

Forest Science and Technology Centre of Catalonia (CTFC) is a research centre affiliated with the Generalitat de Catalunya (the Catalan government), and it reports to the Ministry responsible for forest issues.

CTFC is a CERCA centre and a government accredited TECNIO agent (developer of public technology).

It was granted a 'Human Resources Excellence in Research' award by the European Commission, recognizing CTFC as a European research institution that fosters an attractive and motivating work environment

Post-doctoral offer in environmental modelling and landscape planning

Reference: 24-02-00002

The Landscape Dynamics and Biodiversity program is looking to recruit a **post-doctoral researcher** to contribute to the theoretical and applied research of the working team with skills and knowledge on:

- Numerical analysis and methods
- Geospatial analysis
- Ecological modelling
- Heuristic optimization

The Forest Science and Technology Centre of Catalonia (CTFC), located in Solsona (Pre-Pyrenees, 120 km from Barcelona), Spain, employs app. 150 staff, produces >100 scientific articles annually and has a turnover of app. 6 Mil. €/year. CTFC's research activity is organised around three programs: Multifunctional Forest Management, Landscape Dynamics and Biodiversity, and Bioeconomy and Governance. Further institutional information is available at: www.ctfc.cat/en.

As part of the **Landscape Dynamics and Biodiversity program**, CTFC undertakes research on the ecology of landscapes and biodiversity in a global change context, innovation in multi-purpose forest planning at different scales targeting multiple ecosystem services, development of cutting-edge decision support systems for forest and agroforest planning, as well as fire ecology and other natural disturbances.

The candidate will be part of the **Precision Forestry (PrecFOR) group** and will be involved in the execution of competitive research and knowledge transfer projects related to designing resilient agroforest landscapes, applying spatial optimization methodologies, simulation models, and software developing. He/she will be involved in ongoing European research projects and in the preparation of national and international calls. This research position at CTFC offers an excellent opportunity to develop a scientific career in applied forest and mathematical research in a stimulating work environment.

TERMS OF THE APPOINTMENT

1. The contract may start on **April 2024**. It is a full-time position with a scientific-technical activities contract related to the PRIMA RES-MAB project (Promoting WEKE Nexus-based adaptation and mitigation solutions and landscapes resilience to climate change in the Mediterranean Biosphere Reserves).

2. Based on CTFC labour categories, annual gross salary will be adjusted to the foreseen role and will be commensurated with the specific profile of the selected candidate (qualifications and experience), ranging between 33.000 – 40.000 €/year.
3. The candidate will be based at CTFC in Solsona (NE Spain), with remote working options according to the institution norms (max. 20 h/week).
4. Working time: 37.5 hours per week.
5. 23+6 days of holidays per year. Good family-work balance conditions.
6. Travelling abroad to collaborate with Southern Europe and Mediterranean researchers and stakeholders.

KEY RESPONSABILITIES

Key tasks and responsibilities will include:

1. Development of a Water-Energy-Food-Ecosystems Socioecological Modelling Tool for the 7 Mediterranean Biosphere Reserves.
2. Compilation of the initial data grouped by WEFE criteria and BR zonation.
3. Performance of dynamic simulations of various climate change scenarios.
4. Multi-criteria evaluation of forest management scenarios and ecosystem services.
5. Multi-objective spatial optimization to guide decision-making for the design of resilient landscapes.
6. Refinement of the WEFE-SEM Tool after validation of the results with key stakeholders.

BASIC REQUIREMENTS

1. A PhD in environmental sciences, forestry, bioinformatics and biostatistics, mathematical modelling, landscape planning, data science, or any related suitable discipline for the main topic of this call.
2. Advanced expertise in numerical methods and spatial, multi-objective optimization methodologies.
3. Expert in programming (R, C, C++, Python, ...) and advanced statistical techniques.
4. Demonstrated computer skills in the use of GIS for spatial data management.
5. Familiarity with Machine Learning models and algorithms.
6. Proved knowledge on Biosphere Reserves, landscape dynamics, forest ecosystems, systematic planning, and multi-criteria decision analysis are an asset.
7. Proven fluency in spoken and written English.

DESIRABLE REQUIREMENTS

1. Demonstrated experience in R+D projects and leading capacities.
2. Ability to disseminate scientific results.
3. Pro-activeness in developing new software (R-packages, forest visualization tool, ...) to contribute at the standardization and generalization of the research team's workflows.
4. Readiness to work in multi-disciplinary teams.
5. Excellent organizational skills and capacity to deliver tasks in a timely manner to deadlines.
6. Fluency in Spanish and Catalan would be an asset.

1. Good communication skills.
2. Capacity to write technical reports.
3. Result oriented.
4. Flexibility and adaptation.
5. Availability to travel locally and internationally.
6. Initiative and pro activity.

CONTACT

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CTFC guarantees an open, transparent, and merit-based recruitment process (OTM-R) to all registered candidacies avoiding thus any bias on gender, origin, age, ideology, or other circumstances that could be discriminatory.

Integration policy: Candidates who have a recognized disability and accredited equal to or greater than 33% will be prioritized, as long as the disability is compatible with the proper performance of the job.

SELECTION PROCESS AND CRITERIA

The selection process is led by the Human Resources Area of CTFC. This process consists of:

1. **Admission of candidates:** applicants must submit a curriculum vitae and letter of intent addressed to borsa.treball@ctfc.cat, **until March 08th, 2024**, indicating the reference code of the offer.
2. **Pre-selection:** verification of compliance with the minimum requirements of the offer.
3. **Selection (from March 09th to March 21st, 2024):** assessment of the preselected candidates by scoring based on objective criteria and interview.
4. **Final decision:** in case of finding the suitable person, the election will be formally communicated to him/her, and the identification of the chosen person will be published on CTFC job openings section.

Further information: borsa.treball@ctfc.cat