#### Part B1

# Curriculum vitae (max. 2 pages)

### **PERSONAL INFORMATION :**

Family name, First name.	PÉREZ-RUZAFA, ANGEL			
Researcher unique identifiers:	ResearcherID: A-3406-2009;			
	Orcid: orcid.org/0000-0003-4769-8912			
Date of birth:	27/04/1958			
Nationality:	Spanish			
URL for web site:	https://webs.um.es/angelpr			
Scopus: https://www.scopus.com/authid/detail.uri?authorId=6602984756				
Publons: https://publons.com/researcher/1410800/angel-perez-ruzafa/				
Google scholars: https://scholar.google.com/citations?user=QZHVmH8AAAAJ&hl=es&oi=ao				
Research Gate: https://www.researchgate.net/profile/Angel_Perez-Ruzafa/reputation				
Frontiers Loop: http://loop.from	itiersin.org/people/123869/impact			

#### **EDUCATION:**

2013	013 Graduate in Fine Arts Faculty of Fine Arts, University of Murcia, Spain				
1989	PhD in Biology	Faculty of Biology, University of Murcia, Spain			
1980	Graduate in Biology	Faculty of Biology, University of La Laguna, Spain			
		<b>CURRENT POSITION(S) :</b>			
2019- President of the Academy Academy of Sciences of the Murcia Region, Spain					
2019-	President of the Academy	Academy of Sciences of the Murcia Region, Spain			
	President of the Academy Full Professor of Ecology	Academy of Sciences of the Murcia Region, Spain Faculty of Biology, University of Murcia, Spain			
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Hydrology, University of Murcia, Spain.

1981-1983 Officer of the Spanish National Army, Spanish Ministry of Defence, Spain.

**FELLOWSHIPS AND AWARDS :** 

- 1983-1986 Scholarship for the Research Personnel Training Plan of the Spanish Ministry of Education and Science.
- Different Fellowships for attending seven congresses and training courses abroad, awarded by, among others, the Western Canadian Universities Marine Biological Society (WCUMBS) (1987, Canada), the Euro-Mediterranean Centre on Marine Contamination Hazards (1991, Malta), or the NATO Committee on the Challenges of Modern Society (2000, 2002, Turkey).

Seven different awards on environmental dedication, student recognition and academic mentions, among which stands out the Extraordinary Prize of Degree in 1983/84 course (University of La Laguna, Spain)

# SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS :

- I have directed 18 doctoral theses (two of them in Portuguese universities and one in co-tutelage with Tunisia), being a foreign supervisor of two more in Italy and Tunisia, and I am currently directing 4 more. I have also directed 9 Degree theses, 17 master thesis, and 24 end degree projects.
- I have tutored around 100 ERASMUS students at or from Italian, French, Finnish, Irish, German, Latvian Danish, Lithuanian and Portuguese universities, 1 ISEP student at the Northern Illinois University, and 8 INTERCAMPUS students at or from universities in Mexico, Brazil, Dominican Republic and Peru.
- Additionally, I have also tutored among more than a dozen students of internships in companies in the Murcia region or within the Erasmus plus placement and Erasmus practices programs.

I have supervised an E.U. Marie Curie Reincorporation Fellowship (1997-1998).

In general, I have been involved in more than 90 research projects or technical assistance contracts, what have supposed managing more than 4.000.000 € of financing, and I have supervised more than 50 predoctoral or postdoctoral students and researchers. Notably, of my former students, a number greater than 50% is currently developing their activity in the field of Marine Biology.

#### **TEACHING ACTIVITIES :**

Since 1982 I have taught 12 different subjects in the degrees of Biology, Environmental Sciences and Technical Mining Engineering, all of them related to ecology and marine ecology in particular.

Moreover, since 1989 I have taught numerous courses in the master's and doctoral studies at the Universities of Murcia and Granada, in different specialties of Ecology, Marine Biology and Teacher Training.

I also have given more than 170 conferences and seminars in ecology, marine sciences and ecology of coastal lagoons, and dissemination and university extension in general.

#### **ORGANISATION OF SCIENTIFIC MEETINGS :**

Since 1999, I have organized or have belonged to the scientific committee of 15 international and 4 national congresses. Including the last 3<sup>rd</sup> (Naples), 4<sup>th</sup> (Montpellier), 5<sup>th</sup> (Aveiro), 6<sup>th</sup> (Lecce), 7<sup>th</sup> (Murcia), 8<sup>th</sup> (Athens) and 9<sup>th</sup> (Venice) European Coastal Lagoon Symposium, a reference in the study of coastal lagoons.

