



CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

CV date	07/10/2022
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First name	Fernando		
Family name	Tuya		
Gender	Monosexual	Birth date	16/03/1974
ID number	44700451c		
e-mail	fernando.tuya@ulpgc.es	www.fernandotuya.org	
Open Researcher and Contributor ID (ORCID)	0000-0001-8316-5887		

(*) Mandatory

A.1. Current position

Position	Associate Professor (“ <i>Profesor Titular</i> ”)		
Initial date	01/03/2018		
Institution	Universidad de Las Palmas de Gran Canaria		
Department/Center	Biology	IU-ECOQUA	
Country	Spain	Tele. number	928457279
Key words	marine ecology, benthic ecosystems, marine community ecology		

A.2. Previous positions (research activity interruptions, art. 14.2.b)

Period	Position/Institution/Country/Interruption cause
2004-2005	Postdoctoral researcher , ICCM, Spain
2006-2008	Postdoctoral researcher , ECU, Australia
2009-2010	Auxiliar researcher , CIIMAR, University of Porto, Portugal
2010-2015	“Ramón y Cajal” Tenure track researcher, Universidad de Las Palmas de G.C., Spain
2015-2018	Lecturer (“ <i>Profesor Contratado Doctor I3</i> ”), Universidad de Las Palmas de G.C., Spain,
2018	Interruption for first son birth
2018-	Associate Professor

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Degree in Marine Sciences	Universidad de Las Palmas de Gran Canaria	1997
PhD in Marine Sciences with extraordinary award	Universidad de Las Palmas de Gran Canaria	2004

Part B. CV SUMMARY (max. 5000 characters, including spaces)

The motivation of my research is the necessity of **searching for models that aim to explain patterns in the organization of (coastal) marine biodiversity** through ecosystems across different scales of space, time and taxonomy. More specifically, my research focuses on ecological interactions in and around marine habitats to tease apart the complex interactions that cause patterns of species distributions in nature. This approach allows transferring basic ecological knowledge into the sustainable management and conservation of marine ecosystems. For example, extensive research on the ecology of the seagrass *Cymodocea nodosa* resulted in the inclusion of the species in the National Catalogue of Endangered Species (BOE 190, 8 August 2016, 56733-56735). In the last 10 years, my research agenda has mostly focused on the **effect of environmental stressors over 'ecosystems engineers'** and associated biota, seagrasses and macroalgae in particular, for a total production of over



60 papers in peer reviewed scientific journals. I have extensive collaborations within and outside Europe, as highlighted by his publication track-record (see below). In the last 10 years, I have obtained funding, as PI, through competitive programs, at a regional, national and European levels, to develop 6 projects. Overall, in my career, I have published ca. **160 papers** in peer-reviewed journals (JCR) on different aspects of the ecology of marine communities; > 45 papers are within the first quartile (Q1) of the *Marine and Freshwater Biology* field, in addition to generalist scientific journals (e.g., Ecology Letters, Nature Climate Change, Science) and broad ecological journals (Journal of Ecology, Oecologia, etc). Importantly, I am the first author in the ca. 33 % of published papers, with **an average of two papers published per year as first author**, while I am the corresponding author (i.e., “senior” author) in another ca. 35% of papers. This scientific production has received ca. 5,400 cites (h-index=34, Scopus, October 2022) and ca. 7400 cites (h-index = 43, Google Scholar, October 2022). In terms of editorial activities, I am part of the **editorial board of four scientific journals**: Diversity (since 2020), Aquatic Botany (since 2017), Frontiers in Marine Sciences (since 2014), and Aquaculture Environment Interactions (since 2009). From 2021, I am the **Head of the Research Group** “Biodiversity and Conservation” (www.ecoaqua.eu/es/biocon.html). Since 2019, I am the **“Head of Service”** of the Department of Biology, ULPGC.

I have communicated scientific information to society through dissemination of popular monographs, which can be freely downloaded from the Internet (www.fernandotuya.org). I authored several **field guides of marine life of the Macaronesian islands** (www.oceanografica.com/store/). I disseminate routines in marine ecology and statistics (through the open-source R statistical package) for data science, focusing on marine ecology, via my own **YouTube channel**. I am also scientific advisor of the environmental consultancy company Elittoral (www.elittoral.es/).

I have supervised **6 PhD theses, 13 Master’s degree theses and 17 Degree theses**; I currently supervise **4 PhD students**. A very compromised supervision of students is demonstrated by the large increase in last authorships (“senior” authorship) in the last years, as the result of students’ supervision. All supervised PhD students are actually either postdoctoral researchers or technicians at public institutions, such as the Environmental Agency of the Canary Islands Autonomous Government. Included in the top 100s ranking of Spanish researchers according to their scientific influence (<https://ranking.influscience.eu/persona/17680078/>) and the top ranking of Spanish researchers according to the h-index (<https://grupodih.info/biologia.html>).

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications

F. Tuya, Fernández, Y., del Pilar-Ruso, Y.,..., Tomas, F. 2021. Partitioning resilience of a marine foundation species into resistance and recovery trajectories. *Oecologia* 196: 515-527.

B. Martínez-Crego, Prado, P., Marco-Méndez, C.,..., **Tuya, F.** 2021. Driving factors of biogeographical variation in seagrass herbivory. *Science of the Total Environment* 758: 143756.

