


PERSONAL INFORMATION



Miguel Alexandre Ribeiro Moreira

 Rua Ramalho Ortigão, nº15, 2855-047 Corroios, Portugal

 (+351) 938 336 179

 mig.ribeiro@gmail.com

 [Linkedin](#) [Orcid](#) [Research Gate](#) [Google Scholar](#)

Sex Male | Date of birth 19/06/1984 | Nationality Portuguese

JOB APPLIED FOR POSITION PREFERRED JOB

Junior researcher in Environmental and Ecological Sciences

WORK EXPERIENCE

February 2016 to 10th of
November 2020

Ph.D. Fellow in River Restoration and Management

CERIS - Civil Engineering for Research and Innovation for Sustainability, Instituto Superior Técnico, University of Lisboa

- Collaboration in the development of the "PHISH-DB - historical freshwater fish occurrence database for Portuguese rivers and streams", under the scope of the course "River Ecosystem Functioning and Monitoring" (Outputs in **Annex I**); Main duties: data curation; methodological coordination and establishment of the spatial location for the historical records;
- Thesis research topic: "Mitigation of hydropowering impacts on fish: towards sustainable hydropower management".

Ph.D. scholarship under the FCT Doctoral Programme FLUVIO – River Restoration and Management. Grant number PD/BD/114336/2016.

1st of August to 4th of November
2015

Geographic Information Systems technical support

CIBIO (InBIO Associate Lab) - Research Center in Biodiversity and Genetic Resources, University of the Azores Unit – Ponta Delgada (São Miguel, Açores)

- Development of a spatial-based assessment scheme with the aim of site selection for an aquaculture industrial complex implementation at the Azores Archipelago Islands;
- Advanced Geographic Information Systems data processing (ArcMap) for mapping the defined criteria and respective classification scheme on the potential terrestrial areas.

LocAqua Project – Planning and site selection for the implementation of Aquaculture Units in the Azorean Archipelago. Project funded by the Azores Regional Government (Secretaria Regional dos Recursos Naturais, Direção Regional das Pescas, Gabinete de Aquicultura e Mercados).

1st of September 2014 to 28th of
February 2015

Research Fellow at the IND_CHANGE Project

ESA-IPVC – Escola Superior Agrária do Instituto Politécnico de Viana do Castelo. Participating institution at the consortium led by CIBIO (InBIO Associate Lab) – Research Center in Biodiversity and Genetic Resources, University of Porto.

- Development and validation of Land Cover Maps from the Vez River catchment area as study site, based on intensive field-work campaign following the LUCAS approach (LULC European Survey Methodology) and Geographic Information Systems techniques (Orthophoto-interpretation);
- Spatial data quality evaluation following the EN ISO 19157:2013 norm "Geographic information – Data quality".

IND_CHANGE - INDicator-based modelling tools to predict landscape CHANGE and to improve the application of social-ecological research in adaptive land management. Project PTDC/AAG-MAA/4539/2012, funded by Fundação para a Ciência e a Tecnologia (FCT) and co-funded by Fundo Europeu de Desenvolvimento Regional (FEDER).

1st of July to 31st of December
2013

Research Fellow at the SMARTPARKS Project

CIBIO (InBIO Associate Lab) - Research Center in Biodiversity and Genetic Resources, University of the Azores Unit – Ponta Delgada (São Miguel, Açores), Portugal.

- Assessment of the ecological status of the endemic vascular plants' habitats at Pico Island – Azores, using the InVEST Habitat Quality model methodology;
- Validation and update of the Pico island Land Cover Map based on field-work (natural habitats/species distribution survey and experts consulting) at the Pico island (outputs in **Annex II**).

[SMARTPARKS - Planning and Management System for Small Islands Protected Areas.](#)

[Project PTDC/AAC-AMB/098786/2008, funded by Fundação para a Ciência e a Tecnologia \(FCT\).](#)

1st of October 2012 to 6th of May
2013

Environmental Engineer Trainee

Environment and Sustainability Office from EDP Distribuição of EDP Group – Energy Sector, Lisboa, Portugal

- Integration in the working group for the 2013 Environmental Management System extension, based under the EN ISO 14001:2012 requirements, preparing and following the auditing procedure certified by Lloyd's Register Quality Assurance;
- Training course in "Integrated Management Systems".