# **INSTITUTIONAL RESPONSIBILITIES :**

- I have developed institutional responsibilities at all levels, from the department council, the faculty board, the university cloister or numerous commissions such as extension activities, sports, doctorate, etc. even the most remarkable can be from 1998-2002 as Vice-Rector for University Extension and International Relations and as Member of the Governing Board of the University of Murcia.
- Since 2016 I act as Spokesman of the Mar Menor Scientific Advisory Committee (Murcia Region, Spain), and since 2019 I am the elected President of the Academy of Sciences of the Murcia Region.

### **REVIEWING ACTIVITIES :**

- I have acted as a scientific project evaluator for national evaluation agencies of Spain, Romania, Italy, Germany and Argentina, for the USA National Oceanic and Atmospheric Administration (NOAA Fisheries Grants), for the regional agencies of the Basque and the Andalusian Governments (Spain), for the Università Ca'Foscari (Venice) and the Università degli Studi di Roma "La Sapienza" and for the BBVA Foundation.
- At the same time, I have been external evaluator for reports or member of the project advisory committee for the International Council for the Exploration of the Sea (ICES), Enveurope (LIFE08 ENV/IT/000399), and DENOFLIT (LIFE09 NAT/LT/000234).

I have also acted as an academic evaluator for different university degrees and studies in Spain and Portugal.

- I have been a reviewer of more than 228 articles in more than 65 different scientific journals, collected on the web of science records (https://publons.com/author/1410800/angel-perez-ruzafa#profile)
- I am member of the Editorial Board of 5 scientific journals, *Marine Environmental Research* (Elsevier. ISSN: 0141-1136), and *Heliyon* (Cell Press ISSN 2405-8440), *Transitional Waters Bulletin* (e-ISSN: 1825-229X), *Vieraea* (ISSN: 0210-945X), *Revista de la Academia Canaria de Ciencias*,.
- I have also acted as guest editor of 8 special issues of scientific journals, on topics related to coastal lagoons and marine protected areas: (1993) *Publicaciones Especiales del Instituto Español de Oceanografía*, 11; (2007) *Marine Pollution Bulletin*, 55 (10-12); (2009) *ICES Journal of Marine Science*, 66 (1); (2008) *Journal for Nature Conservation*, 16 (4); (2019) *Estuarine, Coastal and Shelf Science*, 216. (2020) *Water*; (2020) *Frontiers in Ecology and Evolution*; (2020) *Journal for Nature Conservation*.

#### **MEMBERSHIPS OF SCIENTIFIC SOCIETIES :**

I am elected member of the Academy of Sciences of the Region of Murcia.and Corresponding Academic of the Canary Academy of Sciences. I also belong to the Official College of Biologists of the Region of Murcia.

#### **MAJOR COLLABORATIONS :**

I maintain close working relationships with the Universities of Salento in Italy and Klaipeda in Lithuania, and the Istituto delle Scienze Marine ISMAR in Italy, mainly in coastal lagoon studies. Noteworthy, I have coordinated the EMPAFISH Project ('European Marine Protected Areas as tools for Fisheries Management and Conservation'), in the EC FP6 involving 15 research teams from 6 countries and OOCMUR (Coastal Oceanographic Observatory of Murcia) for the Spanish Ministry of Science and Innovation.

# **STAYS IN RESEARCH CENTERS :**

- I have carried out research stays of more than one month at the Bamfield Marine Station (Canada, 1987), Charles Darwin Scientific Station (Galápagos, Ecuador, 1990, 1991, 1992), University of La Laguna (Spain, 1989-1990), Insular Museum of Natural Sciences of Santa Cruz de Tenerife (Spain, 1990-1991) Klaipeda University, Coastal Research and Planning Institute (Lithuania, 2013-2014) and ISMAR-Institut of Marine Science, CNR (Venezia, Italy, 2014).
- I have done research campaigns on board the oceanographic vessels Hespérides (Antártida, 1994) and Corvette (Cabo Verde, 1998 and Salvajes archipelago, 1999).