J. Valdazo, Viera, M.A., **Tuya, F.** 2020. Seasonality in the canopy structure of the endangered brown macroalga *Cystoseira abies-marina* at Gran Canaria Island (Canary Islands, eastern Atlantic). *European Journal of Phycology* 55(3): 253-265.

G. Bañolas, Fernández, S., Espino, F., Haroun, R., **Tuya, F.** 2020. Evaluation of carbon sinks by the seagrass *Cymodocea nodosa* at an oceanic island: spatial variation and economic valuation. *Ocean and Coastal Management* 187: 105112.

P. Manent, Bañolas, G., Alberto, F., ..., **Tuya, F.** 2020. Long-term seagrass degradation: Integrating landscape, demographic, and genetic responses. *Aquatic Conservation: Marine and Freshwater Ecosystems* 30(6): 1111-1120.

F. Tuya, Fernández-Torquemada, Y., Zarcero, J.,..., Tomas, F. 2019. Biogeography modulates seagrass resistance to small-scale perturbations. *Journal of Ecology* 107: 1263–1275.



Franco, J.N., **Tuya, F.**, Bertocci, I.,..., Arenas, F. 2018. The 'golden kelp' *Laminaria ochroleuca* under global change: integrating multiple eco-physiological responses with species distribution models. *Journal of Ecology* 106: 47-58.

F. Tuya, J.F. Betancort, R. Haroun,..., Meco, J. 2017. Seagrass paleobiogeography: fossil records reveal the presence of *Halodule* cf. in the Canary Islands (eastern Atlantic). *Aquatic Botany* 143: 1-7.

F. Tuya, Vila, F., Bergasa, O.,..., Robaina, R.R. 2017. Artificial seagrass leaves shield transplanted seagrass seedlings and increase their survivorship. *Aquatic Botany* 136: 31-34.

R. Riera, Pérez, O., Cromey, C.,..., **Tuya, F.** 2017. MACAROMOD: A tool to model particulate waste dispersion and benthic impact from offshore sea-cage aquaculture in the Macaronesian region. *Ecological Modelling* 361: 122–134.

T. Wernberg, Bennett, S., Babcock, R.C.,... **Tuya, F.**, Vanderklift, M.A., Wilson, S. 2016. Climate-driven regime shift of a temperate marine ecosystem. *Science* 353(6295): 169-172.

F. Tuya, Betancor, S., Viera-Rodríguez, M.A.,..., Espino, F. 2015. Effect of chronic versus pulse perturbations on a marine ecosystem: integration of functional responses across organization levels. *Ecosystems* 18: 1455–1471.

J.N. Franco, Wernberg, T., Bertocci, I.,..., **Tuya, F.** 2015. Herbivory drives kelp recruits into 'hiding' in a warm ocean climate. *Marine Ecology Progress Series* 536: 1–9.

F. Tuya, Ribeiro-Leite, L., Arto-Cuesta, N.,..., Espino, F. 2014. Decadal changes in the structure of *Cymodocea nodosa* seagrass meadows: Natural vs. human influences. *Estuarine, Coastal and Shelf Science* 137: 41-49.

F. Tuya, Png-Gonzalez, L., Riera, R., Haroun, R., Espino, F. 2014. Ecological structure and function differ between habitats dominated by seagrasses and green seaweeds. *Marine Environmental Research* 98: 1-13.

F. Tuya, Haroun, R., Espino, F. 2014. Economic assessment of ecosystem services: Monetary value of seagrass meadows for coastal fisheries. *Ocean and Coastal Management* 96: 181-187.

F. Tuya, Espino, F., Terrados, J. 2013. Preservation of seagrass clonal integration buffers against burial stress. *Journal of Experimental Marine Biology and Ecology* 439: 42-46.

F. Tuya, Viera-Rodríguez, M.A., Guedes, R.,..., Terrados, J. 2013. Seagrass responses to nutrient enrichment depend on clonal integration, but not flow-on effects on associated biota. *Marine Ecology Progress Series* 490: 23-35.

T. Wernberg, Smale, D.A, **Tuya, F.**,..., Rousseaux, C.L. 2013. An extreme climatic event alters marine ecosystem structure in a global biodiversity hotspot. *Nature Climate Change* 3: 78-82.

F. Tuya, Cacabelos, E., Duarte, P.,..., Wernberg, T. 2012. Patterns of landscape and assemblage structure along a latitudinal gradient in ocean climate. *Marine Ecology Progress Series* 466: 9-19.

C.3. Research projects

Project Title	Funding source	Amount	Period	Role
POPCORN: composition, distribution and supply of ecosystem services and resilience of rhodolith bed across an oceanic archipelago	Spanish Science and Innovation Bureau	€ 196, 200	2022-2025	IP
METOSERECO: Towards new methodologies in marine robotics to study	Government of the Canary Islands	€ 69,729.30	2021-2023	IP



marine ecosystem services				
RESIGRASS: A holistic understanding of seagrass functioning and resilience to local-scale disturbances: from molecular to biogeographical scales	Spanish Science Secretary (MINECO)	€ 96,000	2015-2019	IP
ANTROTIDAL: Response of intertidal biota to anthropogenic disturbances: effect of eutrophication under the current climatic scenario	Spanish Science Secretary (MINECO)	€ 39,930	2012-2014	IP
ECOSERVEG: Changes in submersed vegetation: assessing loss in ecosystems services from frondose to depauperate systems dominated by opportunistic vegetation	EU (BEST, Voluntary Scheme for Biodiversity in Territories of the EU Outermost Regions)	€ 117,000	2012-2014	IP