[EDP Distribuição operates in the regulated distribution market in mainland Portugal, being responsible for the operation High-Voltage \(60/130/150 kV\) and Medium-Voltage \(6/10/15/30 kV\) overhead and underground powerlines.](#)

9th of March to 9th of December
2011

Environmental and ecological technical consultant (Professional Traineeship)

Bio3 - Estudos e Projectos em Biologia e Valorização de Recursos Naturais, Lda. – Almada, Portugal

- Planning and execution of ecological assessment and monitoring programs, including field-work, mapping, cartography and report writing, under the Water Framework Directive (WFD) and other ecological monitoring protocols, following INAG's protocol "Critérios para a classificação do estado das massas de água superficiais - Rios e Albufeiras";
- Water resources sustainable management under the WFD implementation requirements;
- Statistical data analysis, ecological monitoring and report writing for hydroelectric power plants Environmental Impact Assessment (EIA) (detailed information in **Annex III** – in portuguese).

[Biodiversity consultancy, research and information systems.](#)

VOLUNTEER COLLABORATIONS

May and June 2012

Technical support at the EU Programme *Life Estepárias*

Liga para a Proteção da Natureza (League for Nature's Protection) - Castro Verde, Portugal

- The main goal of this collaboration was to promote the conservation of the pseudo-steppe ecosystem on the Castro Verde Special Area of Conservation (SPA), classified under the Natura 2000 Network, under the European Union Conservation Programme "Life Estepárias";
- Minimizing the threats at the SPAs to ensure the long-term conservation of bird protected species and to contribute for Natura 2000 management;
- Monitoring and minimizing the impact under bird species of medium voltage electrical lines and border fences in the Castro Verde SPA;
- Environmental education and awareness activities with the local community and at the local schools.

[Non-profit Non-Governmental Organization whose mission is to contribute to Nature Conservation and Environmental Protection through a Sustainability perspective](#)

EDUCATION AND TRAINING

February 2016 to 10th of
November 2020

Ph.D. in River Restoration and Management

Instituto Superior Técnico, University of Lisboa, Portugal (IST-UL)

The thesis main goals were to increase the knowledge on the effects of the hydroelectric-induced flow alterations (hydropeaking) impacts on fish ecological traits, and the development of effective design

and assessment of mitigation measures. These goals were achieved by conducting the following tasks:

- 1) A systematic literature review to establish widespread frameworks and ecologically-relevant parameters for the design and assessment of mitigation measures for fish species;
- 2) Application of the conceptualized frameworks in a field case-study based in 1D hydrological modelling and spatial analysis tools (Inn river, Austria);
- 3) Flume experimental study with the native cyprinid species Iberian barbel (*Luciobarbus bocagei*) for new insights into physiological and behavioral species' responses under hydropoising simulated conditions (outputs in **Annex I**).

Level in national classification: Pass with Distinction

September 2004 to 15th of
December 2010

Integrated Master's Degree (1st + 2nd Cycle) in Environmental Engineering – Major in Ecological Engineering

Faculty of Sciences and Technology, NOVA University of Lisboa, Portugal (FCT-UNL)

- Environmental and ecological monitoring using Geographic Information Systems and Remote Sensing tools;
- Statistical and field-work methods in Ecological assessment;
- Ecological modelling;
- Environmental and Ecological risk assessment;
- Biodiversity conservation;
- Natural resources sustainable management;
- Engineering sciences in general.

Level in national classification: 13 out of 20 (BSc) / 15 out of 20 (MSc) /14 out of 20 (1st and 2nd Cycle - Integrated Master degree)

September 2009 to July 2010

Master thesis international project under the ERASMUS program

Radboud Universiteit Nijmegen, The Netherlands

- Development and application of an ecosystem management model based in biodiversity indices, with the Sado Estuary Natural Reserve as study case. Thesis entitled "Assessing the balance between biodiversity conservation and coastal and estuarine management of the Sado Estuary Natural Reserve, Portugal, using BIO-SAFE". Available at: <http://run.unl.pt/handle/10362/4987>

Level in national classification: 17 out of 20

PERSONAL SKILLS

Mother tongue(s) Portuguese

Other language(s)

English

Spanish / Castilian

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Spanish / Castilian	B1	B1	B1	B1	A2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages - Self-assessment grid](#)

Communication skills

- Environmental Educator trained by the Lisbon Zoo Educational Center, since February 2012;
- Teamwork and team spirit acquired in various types of groups, from musical and theatre groups to academic associations and university sports team.

