

Jessica Bernal Borrego

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Personal Statement I am a biologist fascinated by geomatics and spatial modeling, with experience in international projects and robust training in law applied to the environment and land use planning. I am interested in macroecological processes, seeking to improve our geospatial knowledge, mainly at the taxon level, but in conjunction with communities, ecosystems, and their services. Accordingly, I am looking for projects focused on these fundamental strands and more applied aspects, such as climate and land use changes, biological invasions, or rare and threatened species management.

Skills

- Data analysis and statistical modeling: RStudio, MATLAB
- Database management and data visualization: SQL, Microsoft Access, Excel, Power BI
- GIS mapping and spatial analysis: ArcGIS, QGIS, Google Earth
- Programming languages: R, Python, SQL, Java, C++
- Machine learning and data mining techniques: Google Earth Engine, ENVI, ArcGIS Spatial Analyst, QGIS, GRASS GIS, Orfeo ToolBox, GeoServer
- Project management and collaboration: Microsoft 365, SharePoint

Education **MSc in Geomatics, Remote Sensing and Spatial Models Applied to Forest Management**
University of Córdoba, Spain *Dec-22*
4.0 GPA, Honors, Global change and climate: evaluation of impacts on natural ecosystems through GIS and remote sensing.
4.0 GPA, Honors, Project: Human-wildlife conflict in the Limpopo National Park. An approach through habitat suitability modeling.

MSc in Territorial, Urban and Environmental Planning
University of Málaga, Spain *Oct-21*
4.0 GPA, Honors, Final Master's Thesis: Hydrological Risks and Planning in the Province of Málaga.

Bachelor in Biological Sciences
University of Málaga, Spain *Sep-18*
4.0 GPA, Honors, Final Degree Project: Hiporrheic Ecotones: Physico-chemical variables and associated biota.
4.0 GPA, Honors, Impact and Ecosystem Management.

Work Experience **Environmental Specialist, Independent professional**
Málaga, Spain

Provision of technical and legal advice on environmental issues, including environmental impact studies, environmental planning, geospatial analysis, HSM and species monitoring campaigns. *Jan 2023 – Present*
Notable projects: Assisting IDAF with the human-wildlife conflict in the LNP, providing support in the same tasks previously completed for the company. I also collaborate with the University of Malaga on the project "Extractive activities and public policies: sustainability, energy transition, and security."

Remote Sensing and GIS Officer, Tragsatec
Madrid, Spain *Sep 2022 – Feb 2023*
Design of the pilot system for the acquisition of knowledge by Remote Sensing of threatened native species and invasive alien species of the flora of Spain, including geoprocessing and programming with GEE and R.

Research Consultant, IDAF Center for applied research*Córdoba, Spain*

Identification, through the mapping of interactions and the use of statistical analysis (R programming), of the areas with a higher risk of conflicts between humans and wildlife in and around Limpopo National Park. On top of that, an evaluation of mitigation strategies in practice is also carried out to eventually offer an overview of their effectiveness and the status of the situation.

*Apr 2022 -
Dec 2022***Environmental and Planning Officer, DCN***Madrid, Spain*

Management and evaluation of environmental and urban studies and projects within "Madrid Nuevo Norte" urban operation, one of Europe's most ambitious urban regeneration strategies. I was also responsible for the environmental technical assistance team, as well as for the development and implementation of geodatabases of environmental and urban requirements (Access, Power Apps, ArcGIS Enterprise).

*Sep 2021
– Sep
2022***Environmental Assessment Officer, Tragsatec***Madrid, Spain*

Technical assistance for the General Directorate of Quality and Environmental Assessment of the Ministry for the Ecological Transition and the Demographic Challenge, carrying out environmental impact assessments, geospatial analysis, map production, and the preparation of environmental impact statements of construction projects in Spain.

*Aug 2020
– Sep
2021***Environmental Specialist, Independent professional***Málaga, Spain*

Collaboration with public organizations and private companies that require technical and legal advice on species' ecosystems and environmental issues, including environmental impact studies, environmental planning, and species monitoring campaigns.

*Apr 2018
– Aug
2020***Coordinator and Consultant, IUCN-Med - International Union for Conservation of Nature. Cooperation Center for the Mediterranean***Málaga, Spain*

Coordination for the first evaluation of Porifera at the Mediterranean level for the IUCN Red List and implementation and monitoring of the marine program for the management of exotic species and the conservation of Marine Protected Areas (MPAs). I was responsible for cooperation between partners and experts and geodata analysis and management. On top of that, as a regional assessor, I assessed more than 50 Mediterranean species.

*Oct 2017 –
Apr 2019***Ecology Research Trainee, NIOZ – Royal Netherlands Institute for Sea Research***Texel, Netherlands*

Study of the ecology of migratory birds, including catching, ringing, georeferenced monitoring, status and distribution of food sources, and care and management of captive groups. The Red knot (*Calidris canutus*) as key species of the Global Flyway Ecology project – Team Piersma.

*Jul 2017 –
Oct 2017*

Collection and classification of benthos by sampling in the North Sea (box-core) and the Wadden Sea. SIBES project.

**Activities
& Volunteer
Experience****Ecological Restoration Volunteer, Ecoherencia S. Coop. And.**

Improvement and maintenance of old reforestation, improvement of avifauna habitat by opening herbaceous meadows, and improvement of amphibian breeding habitat through the creation of wetlands.

*Oct-16***Temporary Foster Help Volunteer, Society for the Protection of Animals and Plants of Málaga**

Rescue and temporary housing for abandoned and homeless animals.

*Jan 2006 -
Sept 2013*

Awards	Terra Málaga Research Award Project “Hydrological Risks and Planning in the Province of Málaga”	Nov-22
Publications	Bernal Borrego, J. (2022). <i>Hydrological Risks and Planning in the Province of Malaga</i> . https://doi.org/10.13140/RG.2.2.28125.08163	Dec-22
	Bernal Borrego, J. (2018). <i>The hyporheic ecotone. Physico chemicals variables and associated biota</i> . https://doi.org/10.13140/RG.2.2.32316.10884/1	Sep-18
Websites	https://github.com/JBernal7 https://www.linkedin.com/in/jessica-bernal-borrego https://www.researchgate.net/profile/Jessica-Bernal-Borrego	