>Project description</b>		<p>The project consists in developing analytical methods and decision-support tools to enhance native species dispersal, migration and colonization potential in biodiversity networks as an adaptive response to climate and land use changes.</p> <p>The project will assess the climate-driven migration pressure, the potential extinction debts and colonization credits, the permeability of the landscape for species migration, and the bottlenecks and barriers for range shifts and for the functional connectivity of the forest habitat networks.</p> <p>It will consider native forest tree species, forest plant communities and wildlife species to support their gene flow, range shifts and population viability in heterogeneous Mediterranean landscapes.</p> <p>The project will integrate and further develop habitat availability (reachability) metrics, dynamic species distribution models, landscape resistance models,</p>



## Expression of Interest – UPM Supervisor

and spatiotemporal network analysis under plausible scenarios of climate change, rural land abandonment and land use change. The modelling workflows will make use of high-resolution remote sensing data and of genetic and telemetry data (when available), and put a special emphasis on the validation of the resulting habitat, movement and connectivity models with independent data on the analysed species.

The project will provide novel decision-support guidelines and spatially-explicit priorities for forest managers and conservationists at landscape and regional scales. These guidelines should cover ecosystems within and outside protected areas, and address both the enhanced conservation of existing habitats and the prioritization of the restoration efforts that could best enhance the resilience and connectivity of the forest communities and biodiversity networks.

### Applications: documents to be submitted and deadlines

The applicant should submit, not later than the **30th of April 2024**:

- Letter of motivation.
- Curriculum vitae.
- A brief summary of the three most important scientific papers or contributions.