Organisational / managerial skills

- Session conveyor at the 6th Symposium of the International Society for River Science, 8-13 September 2019, Vienna - Austria;

- Collaborator at the “Wind & Biodiversity Seminar”, organized by the Bio3 company, in November 2011;
- Member of the Environmental Engineering Students Council from November 2008 until September 2009;
- Member of the “Environment Conference Day” organizing committee at the of the FCT/UNL annual national conference “JORTEC” in the year of 2009.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Independent user	Independent user	Proficient user

Levels: Basic user - Independent user - Proficient user

[Digital competences - Self-assessment grid](#)

- Very competent with Microsoft Office™ software (Windows, Word, Excel, Outlook, Power Point) and Internet browsers in general;
- Very competent with Geographic Information Systems and Remote Sensing software (ArcGIS, Idrisi, Manifold, QuantumGIS);
- Very competent with ecological modelling (InVEST) and hydrological modelling software (HEC-RAS, River2D);
- Competent with statistical software (SPSS, NCSS, PRIMER).

Other skills

- Member of the university swimming team during the year of 2009;
- Member of the Portuguese ethno-music group “Os Zoelas - Pauliteiros de Miranda” (2011-2013);
- Member of the academic music group “anTUNiA” (2003-2013);
- Member of the academic theater group “NNT” (2006-2008);
- Member of the Percussion Orchestra “Tocá Rufar” and of the rhythm group “WOK” (1997-2002).
- Outdoor filming and nature photography lover.

Driving licence A1, B

ANNEX I Outputs from the FLUVIO Doctoral Programme

Courses

- River Ecosystem Functioning and Monitoring* (6 ECTS) at Instituto Superior de Agronomia, University of Lisbon
- Land Use and Water Management (6 ECTS) at Instituto Superior de Agronomia, University of Lisbon
- River Modelling and Ecohydraulics (6 ECTS) at Instituto Superior Técnico, University of Lisbon
- Hydromorphological and Habitat Restoration (6 ECTS) at University Politécnica de Madrid (UPM) - Spain
- River Conservation under Managed Flows (6 ECTS) at Environmental Consulting Klagenfurt (ECK) and University of Natural Resources and Life Sciences (BOKU) – Vienna, Austria
- Seminar Course (6 ECTS) at Instituto Superior de Agronomia, University of Lisbon

*Course outputs

Publications (peer-review journals)

Duarte, G., **Moreira, M.**, Branco, P., da Costa, L., Ferreira, M.T., Segurado, P., 2018. One millennium of historical freshwater fish occurrence data for Portuguese rivers and streams. *Scientific Data* 5, 180163. <https://doi.org/10.1038/sdata.2018.163>

Presentations in Conferences

Duarte, G., **Moreira, M.**, Branco, P., da Costa, L., Ferreira, M.T., Segurado, P., 2018. The Portuguese historical fish database – Phish. Poster presentation at Limnologia 2018 - XIX Conference of the Iberian Association of Limnology. Coimbra, Portugal, 24-29 June 2018. Book of abstracts: https://www.limnetica.com/documentos/congresos/Book_of_abstracts_Coimbra2018.pdf

Moreira, M., Duarte, G., Segurado, P., Ferreira, M.T., 2017. PHISH-DB - Portuguese historical fish database. Poster presentation at SEFS 10 - Symposium for European Freshwater Sciences. Olomouc, Czech Republic, 2-7 July 2017. Book of abstracts: http://www.freshwatersciences.eu/files/Abstract_book_SEFS10.pdf

Thesis outputs

Publications (peer-review journals)

Moreira, M., Schletterer, M., Quaresma, A., Boavida, I., Pinheiro, A., 2020a. New insights into hydropeaking mitigation assessment from a diversion hydropower plant: the GKI project (Tyrol, Austria). *Ecological Engineering* 158. <https://doi.org/10.1016/j.ecoleng.2020.106035>

Moreira, M., Costa, M.J., Valbuena-Castro, J., Pinheiro, A.N., Boavida, I., 2020b. Cover or Velocity: What Triggers Iberian Barbel (*Luciobarbus bocagei*) Refuge Selection under Experimental Hydropeaking Conditions? *Water* 12(2), 317. <https://doi.org/10.3390/w12020317>