#### **MOST IMPORTANT SCIENTIFIC RESULTS :**

My work has materialized in more than 90 Books or book chapters and 204 scientific articles (128 in the WoS core collection), with 8202 citations, h-index=47, i10 index=125 in Google Scholar. They have contributed to demonstrated the usefulness of marine reserves as a tool for fisheries management and biodiversity conservation and as a regional socio-economic engine, analysing the spatial and temporal factors and scales that determine their effectiveness. Studies in coastal lagoons have broken old topics and have explained the mechanisms that make them a model ecosystem for the analysis of the mechanisms of organization and development of homeostatic mechanisms, optimizing biological production and structural complexity.

# Section c: Ten years track-record (max. 2 pages)<sup>3</sup>

In these last ten years, my research areas have continued to delve mainly into marine ecology, coastal lagoon ecology and marine protected areas, with an important dedication to applied aspects of coastal zone management. In addition, I currently combine my research work with my teaching functions, the presidency of the Academy of Sciences in the Region of Murcia and my role as spokesperson and member of the Commission for Scientific Counselling on the Mar Menor.

In this period, I have published 13 book chapters and 78 articles (WoS), 39 of them in coastal lagoons and 17 in marine protected areas, the majority in the most outstanding journals in these research lines.

My article production places me among the 3 researchers in the world with the highest production collected in the WoS of the last ten years on the subject of coastal lagoons.

In addition, our works are highly requested and referenced by other authors. In this period, I have reached 1506 citations for my articles, with an average of 21.2 citations per article.

It can be highlighted for their impact or the impact of the journal where they have been published:

Manel S., Loiseau N., Andrello M., Fietz K., Goñi R., Forcada A., Lenfant P., Kinninmonth S., Marcos C., Marques V., Mallol S., **Pérez-Ruzafa A**., Breusing C., Puebla O., Mouillot D., 2019. Long-Distance Benefits of Marine Reserves: Myth or Reality? Trends in Ecology & Evolution, 34 (4): 342-354. DOI: 10.1016/j.tree.2019.01.002. (Journal Impact factor: 18.601; Article Impact factor: 4.00).

**Pérez-Ruzafa A.,** Campillo A., Fernández-Palacios J.M., García-Lacunza A., García-Oliva M., Ibañez H., Navarro-Martínez P.C., Pérez-Marcos M., Pérez-Ruzafa I.M., Quispe-Becerra J.I., Sala-Mirete A., Sánchez O. & Marcos C., 2019. Long-Term Dynamic in Nutrients, Chlorophyll a, and Water Quality Parameters in a Coastal Lagoon During a Process of Eutrophication for Decades, a Sudden Break and a Relatively Rapid Recovery. *Frontiers in Marine Sciences*, 6: UNSP 26. DOI: 10.3389/fmars.2019.00026. (Journal IF: 3.828; Article IF: 5.50).

**Pérez-Ruzafa** A., De Pascalis F., Ghezzo M., Quispe J.I., Hernández-García R., Muñoz I., Vergara C., Pérez-Ruzafa I.M., Umgiesser G., & Marcos C., 2019. Connectivity between coastal lagoons and sea: Asymmetrical effects on assemblages' structure. *Estuarine, Coastal and Shelf Science*, 216: 171-186. DOI: 10.1016/j.ecss.2018.02.031. (Journal Impact factor: 2.889; Article Impact factor: 6.50).

Riera R., Tuset V.M., Betancur-R. R., Lombarte A., Marcos C. & **Pérez-Ruzafa A.**, 2018. Modelling alphadiversities of coastal lagoon fish assemblages from the Mediterranean Sea. *Progress in Oceanography*, 165: 100-109. DOI: 10.1016/j.pocean.2018.05.003. (Journal IF: 4.797; Article IF: 2.00).

**Pérez-Ruzafa** A., Pérez-Marcos M. & Marcos C., 2018. From fish physiology to ecosystems management: Keys for moving through biological levels of organization in detecting environmental changes and anticipate their consequences. Ecological Indicators, 90: 334-345. DOI: 10.1016/j.ecolind.2018.03.019. (Journal Impact factor: 4.968; Article Impact factor: 1.33).

Marcos C., Torres I., López-Capel A. & **Pérez-Ruzafa A**., 2015. Long term evolution of fisheries in a coastal lagoon related to changes in lagoon ecology and human pressures. *Reviews in Fish Biology and Fisheries*, 25 (4): 689-713. DOI: 10.1007/s11160-015-9397-7. (Journal IF: 4.638; Article IF: 2.83).

