

CATEGORY: Doctoral Researcher Type 1.

2. REQUIRED DEGREE: Doctorate

3. PROJECT/AGREEMENT/CONTRACT:

Multiscale Monitoring of Carbon Sequestration, Biodiversity and Climate Change in Coastal Marshes.
Coastal Marshes

Project Ref.: PCM_00030

Line of research: Microbial ecology and biogeochemical cycles in aquatic systems.

Project end date: 09/30/2025.

Call for proposals: Order of January 17, 2023, approving the regulatory bases for the award of grants for the regulatory bases for granting aid to R+D+i projects, on a competitive basis, within the framework of the Complementary Plan for Marine Sciences, in the Complementary Marine Science Plan and the Recovery, Transformation and Resilience Plan.

Funding: Resources from the "Next Generation EU" Recovery Fund through the Recovery, Transformation and Resilience Plan. Recovery, Transformation and Resilience Plan and from the 54A program of the Regional Ministry of University, Research and Innovation of the Junta de Andalucía.

"The present contract is co-financed by the Administration of the Junta de Andalucía, with file code PCM_00030, with file code PCM_00030, with file code PCM_00030, with file code PCM_00030.

PCM_00030, and by the European Union through the NextGenerationEU funds of the Plan de Recuperación, Transformación Recovery, Transformation and Resilience Plan".

4. ACTIVITIES TO BE CARRIED OUT IN THE POSITION:

- Contribute to research on the study of primary production, biogeochemical fluxes and carbon sequestration and biodiversity patterns in response to climate change.
- Analyse the information obtained by remote sensing techniques (drones and satellites) and perform the scaling and mapping of project variables.
- Carrying out in situ measurements with field instruments for the measurement of biogeochemical variables and the biogeochemical variables and validation of remotely sensed data.
- Data processing and statistical analysis of environmental variables for the determination of spatial patterns of the spatial patterns of photosynthetic communities and primary production in intertidal zones.
- Extraction of data on biogeochemical, environmental and climatic variables from different sources, organization and sources, organization and preparation for analysis and incorporation into databases.
- Supporting the development of biogeochemical models in aquatic systems related to primary production in sediment and production in sediment and water, gas and nutrient exchanges at the sediment-water and sediment-air interface, and microbial processes.
- Prepare papers and presentations of different levels of complexity (technical reports, project reports, scientific papers...).
- Integrate and collaborate with the rest of the researchers of the project in the activities related to the execution of the project in an international environment.
- Carry out dissemination tasks related to the subject matter of the contract.

* This contract will be subject to a conflict of interest check in the MINERVA platform and the result obtained will be favorable.

5. CHARACTERISTICS OF THE CONTRACT:

Purpose: Temporary contract within the framework of the Plan for Recovery, Transformation and Resilience (DA10ª Law 17/2022, of September 5, which amends Law 14/2011, of June 1, on Science, Technology and Innovation).

Estimated duration of funding: Until 30/09/2025. Subject to the duration of the project and its funding.

Working day: Full time.

Termination of the contract: According to the provisions of Article 49 of RDL 2/2015 of October 23, 2015, by which approves the revised text of the Statute of Workers.

Place of development: Laboratory of Microbial Ecology and Biogeochemistry.

Place of assignment: Department of Biology.

Monthly remuneration: 2,395.62 euros per month. The duration of the contract may not exceed the authorized duration for the execution of the project.

authorized for the execution of the project.

6. PREFERRED MERITS/PROFILE:

Preferred qualification:

- Bachelor's degree or equivalent in Marine or Environmental Sciences, Biology, Physics, Mathematics, Geomatics, or equivalent,
- Doctorate related to the study of carbon sequestration and biogeochemical cycles in coastal areas, remote sensing image processing and/or biogeochemical modeling in the field of marine and environmental sciences.
- Master related to the study of carbon sequestration and biogeochemical cycles in coastal areas, remote sensing image processing and/or biogeochemical modeling in the field of marine and environmental sciences.

Professional experience:

- Experience in the measurement of sediment-water and sediment-air fluxes using benthic chambers with IRGA, FTIR, etc. or Eddy covariance towers.
- Experience in spatial ecology of communities, mainly marine photosynthetic communities, and carbon cycle biogeochemistry.
- Experience in Geographic Information Systems (ArcGis, QGis) and advanced programming (ArcPy, Python, Python).
- Experience in the use of statistical tools, for spatial and time series analysis.

Research experience:

- Published articles, participation in international congresses will be positively valued, visits to foreign centers, international collaborations and participation in research projects directly related to the objective of the project.

Language: Minimum English level B2.

Other:

- Knowledge of data analysis and processing of satellite and drone images, multispectral and hyperspectral, especially related to photosynthetic aquatic communities.
- Knowledge of biogeochemical modeling applied to the estimation of primary production of benthic and phytoplankton communities.
- Knowledge of machine learning applied to signals and images and computer vision programming (Opencv/Scikit-image and Scikit-learn libraries).

7. RESPONSIBLE:

D. Sokratis Papaspyrou and D. Alfonso Corzo Rodríguez