Hayes, D.S., **Moreira, M.**, Boavida, I., Haslauer, M., Unfer, G., Zeiringer, B., Greimel, F., Auer, S., Ferreira, T., Schmutz, S., 2019. Life Stage-Specific Hydropeaking Flow Rules. *Sustainability* 11(6), 1547. <https://doi.org/10.3390/su11061547>

Moreira, M., Hayes, D.S., Boavida, I., Schletterer, M., Schmutz, S., Pinheiro, A., 2019. Ecologically-based criteria for hydropeaking mitigation: A review. *Science of the Total Environment* 657, 1508-1522. <https://doi.org/10.1016/j.scitotenv.2018.12.107>

Other Publications (peer-review journals)

Boavida, I., Díaz-Redondo, M., Fuentes-Pérez, J.F., Hayes, D.S., Jesus, J., **Moreira, M.**, Belmar, O., Vila-Martínez, N., Palau-Nadal, A., Costa, M.J., 2020. Ecohydraulics of river flow alterations and impacts on freshwater fish. *Limnetica*, 39(1), 213-232. DOI: [10.23818/limn.39.14](https://doi.org/10.23818/limn.39.14)

Presentations in Conferences

Moreira, M., Costa, M.J., Valbuena-Castro, J., Boavida, I., Pinheiro, A. 2019. LUNKERS-type structures as potential hydropeaking flow-refuges for Iberian barbel (*Luciobarbus bocagei*) in experimental conditions. Poster presentation at the 6th Symposium of the International Society for River Science. Vienna, Austria, 8-13 September 2019. Book of abstracts: www.bib.irb.hr/1025362/download/1025362.ISRS2019_book_of_abstracts.pdf

Moreira, M., Schletterer, M., Quaresma, A., Boavida, I., Pinheiro, A. 2019. Hydropeaking mitigation through a diversion Hydropower plant scheme: the GKI study-case (Tyrol, Austria). Oral presentation at the 6th Symposium of the International Society for River Science. Vienna, Austria, 8-13 September 2019. Book of abstracts:
www.bib.irb.hr/1025362/download/1025362.ISRS2019_book_of_abstracts.pdf

Moreira, M., Hayes, D.S., Boavida, I., Pinheiro, A.P., 2019. Hydropeaking: current status and new insights on ecological impacts mitigation. Oral presentation at the 15th European Ecological Federation Congress. Lisbon, Portugal, 29 July – 2 August 2019. Book of abstracts:
http://eeflisbon2019.org/en/content/programme-overview/abstract_book/book.html

Moreira, M., Hayes, D.S., Boavida, I., Pinheiro, A.P., 2018. Hydropeaking thresholds – Current status and outlook. Poster presentation at Limnologia 2018 - XIX Conference of the Iberian Association of Limnology. Coimbra, Portugal, 24-29 June 2018. Book of abstracts:
https://www.limnetica.com/documentos/congresos/Book_of_abstracts_Coimbra2018.pdf

Technical Reports

Boavida, I., **Moreira, M.**, Hayes, D.S., 2018. Survey of Solutions, Methods, Tools and Devices for Hydropeaking. European Project FiThydro WP2 – Task Deliverable 2.1.
<https://www.fithydro.eu/wp-content/uploads/2019/07/D2.1-SYGMA.pdf>

Other competences

Session convenor at the 6th Symposium of the International Society for River Science, 8-13 September 2019, Vienna - Austria. Special session entitled "Mitigating ecological impacts in a flow-altered world". Book of abstracts:
www.bib.irb.hr/1025362/download/1025362.ISRS2019_book_of_abstracts.pdf

ANNEX II Outputs from the SMARTPARKS research project

Publications (peer-review journals)

- Moreira, M.**, Fonseca, C., Vergilio, M., Calado, H., Gil, A., 2018. Spatial assessment of habitat conservation status in a Macaronesian island based on the InVEST model: a case study of Pico Island (Azores, Portugal). *Land Use Policy*, 78: 637-649.
<https://doi.org/10.1016/j.landusepol.2018.07.015>
- Calado, H., Vergílio, M., Fonseca, C., Gil, A., Moniz, F., Silva, S.F., **Moreira, M.**, Bragagnolo, C., Silva, C.P., Pereira, M., 2014. Developing a Planning and Management System for Protected Areas on Small Islands (The Azores Archipelago, Portugal): the SMARTPARKS Project. *Journal of Integrated Coastal Zone Management / Revista de Gestão Costeira Integrada*, 14(2):335-344. DOI: [10.5894/rgci496](https://doi.org/10.5894/rgci496)
- Fonseca, C., Pereira da Silva, C., Calado, H., Moniz, F., Bragagnolo, C., Gil, A., Phillips, M., Pereira, M., **Moreira, M.**, 2014. Coastal and marine protected areas as key elements for tourism in small islands. *Journal of Coastal Research*, SI 70: 461-466. DOI: <https://doi.org/10.2112/SI70-078.1>