**Pérez-Ruzafa A**. & Marcos C., 2012. Fisheries in coastal lagoons: An assumed but poorly researched aspect of the ecology and functioning of coastal lagoons. *Estuarine, Coastal and Shelf Science*, 110: 15-31. DOI: 10.1016/j.ecss.2012.05.025. (Journal Impact factor: 2.889; Article Impact factor: 5.33).

**Pérez-Ruzafa A.**, Marcos C. & Pérez-Ruzafa I.M., 2011. Mediterranean coastal lagoons in an ecosystem and aquatic resources management context. *Physics and Chemistry of the Earth*, 36 (5-6): 160-166. DOI: 10.1016/j.pce.2010.04.013. (Journal Impact factor: 2.436; Article Impact factor: 7.10).

**Pérez-Ruzafa** A., Marcos C., Pérez-Ruzafa I.M. & Pérez-Marcos M., 2011. Coastal lagoons: "transitional ecosystems" between transitional and coastal waters. *Journal of Coastal Conservation*, 15 (3): 369-392. DOI: 10.1007/s11852-010-0095-2. (Journal Impact factor: 1.503; Article Impact factor: 8.20).

Claudet J., Osenberg C.W., Domenici P., Badalamenti F., Milazzo M., Falcón J.M., Bertocci I., Benedetti-Cecchi L., García-Charton J.A., Goñi R., Borg J.A., Forcada A., De Lucia G.A., **Pérez-Ruzafa A.**, Afonso P., Brito A., Guala I., Le Direach L., Sanchez-Jérez P., Somerfield P.J. & Planes, S., 2010. Marine reserves: Fish life history and ecological traits matter. Ecological Applications, 20 (3): 830-839. DOI: 10.1890/08-2131.1. (Journal Impact factor: 5.047; Article Impact factor: 15.18).

<sup>&</sup>lt;sup>3</sup> Please list the order of authors as indicated in the original publication

Prominently, in 2019 and 2020 I have also been a guest editor in the publication of 4 special issues of the scientific journals *Estuarine, Coastal and Shelf Science* (216), *Water, Frontiers in Ecology and Evolution*, and *Journal for Nature Conservation*.

In 2016-2018, I have work as IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) Expert and Lead author in the *IPBES regional assessment report on biodiversity and ecosystem services for Europe and Central Asia.* 

In these last teen years, I have organized one International Congress and acted as Scientific Committee in 7 others in lagoon ecology and related aspects. In addition, I have acted as Invited Keynote speaker in 3 congresses:

2011- 5<sup>th</sup> European Coastal Lagoons Symposium (Aveiro, Portugal). Keynote: Fisheries in coastal lagoons: an assumed but poorly researched aspect of the ecology and functioning of coastal lagoons.

2013- VI EUROLAG and VII LAGUNET Conference (Lecce, Italy). Keynote: Eutrophication and biodiversity in coastal lagoons.

2016 - 51<sup>st</sup> European Marine Biology Symposium (EMBS) (Rhodes, Greece). Keynote: From estuarine to lagoon paradox or why coastal lagoons should be taken into account in Marine Strategies.

I have also participated as invited speaker or expert in other scientific or academic meetings like the Workshop on The Ecological Implications of Climate Change on the Lagoon of Venice (2011, Venice, Italy), the Euro-Mediterranean University (EMUNI) (2012, Portorož-Piran, Slovenia), Workshop Ter Mar, Propostas para a gestao (2012, Açores, Portugal), AOGS-Research and management of transitional waters (2013, Brisbane, Australia), Workshop Ter Mar II, Gestão de Áreas Marinhas Protegidas, oportunidades para o desenvolvimento (2014, Ponta Delgada, Açores, Portugal), or the Workshop Ecological status and fishery management: conflicts and synergies in transitional waters (2014, Venice, Italy).

In 2016, I was invited to give the presentation "The role of Marine Protected Areas" in the Public Hearing "Mediterranean Sea: State of the fishing stock and strategies to adopt for the conservation and socio-economic situation of the fisheries sector", held at the European Parliament in Brussels (Belgium).

Both in publications, or in the exchanges of information, projects, students, work stays, etc. we collaborate with different research teams, mainly with those led by Dr. Arturas Razinkovas-Baziukas (University of Klaipeda, Lithuania) and Dr. Georg Umgiesser (Istituto delle Scienze Marine, Venice, Italy).