Book Chapters

- Gil, A., Picanço, A., **Moreira, M.**, Borges, P.A.V., 2020. Capítulo 4.4. Cartografia e análise de serviços de ecossistemas terrestres em pequenas ilhas oceânicas. *In*: S.C. Ribeiro, N. Guiomar, D. Boscolo & Ana Firmino (Eds.). *A Ecologia da Paisagem no Contexto Luso-Brasileiro*. APEP- Associação Portuguesa Ecologia da Paisagem e IALE-BR Associação Brasileira de Ecologia da Paisagem. Editora Appris.

Technical Reports

- Moreira, M.**, Gil, A., 2013. Valoração da Biodiversidade no Parque Natural de Ilha do Pico através da metodologia InVEST - Relatório Técnico. Projeto SMARTPARKS. Universidade dos Açores, Ponta Delgada. Available at researchgate.net/publication/314197267

Presentations in Conferences

- Moreira, M., 2013. Biodiversity Valuation at the Pico Island Natural Park: The InVEST methodological approach. Oral presentation at the International Workshop "Defining, Planning and Management of Protected Areas in Small Islands – the SMARTPARKS Project contributions". Ponta Delgada - Azores, Portugal, October 2013.

ANNEX III
Experiência profissional na
empresa Bio3, Lda.

Projetos e tarefas

- Planeamento e execução dos trabalhos de campo, e elaboração dos relatórios de campanha, da monitorização inserida no Acompanhamento Ecológico de mamíferos (Micromamíferos, Lontra e Toupeira-de-água) e de Anfíbios do Estudo de Impacte Ambiental do Aproveitamento Hidroelétrico de Foz-Tua, referentes às campanhas de monitorização de Primavera, Verão e Outono de 2011 (ano 0 - fase de pré-construção);
- Planeamento e execução dos trabalhos de campo para o Estudo de Impacte Ambiental do Aproveitamento Hidroelétrico de Carvão-Ribeira (Rio Távora) nas componentes da DQA (Ictiofauna, Macroinvertebrados e Fitobentos) e execução da metodologia IFIM (caracterização do microhabitat e do perfil topográfico) para a determinação do caudal ecológico do aproveitamento Hidroelétrico a ser construído. Elaboração do relatório relativo à análise da Qualidade Ecológica da área em estudo segundo as normas da DQA (elementos Físico-químicos, Fitobentos e Macroinvertebrados);
- Planeamento e execução dos trabalhos de campo para a análise da eficiência do dispositivo para passagem de ictiofauna (escada de peixes) e monitorização das componentes Mamofauna (Toupeira-de-água) e DQA (Ictiofauna, Macroinvertebrados e Fitobentos) do Aproveitamento Hidroelétrico das Trutas (Rio Tuela, Vinhais - Bragança). Elaboração do relatório relativo à monitorização anual e implementação das normas relativas à DQA (RHS, Fitobentos e Macroinvertebrados);
- Elaboração do aditamento ao descritor de Ecologia do Estudo de Impacte Ambiental do Alçamento da Instalação de Resíduos das Minas de Extração e Preparação de Minérios Metálicos (não ferrosos) de Aljustrel, e adequação do plano de monitorização ecológica aos critérios definidos pela DQA;
- Caracterização e avaliação do estado ecológico da comunidade fitoplanctónica da Albufeira de Alqueva, relativo à fase de pós-construção, de acordo com os critérios definidos pela DQA;
- Caracterização e avaliação do estado ecológico da comunidade fitoplanctónica da Albufeira de Pracana, situada na área de influência do Aproveitamento Hidroelétrico do Alvito (Rio Ocreza), relativo à fase de pré-construção, de acordo com os critérios definidos pela DQA;
- Execução dos trabalhos de campo na Monitorização ecológica das Barragens de Ferradosa, Olgas, Pretarouca e Sambade segundo as normas da DQA (Ictiofauna e Macroinvertebrados).