In the last ten years, around 20 researchers have worked or have been trained in our group, and I have directed 8 PhD Thesis in the same period, and right now 4 more are in an advanced stage of development.

Of the students who have completed their thesis under my direction in this period, most of them are currently working in Marine Biology at different institutions such as Universidade Federal do Sul da Bahia (Brasil), Universidad Tecnológica de Panamá, Institute of Ocean Sciences and Limnology-UNAM (México), Università degli Studi di Palermo (Italy) or at the University of Murcia itself.

Currently, as more prominent issues, I continue to lead the monitoring and evaluation program of the water quality of the Mar Menor coastal lagoon, and our group participates in a Regional RIS-3 project on a mobile observation network in coastal zones. At the same time, I am member of the Management Committee of the recently approved Cost Action OC-2019-1-23838 -Unifying Approaches to Marine Connectivity for improved Resource Management for the Seas (SEA-UNICORN). And we participate in the LIFE19 NAT/IT/000264 - Seagrass transplantation for transitional Ecosystem Recovery (LIFE-TRANSFER)- that is under a second revision before September in view of its possible financing.

I am also acting as expert in Environment designated by the Interuniversity Council of the Region of Murcia for the Participation Council of the Regional Entity of Sanitation and Water Treatment of the Region of Murcia (ESAMUR).

# Appendix: All on-going grants and submitted grants applications of the PI (Funding ID) <u>Mandatory information</u> (not counted towards page limits)

<b>On-going Grants (Please indicate</b>	"No funding" when applicable):
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Pérez-Ruzafa

					ERC proposal <sup>2</sup>
Ecological evolution of the Mar Menor (Spring-Summer)	Tecnologías y Servicios Agrarios (Tragsatec)	24,123 €	July- October 2020	PI of the monitoring program	data series for modelling the Mar Menor ecosystem
Mobile Oceanographic Observatory of the Region of Murcia (OOMUR)	Public aid to finance the strategic projects contemplated in the Research and Innovation Strategy for Smart Specialization (RIS3Mur Strategy) of the Ministry of Employment, Universities, Business and the Environment of the Autonomous Community of the Region of Murcia and the European Union	196,947€	2018-2021	Responsible for the tasks "System to determine oceanographic parameters of the water layer" and "Monitoring of water quality and ecological status of the Mar Menor with the OOMMUR tool"	Development of observation infrastructures in coastal lagoons and data series for modelling the Mar Menor ecosystem
Monitoring and predictive analysis of the ecological state evolution of the Mar Menor lagoon ecosystem and impacts prevention	Ministry of Water, Agriculture, Farming, Fishery and Environment of the Autonomous Community of the Region of Murcia	347,875€	October 2020- September 2021	PI of the monitoring and research program	Long-term data series for modelling the Mar Menor ecosystem
Cost Action OC- 2019-1-23838 - Unifying Approaches to Marine Connectivity for improved Resource Management for the Seas (SEA- UNICORN)	European Cooperation in Science and Technology (COST)	No funding	22/09/2020 - 21/09/2024	Management Committee member	Understanding the Role of Marine Functional Connectivity (and restricted connectivity) for marine conservation

# Grant applications (Please indicate "No funding" when applicable):

Project Title	Funding source	Amount (Euros)	Period	Role of the PI	Relation to current ERC proposal <sup>2</sup>
LIFE19 NAT/IT/000264 - Seagrass transplantation for transitional Ecosystem Recovery (LIFE- TRANSFER)	LIFE 2019 Nature and Biodiversity program	3,102,636€	01/09/2020 - 31/08/2025	PI of the Mar Menor case Study WP.	Hydrodinamic modelling and and biological data in Italian and Mar Menor lagoons to feed data bases (partnership

 $<sup>^2</sup>$  Describe clearly any scientific overlap between your ERC application and the current research grant or any grant application.

					with RestConnect collaborators).
LIFE20 ENV/ES/000238 - Use of hydrodynamic models and permeable constructive solutions in ports to preserve fragile marine ecosystems (LIFE Marina)	LIFE 2020 Environment and Resource Efficiency program	2,415,238€	01/09/2021 - 31/08/2025	Responsible of coordinate hydrodynam ic modelling and biological impacts	Hydrodinamic modelling and and biological data in Mar Menor lagoon to feed data bases (partnership with RestConnect external collaborators.